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DAN BEARD'S ANIMAL BOOK

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DAN BEARD'S ANIMAL BOOK

AND

CAMP-FIRE STORIES

BY

DAN BEARD

Author of "The American Boys' Handy Book," "Field and Forest Handy Book," Etc.

ILLUSTRATED BY THE AUTHOR

NEW AND ENLARGED EDITION

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To my son

DANIEL BARTLETT BEARD

The most enjoyable pet and interesting specimen I have ever been fortunate enough to possess.

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PREFACE

THIS is simply a book of animals and is made up from the Author's personal notes and sketches. All scientific names have been omitted and big words avoided as far as practicable, and it is hoped and believed that some of the notes and drawings may be of value to older readers for

> In nature there is nothing unimportant,
> There is nothing uninteresting,
> And nothing fully understood!

Hence any careful observer's notes must be of value in adding to the general knowledge of the subject.

What we need and what is coming is an unselfish, passionate love of Nature, not for Nature's sake, but for humanity's sake; such a love is wholesome, manly, invigorating, and uplifting.

Born in an artist's family, accustomed from infancy to the society of sculptors, painters, and poets, it was natural for me when a lad to dream dreams and build castles in the air, but these castles did not glitter with gold nor was the sun reflected from their jeweled turrets and bespangled domes. The dreams were of the wilderness and a fairyland inhabited by all manner of wild creatures and wild people like those described by Captain Mayne Reid; a country where the towering moun-

tains wore white caps of snow in midsummer to keep their heads cool, where the prairies were covered with crazy quilts of flowers and dotted with real live buffalo and elk.

If this book succeeds in awakening a love for wild Nature in even a small portion of the American youth it will be counted as a success. Well barbered and manicured Nature, closely shaven lawns and neatly trimmed hedges are perfectly proper in yards to suburban houses, but contact with Nature without a hair-cut and unshaven is what gives strength to one's muscles, brightness to one's eyes, and makes the red blood dance in one's veins. Unfortunately there are many who cannot appreciate mountains destitute of summer hotels, unbridged streams or solemn dark woods, no more than the deaf can enjoy music or the blind the beauties of a sunset, but even the deaf can enjoy seeing mountains and forests, and the blind feeling the fresh stimulating air of the wilderness, and this book of random notes is not intended for people unable to appreciate the handicraft of the Creator, or understand what is meant by

> "He prayeth well who loveth well
> Both man and bird and beast."

So recent is it, since man has acquired his present gigantic mental powers, that his moral character is still infantile in its development and like the giant baby that he is, he is a menace and a source of terror to all the rest of creation.

Grand old Mother Nature has long been misunderstood by her pet child and ever since men

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with prehensile toes, lived arboreal lives capering among the branches in the primeval forests they have looked upon good old Mother Nature as an enemy to be subdued at all hazards and any cost. In this silly warfare waged against our best friend, we have denuded the earth of magnificent forests of valuable trees, unnecessarily destroying and burning enough material to supply our descendants with shade and shelter to the end of the world.

We have greedily sought the oil buried beneath the ground and wasted enough to supply generations of men with light and heat.

We have tapped the veins of natural gas and, like the children that we are, allowed it to burn continuously because it was too much trouble or expense to turn it off during the daytime.

We have annihilated beautiful and useful birds for the trifling temporary income their skins brought us, when sold to our women to be used as grotesque and uncanny ornaments for their dear heads and very much dearer hats.

We have ruthlessly hunted and exterminated animals of priceless economic value for the petty price of their pelts or the savage joy derived from butchering them.

And now we stand with expanded chests crying, Look at the greatness of man, see how he has conquered Nature!

Or we flock to the churches and on bended knees pray that the floods be abated or entreat that rain be sent to slack the thirst of our parched fields,

blaming Providence for results directly caused by our own recklessness in denuding the earth of its natural reservoir—the woodland.

Where the banks are covered with forests the snow melts slowly in the spring, but where the trees have been cleared away, the waters come suddenly and with a mad rush, leaving devastation and ruin in their wake!

But do not think that I am pessimistic, for I am a loyal optimist. What I am trying to show is that we are prodigal sons, and although we may yet have to do our stunt as swineherds we even now have a growing consciousness of our sins and will repent in time to save some of our great and incomprehensible inheritance.

Good old Dame Nature is even now patiently looking forward to our repentance and reformation and sits waiting the prodigal's return, with a large and fatted calf for our delectation.

But we cannot hope to reach this practical common-sense view of the situation by reason alone. Sentiment has ever been a more powerful incentive to action than reason, and I am glad to see that sentiment seems to be now turning people to a tardy appreciation of nature and the grand natural resources of our great continent of America.

A WILDERNESS IN NEW YORK CITY

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CHAPTER I

A WILDERNESS IN NEW YORK CITY

BOB-WHITES, WOODCOCKS, MUSKRATS AND OWLS TO BE FOUND WITHIN THE CITY LIMITS—EMPTY BIRDS' NESTS REMODELED AND USED BY WHITE-FOOTED MICE—WHITE-FOOTED MICE AS PETS—THEIR FOOD AND NESTS

In these days of trolley-cars, for a nickel anyone can visit the country, and even find small spots of real wild land.

It is a mistake to suppose that because you live in a city, a long journey is necessary before you can see a real wilderness.

On a pleasant afternoon, in the spring or summer, take a trolley-car and before long you will probably pass some neglected marshy land; stop the car, get out and walk to the swamp you just passed, and, if you are not afraid of wet feet and torn clothes, enter. In five minutes' time you have not only lost all traces of civilization, but all signs of the presence of man.

The trees, whose interlocking branches conceal the sky, might well be a thousand miles from any human habitation.

The almost impassable thicket of green briar, the festoons of cable-like wild grape-vines, the

rushes, the treacherous bog under foot concealed by a carpet of soft mosses, coarse grasses, and rank green skunk cabbages, is just the same in appearance as it was when the occasional tracks left by the moccasined feet of the red man were the only signs of human life in the vast wilderness of a continent!

You are face to face with Nature. Not in her most entrancing form, but always wonderfully beautiful when unmarred by the hand of man.

Here within sound of the screaming locomotives the woodcock rears its persecuted family. Here timid Bob White has found a temporary retreat, and even ventures to whistle, in a subdued tone, his well-known call to his dapper little mate as she sits on her scores of pretty white eggs.

Close by the inoffensive muskrat gnaws contentedly at a root; the bullfrog bellows forth his sonorous notes; red-winged blackbirds, robins, catbirds, hawks, and owls build their nests and rear their young undisturbed by the dreaded small boy. The gray squirrel bounds among the branches overhead, and the beautiful little flying squirrel peeps from its hole in the red cedar, all as if the noise and smoke of a great city were not within hearing and sight but for the dense underbrush. Just such places exist inside the corporation lines of New York City.

The poison sumac and thorny vines form a barrier which leaves no charms for the small boy and past which few pot hunters venture. The

local sportsman is content to wait until Bob White and woodcock families are old enough to venture out of their retreat and be murdered in the most approved style of the war of extermination. It is in such neighborhoods that the

WHITE-FOOTED MOUSE ABOUNDS.

If you visit the swamp early in the autumn when the white-throated sparrow is whistling his plaintive, tremulous call, you will find the scene changed. Mr. Woodcock and all his family have left or been killed; Bob White and family have shared the same fate. The winds have stripped the trees of their leaves, and the frost has changed the grass from green to brown. The thickets and trees are gray and bare in the swamps, and the

EMPTY NESTS

of the blackbird, robin, thrush, and greenlet are now plainly discernible as dark objects against a leaden sky.

Did I say the nests were empty? So they appear at first glance, but an examination will show that some new tenant has been altering these summer houses and refitting them for winter quarters, that is all of them that are not more than five or six feet above the earth.

In some sections of the country it will be found that every birds' nest near the ground is filled with the down stolen from the cat-tail in the neighboring swamp, or with dry lichens or moss,

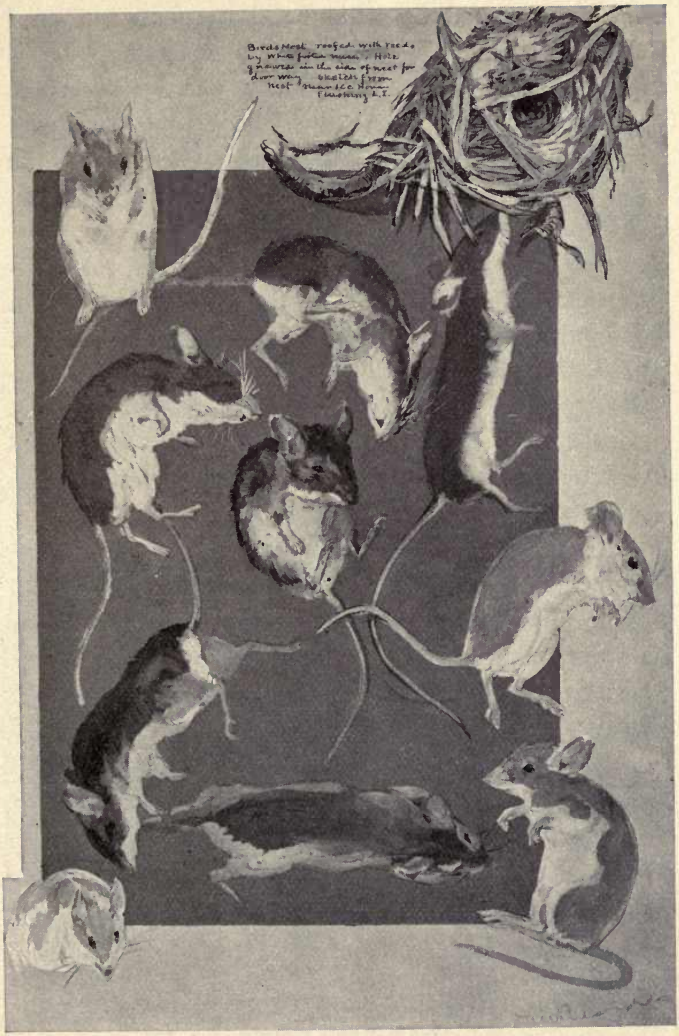
gathered from the bark and roots of the trees, and your curiosity will be aroused and you will wonder what accident filled all these birds' nests; but, when you attempt to investigate more closely and by chance touch the branch upon which the nest rests, you will probably be surprised to see a little brown animal pop out of the nest, run up on the end of the branch and sit there looking at you with his little beady eyes as if he were inquiring why you interrupted his slumbers.

Should you care to venture through the cat-briers and if you are not deterred by fear of the poisonous sap of the white sumac, you may be rewarded by seeing many of these nimble-footed, bright-eyed little tenants of last year's birds' nests, as they leap from their cosy quarters, alarmed by the rude swaying of the branches upon which their hanging home rests. If you are a true woodsman, and know how to assume a pose in which you can keep perfectly quiet and still for a long time, you will see little white-footed mice run back to their homes, where they may easily be captured by placing your handerchief over the nest and taking the house and tenants together.

One Sunday I examined twenty or more birds' nests that I found in the low bushes of a bit of swamp land, only two of which had not been

REMODELED BY THE LITTLE ARCHITECTS.

I made careful sketches of these nests, reproductions of which accompany this article. One



WHITE-FOOTED MICE AND ROOFED BIRD'S NEST

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nest has been filled with the down from the seed stalk of the cat-tail. Under this warm coverlid little White-foot can sleep snug and warm in the frostiest weather. Another nest that has been lined and roofed with moss has a doorway at the top and near the eaves, so to speak, furnishing an entrance and exit for the occupant.

Like their cousins, the flying squirrels, these little mice can not stand wet and cold, and, after a driving rain, they are not infrequently found dead upon the ground. Consequently, when the damp snow covers the top of their nest and the sun begins to melt the snow the mice crawl out and make their winter homes under the roots of trees and the stone walls.

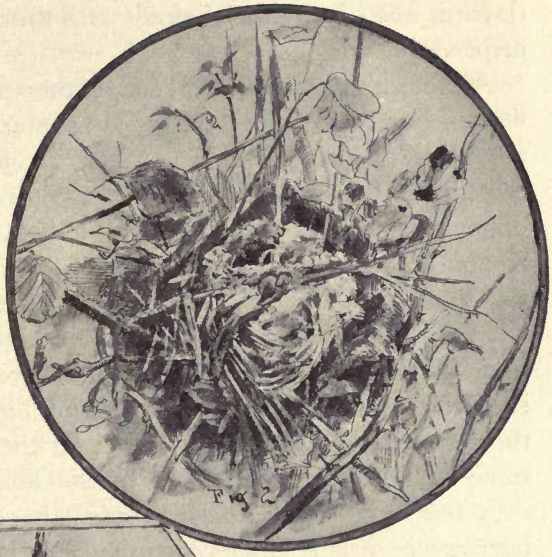
It sometimes happens that some mouse is more ambitious and more ingenious than the rest of his kind. In the Borough of Queens I found a nest, shown in the corner of the accompanying leaf from my sketch book, which had been roofed over with

A THATCH OF RUSHES

and a door made on one side for an entrance and exit of the little squatter. This nest is in the National Museum at Washington, where I sent it some years ago, and, as far as I know, is unique. Usually the little rodents are satisfied with

COVERING THEMSELVES WITH A WARM HEAP OF CAT-TAIL DOWN,

moss or the finely shredded inner bark of the cedar



Birds Nests adapted by Mice for Autumn Homes
Drawn from Nature

Fig 1 Nest near Millpond; cup filled with down from cat tail. No entrance, mouse digs down and then covers himself
Fig 2 Nest in Parsons Nursery cup filled with Moss, hole at one side for doorway.
Dan Beard

FROM WATER-COLORED FIELD SKETCHES

trees; in this warm material they sleep during the daytime and occupy their homes until the first snow comes.

Although Audubon describes nests made by white-footed mice "with nearly as much art as the nests of the Baltimore oriole," I am quite certain the little four-footed artisans in my immediate neighborhood seldom, if ever, take the trouble to build their own houses, much preferring that some other architect shall do it for them.

I have found white-footed mice occupying the nests of flying squirrels in red cedar trees; have seen them scamper from all kinds of birds' nests that are located within arms' reach of the ground; have found their storehouses in the hollow rails of a fence; have dug the little animals out of the burrows of other small creatures; and have even caught them housekeeping in the walls of a round-topped muskrat's hut situated in the center of a frozen pond. Central Park probably shelters a number of these little animals. A very superficial survey disclosed one catbird's nest that had lately been occupied by deer mice. Unlike the common house mouse,

THE WHITE-FOOTED MOUSE HAS NOT BEEN DEGRADED

and contaminated by living with the lords of creation; on the contrary, it avoids the habitation of man, preferring the sweet nuts, seeds, and berries of the woods to the refuse of the kitchen.

Although it will eat Indian corn and grain of all kinds, such material appears to form but a small part of the mouse's diet. I have examined many storehouses of the white-footed mouse, and never yet discovered either wheat or corn in them, notwithstanding the fact that the stores examined were many of them located in the thickets bordering both corn and wheat fields.

When Indian corn is left standing in stacks late into the fall or winter, I must acknowledge that the good judgment of the deer mouse often causes it to select the stacks for a place to locate its winter residence; the perfect shelter, abundant food, and soft silk for nestmaking offer inducements not to be overlooked by such a practical mind. The damage done the farmer, however, is so slight as not to be worthy of attention. As a pet the white-footed mouse will be found to possess a timid and gentle nature, which, combined with his small, agile, form, brown back, white belly, delicate pink and white feet, and large, lustrous eyes, will seldom fail to win the affection of any one who cares for him. The pair that were captured in the muskrat house made willing captives, and lived contentedly in a high narrow cage built for them of wire netting.

A NEST OF THE SUMMER YELLOW BIRD

still resting in the fork of maple in which it was originally built, was fastened by wires to the side of the cage near the top. The mice took imme-

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diate possession of the nest, and used it as a dormitory until spring; but while the buds in the orchard and woodland still imprisoned the blossoms, and before the first swallow had made its appearance, my little captives destroyed the bird's nest and gnawed off a portion of the window curtain that accidently fell against the cage, and with the material thus obtained they built a globular house on the green sod at the bottom of their cage. In the subcellar of the new dwelling an interesting family of little ones was born. The instinct, reason, or automatism of the mice taught them that the bird's nest would be too small for a larger family, and with commendable common sense they erected a more commodious, though less poetic, abode on the ground.

The ingenuity that the deer mice display in adapting and remodeling such shelter as they happen to find, to suit their own wants, is to me more wonderful than the common instinct which teaches the Baltimore oriole to reproduce the same nest year after year automatically like the bees when they build their geometrical honey cells.

CHAPTER II

ALONE IN A ROOM FULL OF RATS

THREATENED BY A RAT, NOISY RATS, ENGLISH RATS, BAD RATS, DANGEROUS RATS, SEWER RATS—POLL PARROT WHIPS RATS IN FAIR FIGHT—SINGING MICE—THE FAMILY OF BEAUTIFUL PESTS, FLYING SQUIRRELS, THEIR NESTS IN A STOVE-PIPE, IN TROUSERS AND IN BOOTS—FLYING SQUIRRELS IN WINTER —AN ALBINO FLYING SQUIRREL WITH PINK EYES.

Being curious to know how and for what purpose the Norway brown rat, which infests our stables and houses, makes such a terrible rumpus after dark, I visited a certain summer kitchen, one night, that had the reputation of being haunted. The room had a brick floor, board walls, a common iron sink with hydrant, and a flight of wooden steps leading from the house proper, to the paved floor.

There was a gas-jet in the summer kitchen. After lighting this, I seated myself upon the steps and waited for the ghosts to appear; I had long since learned that by keeping quiet and immovable one can disarm the suspicions of the most timid creatures, and I reasoned that since ghosts never appeared in daylight and always fled at the crow of a rooster, they must be exceedingly shy. I had not occupied my seat very long, before I saw a

bewhiskered nose peeping from one of the numerous rat holes, where the board walls met the paved floor.

As I had anticipated the ghosts lived in rat holes. But before any of them emerged there were numerous small vibrating noses to be seen at the entrance of many of the dark passages, which led into the earth, below the bricks. For some time the ghosts were content to keep their stations in their doorways and watch the big intruder with their beady black eyes. At length, right from under the steps where I was sitting, a great grizzled old male rat appeared; he was evidently a veteran and the scars about his face and ears told in an unmistakable manner the tale of many a fight.

THE GRIZZLED OLD WARRIOR

not only showed no fear, but was impudent enough to openly threaten me; he did this by making short jumps toward my feet, all the time emitting a noise which I can only imitate by placing my tongue against my front teeth and sucking it away. The nearest I can come to spelling the sound is s-t-u-t. Several times in fear, that the pugnacious rodent might really attack me I shook my foot, and caused him to retreat. My attention had been so occupied with this impertinent old rascal that I had entirely forgotten the ghosts, until the noise made by the upsetting of a tin basin reminded me of their presence and caused me to look around the room. I was amazed at what I beheld.

It was a sight that would have pleased the Pied Piper and warmed the cockles of his heart. The room fairly swarmed with rats. There were big rats, little rats, and half-grown rats. For an hour or more I sat upon those wooden steps and watched the circus. The boisterous play of these creatures made me understand how it is possible for such small animals as rats to make so much noise in an attic or a vacant room.

One rat ran up to the top of the broom handle; the broom was standing in the corner by the sink, resting partly against the sink and partly against the wall and no sooner had the rat done this than another rat followed. Then all the rats seemed to be possessed by a desire to occupy the pinnacle of the broom handle and so they swarmed up and up until the brown mass at the top made the broom topple and fall. In falling it hit a lot of cooking implements and a large dish-pan and brought them down with a bang and a crash upon the brick floor, but the rats seemed to take this as a matter of course and showed not the least alarm. As soon as they landed on their feet they immediately set about finding some other means of entertainment. They pulled every movable thing over the floor, back and forward; they took an old newspaper and yanked it from one end of the summer kitchen to the other. One of them found a chicken bone and then ensued a wild race around and around the kitchen. They indulged in phenomenal leaps; they tried to scale the walls by run-

ning up them at the corners; they upset more tin pans, and only disappeared when I clapped my hands and stamped my feet. The big old male rat being the last to enter his hole, did it only after a slow retreat and a continuous scolding, stut! stut! stut!

ENGLISH RATS.

An old gentleman in speaking of his school days at the celebrated Eton school in England, said that sixty years ago, the sixth form boys were accustomed to eat their supper in the "Long Chamber," where the rats were very plentiful and would come trooping out at supper time from their holes in the wainscot to feed on the food thrown to them by the boys.

WHEN THE RATS BECAME TOO NUMEROUS

the boys, while the rats were feeding, would send their fags to stop up their holes with stockings, so as to trap the rats in the following manner: after the stocking foot and leg was thrust in the hole and the opening at the top of the stocking carefully spread open and fastened there and all was ready the boys would stampede the rats. The rodents, of course, would make for their holes and dive into the fags' stockings, which were then withdrawn and the rats killed by banging them against the bed-steads; after which the poor fags *put on the stockings* and wore them.

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During the summer of 1858, while school was closed, workmen tore up the floor of the "Long Chamber" and removed two large cart loads of bones which the rats had carried down their holes and deposited beneath.

RATS ARE DANGEROUS

under certain conditions. Every one is familiar with the expression that "even a rat will fight when cornered," but from all accounts it does not seem to be always necessary to corner the animals in order to make them fight. When I was in the city engineer's office of Cincinnati, the sewerage engineer's office adjoined ours. The surveyors from the latter office frequently had to enter the sewers and they never did so without going armed with revolvers to protect themselves from the big rats which infest these places.

THE BITE OF A RAT

is exceedingly dangerous, probably because the rat's teeth are coated with all manner of vile stuff which produces blood poisoning. My brother, James Carter Beard, was once bitten by a Norway brown rat through the finger, and his arm became very much inflamed and swelled, from the hand to the shoulder, to the serious alarm of our parents and physician.

THAT RATS WILL ATTACK YOUNG CHILDREN

is only too true. Recently two children of Bos-

ton were bitten by sewer rats, probably fatally, and a little baby boy in Brooklyn, four months old, had his finger badly chewed before his mother could rescue him. Instances are not wanting of full grown men being bitten while asleep or even attacked while awake by rats.

A man in Washington who attempted to sleep in a cellar, only escaped from the hungry rodents after he had received more than a hundred wounds.

A man in Philadelphia entered a brewer's grain pit and before he could be rescued from the rats his body was covered with bloody wounds.

A farmer's boy of East Berlin, Pennsylvania, uncovered a lot of rats while tearing up the barn floor, and although he succeeded in killing a dozen or more, the rats made a fierce fight, and when friends found the boy he was unconscious from loss of blood.

A policeman in New York was badly bitten on the leg by a big sewer rat which he attempted to hit with his club.

A man in Brooklyn made a kick at a rat he saw running across the sidewalk, and when the ugly creature fastened its teeth in his leg he learned to his sorrow that rats will sometimes fight. The newspapers of the day have frequent accounts of rats fatally or seriously wounding human beings and, after making due allowance for the "enthusiasm" of reporters, there will be still sufficient evidence to rank the rat among dangerous animals and to induce us to use due caution when forced

WATER-COLOR SKETCHES FROM NATURE

1.—Left hind foot of common house mouse.
2.—Left hand of common house mouse.
3.—Common house mouse.
4.—White-footed mouse with young.
5.—Left foot of white-footed mouse.
6.—Left hand of white-footed mouse.
7.—Side view of white-footed mouse.
8.—Front view of white-footed mouse.
9.—Under side of white-footed mouse.
10.—White-footed mouse after being drowned in a plate of soup.
11.—Common "Norway" Brown Rat.

to come in contact with the disgusting rodents which inhabit our cities and houses.

A Flushing rat made the mistake of his life in attacking a parrot belonging to a neighbor of mine. There was a terrible rumpus.

POLLY USED VIOLENT LANGUAGE

and more violent measures to defend herself. She lost some feathers and got some scratches, but she must have ripped that rat up in a heart-rending manner, for the cage was bedaubed with blood and a trail of gore led across the dining-room floor, through the kitchen to a large rat hole where it ended. It was a record, bearing mute testimony to the ability of Polly to take care of herself even when attacked by a midnight marauder.

Mice are more interesting than the big dirty rats and when one meets

A SINGING MOUSE

one has indeed a novelty.

A correspondent to the London *Daily Mail* writes about a singing mouse; he says that it has "been warbling just like a canary." Another man writing to the Indianapolis *News* tells of a singing mouse which he caught and kept in captivity. A dispatch to the Cleveland *Plain Dealer* tells of another man who also caught a mouse which he claimed "whistled and sang like a canary." Personally I know of only two singing mice, one was

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in a house of a relative of mine in Ohio, and one in my own home on Long Island. It is claimed by some writers that singing mice are afflicted with bronchitis and that what we call singing is only the wheezing of the invalid mouse. Whatever the cause may be the noise they make, as I remember it, has stronger claims to be called music than have many of the so-called songs of our native warblers.

From various reports it appears that,

LIKE GREY SQUIRRELS AND LEMMINGS, RATS SOMETIMES MIGRATE.

In 1904 reports came from Illinois that certain rural districts had been visited by swarms of rats, one farmer having killed on his own place, three thousand four hundred and thirty-five of them without apparently diminishing their number. Rats' skins are reported to have some value, and when tanned are said to be used for the thumbs of fine kid gloves, while the whiskers of mice are used in manufacturing expensive flies fancied by anglers. But if these rodents were of any great value we would soon find means of exterminating them. The good they do as scavengers is hardly of enough importance to entitle them to a credit mark, and, on the contrary, the harm they do in spreading the plague and other diseases is in itself sufficient reason for a war of extermination. We may exterminate beautiful birds, the dainty prong-horned antelopes, the magnificent and stately bison, but rats and mice will probably

last as long as the human race—safe because of their lack of commercial value.

Both the house mouse and house rat are disgusting degenerates, and while every living animal is a thing of interest, it is the wild creatures of the wood and field that excite our enthusiasm and not the parasitic animals which infest the cities.

All of us who spend part of our time living in the woods know that fairyland is around us and that we have for neighbors

REAL LIVE BROWNIES

who work strange deeds at night in the sleeping woods.

From her hole in the old chestnut tree

FANNY FLYING SQUIRREL

watched the sturdy lads "snaking" logs through the grove, and she saw them roll the logs up skids until the pile took on the form of a house; the little squirrel waited until the house was all finished, and then she passed the word to the wood brownies, and they all moved in! The bats took up their quarters between the logs of the second story; the red squirrels between the logs of the first story, the white-footed mice and large wood rats in all unoccupied nooks.

The Phoebe bird took possession of a projection over the kitchen door, the robin built its nest

THE WOODCHUCK UNDER THE HOUSE

on the soap shelf by the towel rack; the black-tailed hornets defied the paper trust and built themselves a paper balloon under the apex of the eaves; the woodchuck satisfied himself with a home under the kitchen floor; the bumble bees occupied an auger hole in a log of the areaway, and Fanny Flying Squirrel found a fine place on top of the frame of the bedroom window.

All seemed to think that the log cottage was built especially for them, and at first resented human intrusion; but after a while, even the hornets would fly about in the most friendly manner, catching the flies on the dinner table or even picking them from off one's nose or hands.

None of the wild creatures can be taught the sacredness of property rights; they are all born

SWEET DEATH OF A MOUSE

communists, and believe that all forms of wealth are public property. This belief often produces dire results to the brownies themselves, for instance morning after morning the milk was given to the dog, because he was the only one of the legitimate household who had no objection to

MILK WITH A DROWNED WOOD MOUSE IN IT.

You see the little brownies thought the milk was for them and jumped in to drink, but the pans were deep and the sides were slippery and so they perished.

Once the strained honey was poured out on a flat stone for the benefit of the wild bees, because a white-footed mouse had gnawed a hole through the lead covered cork. The mouse had then fallen into the honey and perished, but its remains were preserved by the sweet liquid.

The wood mice did not eat our fish, but they often took them from the plate in the cellar and hid them where they could not be found until our noses told the secret of the hiding place. The little brownies once unwound a ball of twine and draped it all around the room, making a half hitch or two on a hunting knife and a pipe, without dislodging these objects from their insecure perch on the narrow edge of a board. They also took all the tacks from a new package and neatly stowed them away in the egg shells kept for settling the coffee.

But it was when the offspring of Fanny Flying Squirrel filled the house that the real trouble began.

THE MOTHER SQUIRREL

was content at first with making her nest from the tufts of cotton nibbled from the mattresses. This first nest she made over the bedroom window. Determined to evict the little nuisance, I climbed on top of a kitchen chair, which was insecurely balanced on an unsteady washstand, and looked into the little home.

The mother squirrel poked up her pretty head inquiringly from beneath the soft nestling material,

and when I gazed into the soft big eyes of the little animal, all the annoyance and anger in my heart melted away. The chair tilted as I attempted to descend, and I came down with a crash, smashing a mirror, spraining my wrist and barking both shins, but I left Fanny Flying Squirrel in undisturbed possession of her claim.

That was the greatest mistake I made about my log house. The flying squirrels have multiplied and increased, and continued to increase in number, in spite of the fact that each year I capture as many as I can and send them away to friends in different parts of the country for pets. Flying squirrels make most beautiful pets, but they are worse in a house than the so-called Norway brown rats. Rats can't fly.

One season, in company with a friend, I fished the brooks on the way to Wild Lands. My friend said he would clean the fish if I would be cook. The house had been closed all winter and after opening the doors and windows I split some wood and built a fire and then ran outside to breathe, for the smoke filled the room. My friend said that the chimney was cold. He said as soon as it got warm the smoke would go up. In the meantime the smoke refused to go up, but filled the kitchen, and when that was full, streamed out of the windows and doors. But never a whiff went out of the chimney. My eyes and throat smarted, my lungs were raw, tears bedewed my cheeks. I was covered with ashes, and my face was blackened;

WILD LANDS—THE HOME OF FANNY FLYING SQUIRREL

in desperation I climbed to the roof and, with a long pole, felt for the obstruction in the chimney —there was none there.

After building a dozen fires and extinguishing them again, I called my friend, and together we took down the stovepipe and found that the space from the elbow of the pipe for three feet was

PACKED WITH FINE CARDED WOOL

made from raveling gnawed from the dining room rug. In this warm, smoke-proof nest we found Fanny Flying Squirrel, and as usual there was a family of little ones with her. We spared the old mother and nursing babies, dumping them carefully into a cracker box. It was nine o'clock that

night when two hungry men at last sat down to a feast of crackers and trout.

Not long after this adventure, the log house at Wild Lands was filled with a merry company of city people—people with all

THE CITY FEAR OF SOLITUDE

and a firm belief in the existence of terrible blood-sucking bats, long-toothed venomous serpents with a miraculous power of charming their intended victims, implacable hoop snakes and poisonous swifts.

As night approached the fear of these things crept over the guests, and they retired to their cots trembling. Through the chinks they could see the stars twinkle and they knew that a hypnotically inclined snake would choose just such an opening through which to reach its victims.

Scarcely had the visitors closed their eyes for slumber when some live thing fell with a sickening thud on the chest of the most timid guest; it is fortunate her heart was sound or it would have ceased to beat.

Hardly daring to breathe, much less to scream for help, the frightened urbanite lay quiet. How heavy the serpent's coil seemed to be! Gradually her eyes became accustomed to the darkness, and then she saw that the cause of her fright was only pretty Fanny Flying Squirrel squatting on the coverlet washing her face with her little hands.

Every summer evening, after the sun ball has sunk behind the hill across Big Tink Pond, and the hoot-owl and whippoorwill have begun to talk, a shadow-like object is seen to sail from the apex of the roof down into the gloom; more phantoms follow, until at times there are several in the air at once, and we know that it is Fanny Flying Squirrel and her living parachute descendants departing for the night and we may sleep for a while in peace.

But with

THE "WOLF'S BRUSH,"

that pale gleam of light which precedes the dawn, on the eastern horizon, the bright-eyed little aeronauts return from their night's frolic and thump! thump! their bodies strike the shingles overhead and patter! patter! go their little feet scampering over the roof.

Within five or ten minutes from the first thump heard on the shingles the last little imp has returned, and one may hear them in all the gloomy, mysterious corners rustling about as they settle themselves for a long summer's day nap. They wake up again at dusk of the following evening, when, if it is fair, they sally forth, but on rainy or stormy nights they do not go out.

An ordinary rat trap will not confine a flying squirrel, for so flat is its beautiful little body that by using the force of its muscles it can spread the wires apart far enough to escape. I always use my hand, usually protected by a glove or some

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similar object, and catch them with that. I caught nine, in that way, in one night.

Sometimes I have turned down the bedclothes and jumped into bed to alight upon a bunch of cracked nut-shells, acorns and seeds.

A recent writer in a popular out-doors magazine says that the flying squirrels hibernate, but this very winter, with the mercury at times fourteen degrees below zero, the flying squirrels were lively as crickets in my log house and their tracks could be seen in the deep snow on the roof, where they plumped down from a chestnut tree and then scampered to the opening in the roof by the chimney. A few years ago I saw a flying squirrel hopping across our lawns in Flushing, during a driving sleet and snow storm and afterward found its dead body in a hollow shade tree.

One summer the mistress of Wild Lands took on one of those spasmodic fits of cleaning peculiar to her sex, and seizing a pair of canvas trousers she and the maid began to give them a vigorous shaking. The blood curdling screams which followed brought every one within hearing to the spot, and they saw mistress and maid facing each other and doing a wild fantastic dance, accompanied by a swinging of their arms and ear-piercing shrieks.

A dozen or so frightened little flying squirrels were scrambling over the bodies and heads of the dancers or sailing across the intervening space from maid to madam and from madam to maid.

There were four pockets in the trousers and each pocket contained a flying squirrel nest. That night the maid put

PEPPER AN EIGHTH OF AN INCH DEEP OVER ALL THE RUNWAYS

frequented by the squirrels, but the only effect was to make the little imps keep us awake with their high-keyed sneezing.

A SNOW-WHITE FLYING SQUIRREL

One afternoon while sitting on my front piazza in Flushing, I noticed that the people passing seemed to be interested in some object on one of the large maple trees in front of the house. At last my curiosity was so much excited that I got up and went out on the street to investigate and discovered a couple of flying squirrels scampering up and down a tree trunk. Flying squirrels are, however, too common among the shade trees of old Flushing to cause much attention, that is, ordinary, every-day flying squirrels, but while one of these was of this sort the other was as white as the driven snow, and had pink eyes. The two squirrels played among the trees all that afternoon from about five o'clock until after dark. They would sail from the top of one tree diagonally across the street to the trunk of another tree, run up that and launch themselves into the air for a long tobogganing slide down that thin substance

until they struck another tree 150 or 200 feet away. I ran upstairs and got a landing net from my fishing tackle outfit and attempted to capture the beautiful little animal, but soon discovered that I was giving it a fatal notoriety, for, like magic, small boys appeared and with sticks and stones and baseball bats engaged in the chase. As soon as I realized the increasing danger I put up my landing net and calling the boys over to the house distracted their attention by showing them certain other things of interest to boys. In the meantime the flying squirrels disappeared in the shadows of the tree top. A night or two afterwards a man living several blocks away set traps in an old oak tree, a very old oak tree, the only survivor of the group which shaded the Quaker Fox when he preached on Long Island. The next morning the man found the albino squirrel in his trap and taking it down to Manhattan sold it to the former editor of *Recreation*. The animal was placed in an ordinary squirrel cage near by one occupied by an albino fox squirrel. The windows of the editorial room were left open as the weather was warm and in the morning the flying squirrel had made its escape. What was the final fate of the beautiful little creature, I do not know, but it was probably killed by some prowling city cat.

CHAPTER III

HAIRY-TAILED PACK RATS

ORIGIN OF THE NAME—THEY LOVE NOISE AND MISCHIEF, EXCITE FEAR AND MURDER—TRADE, WOOD AND MOUNTAIN RATS—JIM THE TRAPPER AND HIS FOUR-FOOTED FRIENDS—PRANKS OF PACK RATS—THE LEGEND OF PADDY PACK RAT'S TREASURE TROVE

There is a big hairy-tailed rat to be found in the Rocky Mountains which is one of the most interesting little animals in America. Scientists call it a Neotoma, but it is locally known as the

PACK RAT,

mountain rat, wood rat, and trade rat.

To explain the reason for this first name to the Eastern readers, it is necessary to call their attention to the fact that in a new and unsettled country baggage and luggage of all kinds must be carried on one's own shoulders, or on the backs of animals. Of course one cannot carry things on one's back without making them into some sort of a bundle or pack, hence the men on the trail who attend to loading the horses and mules are called packers, while the animals themselves are known

as pack animals, from this it is an easy step to substitute the word pack for the word carry.

Thirty years ago, in all parts of Kentucky, the word *pack* was commonly used for carry and the people *packed* their bundles and baskets. Even the school children *packed* their books to school, the *pack* having survived from the time when Kentucky was first settled and when household goods and personal baggage were brought into the state on the backs of men and animals. The word may not now be generally used in this sense in Kentucky, but it still is in the Rocky mountains and through the Southwest and Northwest. Wherever the hunter or prospector is found the word pack is used in the place of carry, hence,

A PACK RAT IS A RAT THAT CARRIES THINGS.

The trappers hate these little animals because of their mischievous pranks and they one and all kill the rats at every opportunity. I could fill this book with the wonderful stories that are told about this rodent. One trapper, a friend of mine named Jim, has a snug little shack in the Cascade mountains, and Jim confided to me that he had not killed a pack rat in a long time.

This was not because of the scarcity of pack rats in his neighborhood, for every night they pulled his things about or selecting a loose spot in his roof they would stamp on it with their little front feet and make the big shingle rattle with a loud noise. Next to packing things about, if there is

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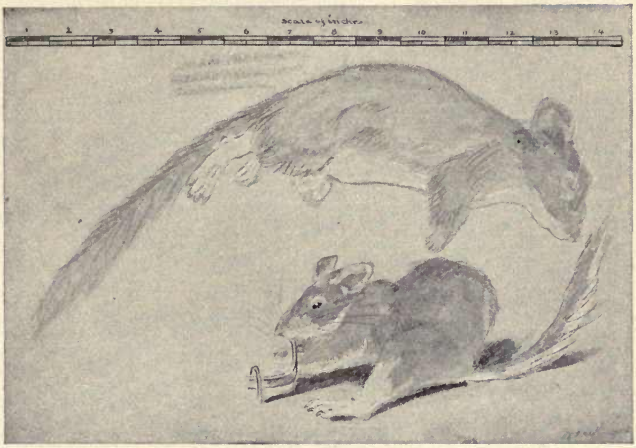

DEAD PACK RAT, OUTLINE TRACED FROM THE ANIMAL, AND LIVE PACK RAT WITH FEET IN A TRAP

anything these rats do love better than their own little souls it is to make as much noise and racket as they possibly can; still Jim the trapper would not kill the rats. When Jim found his boots filled with an assortment of pebbles, and garbage intermingled with the buttons from his clothes, he would say things which should never be repeated much less printed, but still the rats lived in his shack unharmed.

This conduct on Jim's part was so divergent from the character of the man, as I knew him, that it needed some explanation. I do not mean that it was at all unusual for him to use strong language when the spirit moved him; but I do mean that it was very queer that this man, who spent his life killing things,

SHOULD HESITATE TO KILL VARMINTS LIKE PACK RATS.

In due course of time I learned from the trapper himself the reason of his strange forbearance. It seems that the winter shut down on the mountains and caught Jim the trapper short of a supply of tobacco. There was a party of government surveyors camped near him in the mountains who kindly gave Jim a chew of tobacco whenever he asked for it, but they refused to sell or give him any considerable amount of the weed and would not under any circumstances supply him for his winter needs. The surveyors were many miles from the trading post and only had enough for their own use, and they did not expect to visit a post before spring time.

One day Jim was desperately hungry for a bite of tobacco, but consoled himself with the thought that as soon as he reached camp he could beg a chew; but what was the trapper's dismay upon arriving home to find that the topographical men had departed during his absence, for parts unknown. Several days had passed since the surveyors had left, during which time Jim had chewed the bark from numerous sticks of red willow, but it failed to satisfy his cravings and he was growing desperate. He had about made up his mind to take the long solitary tramp necessary to reach the trading post, but before doing so he thought he would set some traps in the bed of a stream. To protect his feet from the cold slush

SKETCHES OF PACK RATS MADE AT LAKE CHELAN, WASH.

and mud he took down a pair of rubber boots which had been hanging for months to one of the rafters over-head. Jim was not at all surprised upon discovering that one boot was unusually heavy—he was accustomed to have the pack rats fill his boots with any material they could find—so with a muttered something which was not a prayer he dumped the contents of the boot on the floor.

The sight of the contents of the boot caused the old sinner to dance around the shack and shout for joy. The pack rats *had taken all the surveyors' plug tobacco* and packed it neatly away in the long hip boot, giving Jim a bountiful supply of his dearly beloved weed and more than enough to last him through the long winter months. I do not vouch for the truth of this story, but from what I know of rats it does not seem an improbable one. They will steal a man's box of pills, carry them to a neighboring camp and leave a dead bird in their place. They have been known to carry off every kind of small article to be found in mountain camps and cabins. The reason they are sometimes called

TRADE RATS

is because of their habit of leaving something in the place of the thing they take away.

A great many stories have originated from this habit of the pack rat and many writers pretend to believe that the hairy-tailed rats are really bent

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upon making an honest trade, but of course this is not true, the rat finds some object, picks it up, and starts to carry it away; during its journey it comes across some other object, which, for some unknown reason, appeals to its fancy, so it simply drops the thing it has and takes up the other object and thus gets the reputation of being too honest to steal. and of making an attempt to pay for everything it takes. Here are a few reports of

PACK RAT PRANKS:

A paste pot was left over night in the assay office of the Silver Queen Mine; when the office was opened in the morning the paste was gone, but the pot was filled with a number of articles, among which was an unbroken glass funnel, the end of a stick, a bit of rope, some scraps of wire, and numerous other similar articles. The pack rats had been busy that night.

A man who was building a shanty in Pueblo sent to Denver for a keg of nails, he knocked out the head of the keg and let it stand over night. In the morning the keg was filled with table knives, spoons, a lot of pebbles, fragments of a buckskin glove, a set of false teeth, and a tin saucer, but there was not a nail left in the keg. The man who lost the spoons found his floor strewn with nails; the man who had lost the buckskin glove found in its place a woolen sock, and the prospector who left his false teeth in a cup of water found in their

place a cup full of nails. The proprietor of the nail keg by diligent work got back about half his original supply of nails.

This all sounds very funny and humorous, but in the early days when men were quick with their guns, a thief's life was often a short one, but not always merry. The hills were full of men who came there to search for gold and who had never heard of or seen a pack rat. It is said that many a bloody tragedy was probably caused by the pack rats taking things of value from one cabin and depositing them in another, and the poor victim with the stolen goods in his shack was given no time for explanation.

Superstitious people have been so

FRIGHTENED BY FOUR-FOOTED MIDNIGHT MARAUDERS

that they have been known to sell valuable claims for trifling amounts in order that they might make their escape from the uncanny neighborhood. It would be interesting to know how much of our old superstitions and beliefs in ghosts, witches, gnomes, and fairies could be traced to the pranks of small animals. But the prettiest legend that I ran across in the West is the one that I heard told as we sat around a camp fire on the shores of the Arrow lakes. I had heard references to it in many parts of the West, so I am led to believe that there is probably a foundation of truth in it. I will tell it to you as I remember it.

A PACK RAT'S TREASURE TROVE. A LEGEND OF THE LAKE CHELAN COUNTRY.

Paddy, the pack rat, and all of the little pink brothers and sisters were born as blind as art critics and as bald as college professors, but, unlike the latter individuals, young pack rats learn to see, in time, and age cures their baldness. Not far from the rats' nest, in a steep bank of treacherous slide rock, there lived a rattlesnake, decorated with dark stripes and spots, the skin of this same snake or one like it is a conspicuous object on my study wall, but its markings approach so closely to the color of the sun-baked stones that a live rattler of this kind is scarcely distinguishable among the slide rocks.

How it happened that the snake ever discovered the rats' nest is uncertain; however, I am inclined to think that, dog like, it used its nose to follow the trail of the mother rat. Even such devoted little creatures as

MOTHER PACK RATS

cannot provide against all accidents, and accidents sometimes happen to their helpless offsprings. Oldtime prospectors and trappers do say that pack rats in the gold mining districts of Arizona protect their nests from snakes by barricades built of prickly cactus.* That this plant does not grow in

*It is possible that the rats do carry the cactus to their nests, but it is also more than probable that if they do so they do it as they would a watch, nails or any other object without any idea of defense.

HOUSE IN WHICH THE PACK RAT WAS CAUGHT IN AN UNBAITED TRAP

the Chelan Mountains near Paddy's home may account for the ease with which the slide rock rattler inserted its body into the cleft in the cliff where the nest was located. By some unexplained accident little Paddy's life was spared, but when the mother rat returned to her home it was to find the graves of all her other children marked by an egg-shaped swelling in the living body of the reptile, which resembled in appearance a Christmas stocking.

The most relentless and bloodthirsty foe of all wild creatures is man and such is the terror usually inspired in their hearts by the presence of a human being, that it is seldom we have an opportunity to witness

THE REAL NATIVE COURAGE

of our wild brothers in furs and feathers. If the old mother rat's body trembled violently and her chisel-like teeth chattered at the sight of the venomous snake, it was not with fear but rather with righteous wrath. With her eyes fixed upon the intruder the old pack rat's body seemed to swell to abnormal proportions. She swayed slowly from side to side and stamped the earth menacingly with her little hand-like feet.

I have often witnessed a snake strike with a rapidity beyond the power of the human eye to follow; but quicker than the movement of the snake was the spring which transferred the mother rat to a perch on the squirming body of the rattler. All in vain did the rasping rattle sound its dry vibrating threat of death; such was the fury of the onslaught that the rodent's teeth not only severed the snake's backbone, but the reptile's head was stricken from its writhing body with the dispatch and skill worthy of a professional headsman.

The initial motive instinct or thought still controlled the snake's body with its dire purpose, and devoid of head, brains or weapons, the horrid thing coiled and struck the rat again and again with the bloody stump of its neck!

Such was the tragedy which left little Paddy sole heir to the horded stores of its parents. When Paddy's eyes were opened he viewed with satisfaction the soft hair which had begun to grow from

HE KILLED PADDY PACK RAT'S BROTHERS AND SISTERS

the tip of his nose to the end of his tail. Pack rats have tails like chipmunks, as you may see by referring to the illustrations, a peculiarity observed by Lewis & Clark's men on July 2, 1804, when they found the first one of these animals ever seen by civilized man. Comparatively few civilized men have seen any of these creatures since 1804, for the reason that only hunters and miners frequent the haunts of the pack rat and the rodents themselves seldom venture out until after dark. The illustration on page 37, drawn from life, will possibly give the reader a better idea of this animal's appearance than a printed description.

It is not its bushy tail alone which makes the pack rat interesting, for its

QUAINT ECCENTRICITIES OF CHARACTER

overshadow the peculiarity of its appearance. No sooner does a camper, prospector or trapper erect his tent, shack or cabin in the rat country than the pack rats are on hand eager for a chance to trade, as I have already said; not only do they exchange their bric-a-brac for food, but any portable object has a value to them, finger rings, pocket knives, buttons, revolvers, iron bolts, pocket compasses, cartridges, watches and keys are irresistibly tempting to pack rats.

As the summer advanced Paddy moved further up the mountain side, where he began a famous collection of curios. About this time it was noised about in ratdom that a prospector's cabin had been erected near Paddy's new home. It is not safe to state just how

THE RATS PASSED THE WORD

around, for it would be certain to be contradicted by my good friend, John Burroughs, but it may be stated that after sunset there was a great rustling among the dry leaves and a swaying of the fringed gentians and Indian paint brushes, showing that the little mountain folks were about that night.

The next night it was very evident that the word had been passed. Scarce had the sun set behind the snow-covered peaks before the little mountain folks assembled to break the dull

monotony of the lonely prospector's life. There was a rat from Lake Chelan with the head of a ling in its mouth; there was a rat from Railroad creek with a half plug of Battle Axe tobacco, another from the Indian settlement with a bunch of blue beads, a rat from the trapper's cabin, five miles over the mountains, with a Canadian half dollar, eager for trade.

Rap, rap, rap! went their front feet on the loose clapboard over the prospector's bunk, but the tired man only mumbled in his sleep and turned over in bed. Rattle-te-bang went a powder can from the rafters to the floor, awakening the sleeper, who reached for his revolver, but seeing nothing, turned to sleep again.

Next morning there was plenty to see—fish heads, chips, bones and pine cones, etc., in place of his knife, fork, spoon and tin cup which he had left on his rude table; but worst of all was the sight of the battered oil can in which he had packed his cartridges. No ammunition was now visible, but in its place was

A CAN OF DIRTY LOOKING PEBBLES.

The angry man kicked over the can and as he did so made use of very many uncomplimentary remarks concerning rats.

With petulant rage, he viciously struck the offending objects with his prospector's pick. As the pebbles flew from the blow the man's expression suddenly changed; he dropped the pick, and for

the moment seemed to fear to move, then he suddenly fell upon his knees, and with hands which shook with excitement, gathered up a handful of the dirty looking pebbles and examined them attentively; after which he gave a wild warwhoop, sprang to the door and fired six shots at the unoffending sky.

Paddy witnessed these antics with the utmost interest and astonishment, and his curiosity was so great that he crept from his hiding place to the unoccupied bunk and was peering cautiously over its side when he found the man's eyes fixed upon him. The man laughed a wild, naughty laugh, which sent the chills down Paddy's back and took from him all power of flight.

When last seen the miner and the rat were inseparable companions; they no longer lived at the edge of the snow fields in the Cascade mountains; a wonderful change had come about, for foolish people had given the lonely prospector houses, lands, cattle and horses in exchange for the dark-colored pebbles which they called nuggets, but Paddy Pack Rat had given these little lumps of gold in exchange for some brass cartridges, and, strange to say, neither Paddy nor the prospector ever regretted the trade.

IF THERE IS ANY ONE WHO CAN TELL

why the bower bird ornaments its playhouse with bits of bright ribbons, broken glass, and pretty pebbles; why the crow and magpie devote so much

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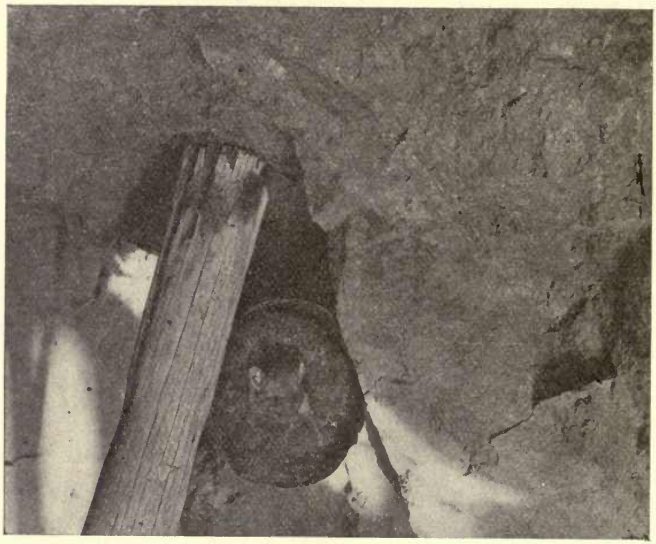


PADDY PACK RAT'S NEST IN AN OLD POWDER CAN INSIDE A GOLD MINE

of their time to stealing and hiding silver thimbles, scarf pins, and trinkets of all kinds, things which they cannot eat or wear, things which, as far as poor human intelligence goes, are absolutely useless to the birds, as useless in fact, as a billionaire's billions are to him; if any one can tell why these birds and men collect these useless things, they may possibly give us a reason for the pack rats' eccentricities.

One pack rat's nest found in an empty house was built of heavy iron spikes, mixed up with forks and spoons, and three large hunting knives, this was not all that was in the pile, for there was a carving fork and steel, several augers, the

parts of a watch, numerous plugs of tobacco, and minor articles too numerous to mention, making a substantial fort if not a soft nest. But the pack rat is

NOT THE ONLY RODENT WITH MISCHIEVOUS HABITS.

Ordinary brown house rats have been known to build a nest as large almost as a bushel basket composed entirely of expensive cigars, and in Connecticut the muskrats robbed a tobacco plantation of growing plants in large quanities. In an old house in Pennsylvania some ten years ago, a rat's nest was found containing a Mexican dollar of the date 1774, a Mexican quarter of the date 1772, and some papers of 1770. A rat in New Jersey was detected in the act of carrying away a thousand dollar bill.

One rat's bed was found in an old house. The nest was composed of money in denominations from $5 up to $1,000. A workman in tearing down another old house discovered a rat's nest made of "butter money" issued by the Bank of Orange County at Goshen, some time before the great Civil War. The nest was at least fifty years old.

But in these cases it must be remembered that the money and even the tobacco and cigars were of real service as good material for the manufacturing of nests—all except the Mexican silver dollar and quarter of a dollar, these must have been

taken by the house rat for the same reason, or lack of reason, which prompts the pack rat to commit its thefts. In this last case, however, it was not the work of the common brown rat, for back

IN 1770 IT WAS THE BLACK RAT WHICH INFESTED OUR HOUSES,

a rat which the brown rats have since almost exterminated.

Even mice have been known to rob a till, and the Florida rat seems to have precisely the same traits as the pack rat. It took a lot of Florida rats only six nights to carry two bushels of shelled beans thirty feet and replace the beans with the empty seed pods. A lady in Florida was dismayed to find a number of seeds in the place of the diamond earrings she had left on her bureau, she knew where the seeds came from and there found her missing ear-rings, but the best joke was on the gambler who found his supply of poker chips replaced with a string of prayer beads and a small crucifix. The devout priest who occupied the next room, however, was greatly shocked to find in place of his rosary a heap of sinful poker chips.

Strange to say the most pestiferous and annoying wild things often make the most delightful and amusing pets. Mr. Charles Frederick Holder once owned a tame pack rat which was allowed the freedom of his room and which he told me was

one of the most amusing of pets. Unfortunately the pack rat from which I made these sketches was so injured by the trap that I had it killed to prevent it from useless suffering. But this is a story in itself and I will tell you about it in the next chapter.

Since the first edition of this book was printed the author has been thoughtless enough, on two occasions, to gather up the double handful of lint and fibers, composing the white-footed mouses' nest, and throw it in the open fire. On both occasions the nests contained thirty-five high-power Winchester cartridges which were not discovered until the bombardment of exploding ammunition began and sent us all fleeing from the room.

Since then all mice nests found in camp are carefully examined before being burned.

CHAPTER IV

JIM THE TRAPPER OF LAKE CHELAN

SKETCHING A MISCHIEVOUS GNOME—NEEDLESS CRUELTY IN SPORT, SCIENCE AND ART—VICIOUS STEEL TRAPS—HOW IT FEELS TO BE CAUGHT IN A TRAP—A MAN IN A TRAP—HOW TO FIX A STEEL TRAP WITH PADS—CHARLES DANA GIBSON, THE ARTIST, AND LANGDON GIBSON, THE ARCTIC EXPLORER, AS NATURALISTS—A SHORT-TAILED MEADOW MOUSE THAT NEVER MISSED A CHANCE—HABITS OF THE MEADOW MOUSE—CATCHING A MUSKRAT BY THE TAIL WITH HAND—BIG RATS IN CAMP—A DANGEROUS CAPTIVE

In the last chapter the Cascade Mountains were mentioned as the place where the particular pack rat, from which the accompanying studies were made, was captured; but it really happened in a wing of the Cascades, known as the Chelan Mountains.

This range is split in twain by a huge crack and between the two halves, at the bottom of the crack, lies Chelan Lake, a long, narrow, deep body of water with steep and often precipitous sides springing up from the water and forming the shore. Wherever a mountain torrent finds its way to the lake it makes a delta at its mouth, composed of boulders of all sizes. These deltas form the only

land level enough for the purposes of a camp or house.

It was in such a place that a trapper had built his little log cabin, a photograph of which, reproduced on page 42, serves as an illustration. There is perhaps no form of playground and romping-place which is more irresistible to a pack rat than a deserted log house, so when I asked

JIM THE TRAPPER

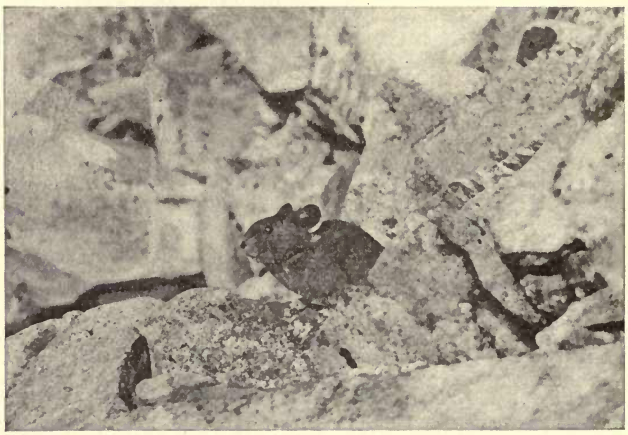
where I could procure a live specimen; I was not surprised when he pointed out the little log house on the shore of Lake Chelan, at the same time saying that he would himself put some traps in the cabin and catch a rat for me.

I always did hate steel traps; they have such a vicious, cruel look and all the appearance of instruments made especially for torture. I asked Jim if he could not set a box trap, but he only laughed at my tenderfoot ideas and said he would get me a rat all right and would not hurt him either. He set some unbaited traps in the old fire-place and the second morning when I paddled up the lake to the deserted cabin and landed among the boulders, I could hear the steel trap rattling around the cabin.

Upon entering the little hut, I saw a large pack rat hopping backwards and dragging the trap after him. Taking the rat and trap to a convenient place, I sat down to make a water color sketch of it. About this time Jim the Trapper came along and detecting a look of pain in my face inquired

with much solicitation if I was feeling ill; I told him that it was not I, but the pack-rat, that was feeling ill and while I was exceedingly anxious to make a drawing of a live pack-rat, I could not work while the creature was suffering so much.

Both its little hands, as the reader may see by



LITTLE CHIEF

the photograph, were held by the vice-like jaws of the trap. Jim threw back his head and laughed boisterously. "Why," he said, "that don't hurt him a bit, it only benumbs his paws so that there is no more feeling in them than there is in your toes when your foot's asleep."

But half convinced, I sat down and made careful drawings of the poor little animal after which Jim knocked it in the head and killed it, and its distorted skin, upholstered by a taxidermist, now occupies a position of honor along with another

unfortunate of the same species on the top of the grandfather's clock in the corner of the dining-room adjoining my studio where I am working; but I have not yet recovered from the guilty feeling I had while sketching that poor rat.

There is a great deal of needless

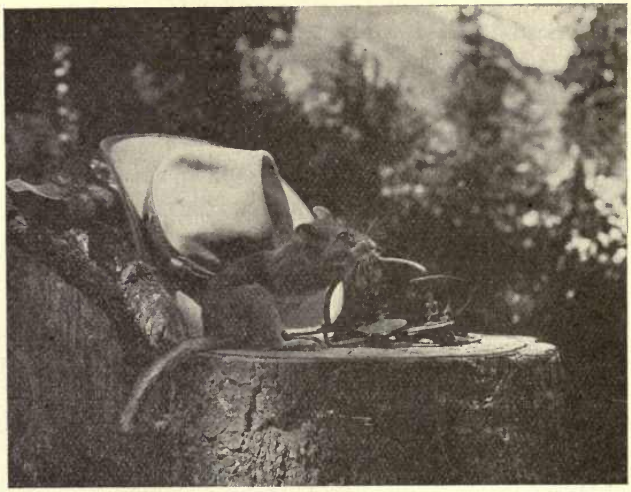
CRUELTY EXERCISED IN THE NAME OF SPORT,

more in the name of science, and some in the name of art, but whatever name you may apply to the act it can neither lessen the pain inflicted, nor modify its cruelty.

HOW IT FEELS TO BE CAUGHT IN A TRAP

After a trip on the lake, another in a stage coach and an exciting one by steamer down the Columbia River, we reached the railroad at Wenatchee and took the train going East. At one of the stations, where we stopped, an old gentleman came aboard and as soon as he secured a seat he threw up the window sash and stood with his hands on the sill smiling at his family of grown-up daughters, as they stood on the platform of the railroad station ready to wave him an adieu with their handkerchiefs.

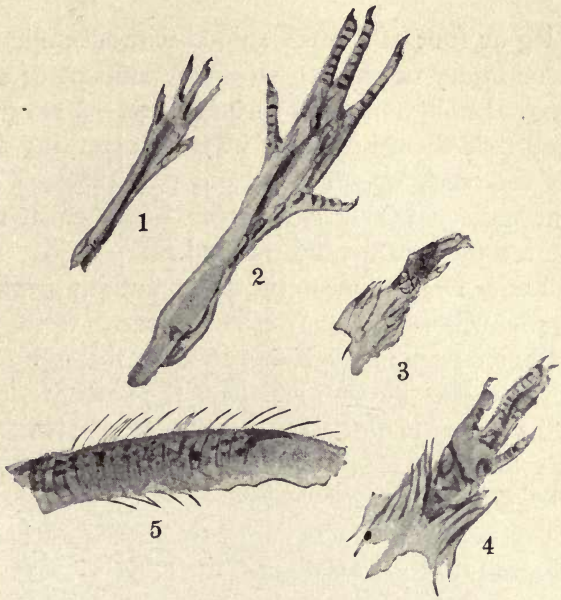
As the train started, the car gave a lurch and down came the window, catching the old man's fingers on the sill. A half-dozen of us rushed to his assistance; we struggled and sweat and pulled at the window sash in vain, the old gentleman's



CRUELTY EXERCISED IN THE NAME OF SPORT

fingers wedged the sash so tightly that it was immovable. Thinking of the pack rat I turned to ask the man if his fingers were "numb," but one look at his white face and agonized expression, told me only too plainly that he was on the point of fainting from extreme pain. All this time the train was speeding on its way.

At last we liberated the victim's fingers by using some walking sticks and umbrellas as levers, with which we pryed up the sash. When he was released the old gentleman would have fallen had I not supported him. A commercial traveler saved him from fainting dead away by giving him a glass of something from a bottle; as it was he suffered so much pain that he got out at the next station, where we left him holding his hands over his head



PARTS OF A JUMPING MOUSE'S ANATOMY

1.—Left hind foot—natural size. 3.—Left hand.
2.—Enlarged hind foot. 4.—Left hand enlarged.
5.—Section of tail

for relief, while waiting for a train on which to return home.

After this experience it is needless to say that no one can convince me that a steel trap does not inflict excruciating pain upon the unfortunate animal caught by its steel jaws.

HOW TO TRAP WITHOUT INJURING THE TRAPPED.

Since then I learned from another trapper how to bind the jaws of a trap with rags until their hard edges are transformed into comparatively soft cushions. A trap treated in this manner will hold

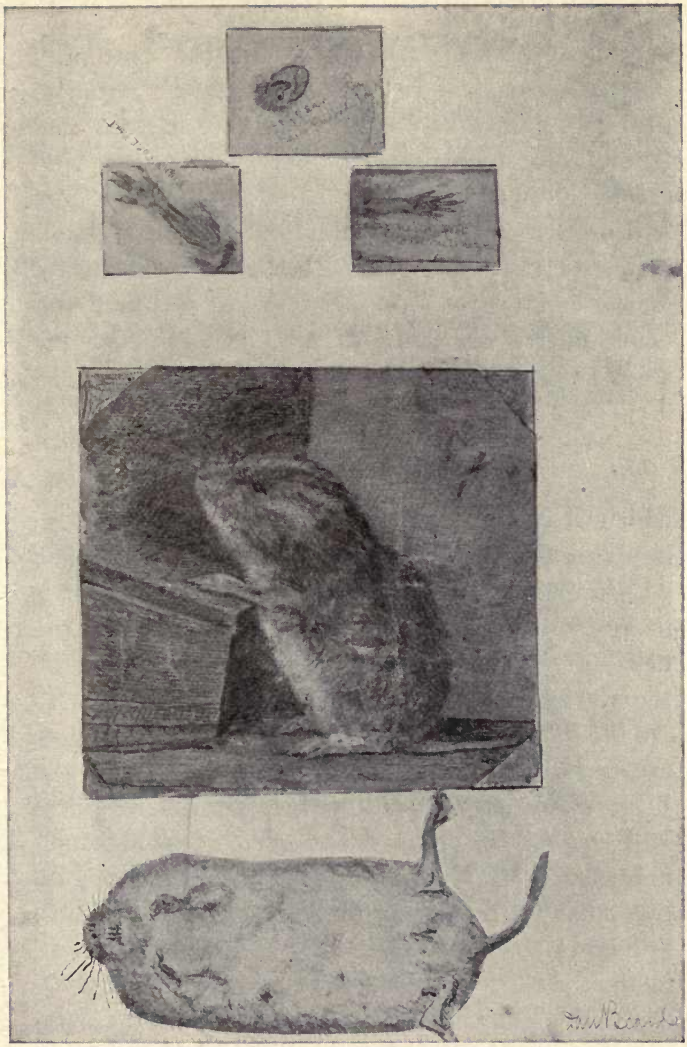
the leg or foot of a small animal without inflicting serious injury or causing an undue amount of suffering. Enough of this painful subject—I am glad to say that there are other ways of capturing animals for study or for pets, and that the pack-rat is the only animal shown in this book which was captured by such a cruel method.

Charles Dana Gibson, the artist, and his brother, Langdon Gibson, the Arctic explorer, were my companions on many long tramps through the fields, woods, swamps, and over the soft meadows and I only wish that I could remember half of the interesting things we saw or the discoveries we made. Nothing escaped the keen eyes of these two boys. It was vain for the wild creatures to attempt to conceal their whereabouts.

We knew the location of every crow's nest, where the red-tailed hawk built, the holes in which the screech owls hid and the grove where the black crested night herons reared their families of fiendish looking offspring. Sometimes we would return with our pockets full of turtles and frogs, or strange and interesting insects, or plants. At other times we would have our handkerchiefs tied together enclosing in their folds field mice, and other living creatures.

A SHORT-TAILED MEADOW MOUSE

which I brought home from one of these excursions proved to be a very savage pet. The white-footed mouse's cage of wire-netting with a tin bottom, I



SKETCHES OF SHORT TAIL MEADOW RAT, FROM LIFE

arranged for the new comer. In the bottom I planted green sod to make the mouse's home as near like nature as possible and here it lived contentedly for many months, but every visitor who carelessly put his or her hand against the cage withdrew it with an exclamation of pain and surprise, for the blunt nosed little mouse was always on the lookout for an opportunity of this kind and never missed a chance to sink its teeth into the fingers that came within its reach.

A YOUNG MEADOW MOUSE

which I once captured proved, however, to be a very gentle little creature and could be handled with impunity. In captivity these little animals make their nests in the form of hollow balls of the dried grass cut down by them while eating the roots. Meadow mice are given to migration, as are the lemmings, and instances of such occurrences are mentioned by Homer, Herodotus, and the Bible. Armies of meadow mice are not unknown in Europe. They have appeared at Vienna and many parts of Germany, and they have been recorded as visiting many different parts of England at intervals from 1648 to 1867, but here in America they seem not yet to have adopted the migration fad. They are probably content with the damage they can do near home. There are at present about one hundred and sixty-five kinds of meadow mice on record and we have our share of them,

America being represented by seventy-eight species and sub species.

Some meadow mice live in the dark shade of the forest, some in high and dry places, and others make their runways and little homes of dry grass on the salt meadows subject to the overflow at every high tide. Some kinds live like moles, have long galleries under the ground and some swim and dive in a manner which entitles them to be called aquatic, but they all bear a general family resemblance to each other and the one in the illustration is typical of the family.

MUSKRATS WHEN CAPTURED YOUNG

make interesting and gentle pets; but full grown muskrats are too savage to handle with safety. This rule, however, is true of most animals, although I have tamed full grown gray squirrels, red squirrels, flying squirrels and chipmunks.

The last-named animal makes a gentle little pet and it is interesting to note that one which I have kept all this winter did not hibernate, although it slept late on very cold or stormy mornings, but on bright days it would sit in the sun and chatter and chortle in a low, self-satisfied, comfortable manner.

A few years ago my wife and I were in camp

AT THE HEAD OF FLATHEAD LAKE.

We were trout fishing and I had climbed over a lot of whim sticks, which is Chinook for the dry

drift wood logs piled on the shore by the torrents, to a point of vantage where a tangle of these whim sticks extended over where dark waters whirled in a spiral, collecting a lot of suds like foam, and keeping it twisting around in the center of a miniature whirlpool. It is in just such places big trout love to lurk and I was intent upon casting my flies over this spot when a low whistle from my wife signaled me. Looking up I saw that she was pointing to some object under the edge of an overhanging bank. Noiselessly clambering back over the smooth logs and cautiously approaching, I peered over the edge of the bank, and with some difficulty discovered the

TIP OF A TAIL.

I felt assured that there must be some sort of an animal hitched to the other end of it, and so climbing down the bank and cautiously removing drift wood and rubbish, I rolled up my sleeves, got down on my knees and quietly slipped my hand close to the place where the root of the tail should be. I was not at all surprised upon pulling the animal out of its hole to discover that I had

CAPTURED A MUSKRAT.

Oh, me, oh, my! what a big one it was! and how vicious! It appeared to be almost as large as a beaver, and was very heavy. It was, in fact, the largest muskrat I had ever seen. I started for camp with Mr. Rat, for the very good reason

JUMPING MOUSE (LIFE SIZE) TAKEN FROM INSIDE OF A RATTLE SNAKE

that I did not know how to let go of it. Not only did I have to hold the animal away from my legs to prevent it biting me, but also had to be constantly on the alert to frustrate its efforts to double up and catch me by the wrist with its long yellow teeth. The rat would attempt to do this by swinging its body in such a way as to gather momentum and at the same time imparting to it a twisting motion that would most certainly have enabled it to swing up and reach my hand if I had not persistently twisted it in the opposite direction, thus unwinding the animal, so to speak.

I had discovered that it is one thing to catch a wild animal by the tail and it is an entirely different proposition to *let go of him again.* When I reached camp the rest of our party were inside their tents. Audubon says that muskrats may be handled with safety, but I would not advise my readers to trust them.

Some previous campers had brought some straw upon which to sleep and had left it in a heap where their tent had been pitched. This offered me a means of getting rid of my

SOMEWHAT DANGEROUS CAPTIVE,

so I held the rat down until its front paws reached the straw and was glad to see that it immediately made an effort to crawl into the old bedding to hide. As soon as I was sure of its purpose, I carefully let go of the tail, jerked away my hand, and the rat immediately disappeared under the straw.

I stood for some time rubbing my tired arm, for I had carried the rat a considerable distance. Then I called to the other campers and as they came out of their tents, I told them that I wanted to break camp, that I did not like the place at all, that it was infested with rats.

"Rats!" they exclaimed. "Why there are no rats here."

The heap of straw was directly in front of my own tent which was located on a high bank overlooking the Swan River; the campers were all standing around the straw. I told them that I did

not know what they might call the animals, but I called them rats.

"Where are the rats?" they inquired.

"Everywhere," I replied.

"Show us one," laughed one of the ladies.

"Why," I exclaimed, "there are probably some in your tent now."

"Mercy!" cried the ladies in alarm.

"Oh, he is crazy," whispered a small boy.

"Come, Mr. Beard," said one of the gentlemen, kindly taking me by the arm, "you have been dreaming, show us a rat."

"Well," I replied, looking thoughtfully around, "likely as not there are some in this straw." With that I kicked the straw away and out jumped the frightened muskrat.

There were screams from the ladies, some explosive remarks from the men, and the place was incontinently deserted.

In less time than it takes to tell it the rat went over the edge of the bluff, scrambled and rolled down the bank, splashed into the water and swam away. But the campers had shown more speed than the muskrat in making an escape.

Picking up my trout rod, I went back to the river to get the big trout I knew must be lurking in the whirlpool amid the tangled heap of "whim sticks."

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CHAPTER V.

A TRIBE OF GNAWERS AND THEIR FOOD

GNAWERS GOOD FOR FOOD — BEAVER TAILS — RAT STEW — DORMICE HASH—POPPY SEED AND HONEY—BOILED PORCUPINE—THE INDIAN METHOD OF COOKING PORCUPINE—THE RULE OF THE WILDERNESS—THE SIN OF THE SIN-YALE-A-MIN PORCUPINE QUILL—THE TAIL IS MOST SAVORY—CUDJO THE GRAY SQUIRREL—ROBIN THE RED SQUIRREL—A DRUNKEN RED SQUIRREL AND HOW IT ACTED—THE RED SQUIRREL TAMED—BLOODY MINDED CHIPMUNKS—LIVE MICE—SNAKES AND YOUNG BIRDS AS CHIPMUNK FOOD—THE CHIPMUNK AT WHIPPORWILL COTTAGE—THE WHITE FOOTED MOUSE AND THE SNAKE.

All evidence seems to point to the fact that the whole tribe of gnawers can change from their accustomed diet to a new one without suffering any great inconvenience, or injury to their health. This may not be true of the beaver, I have never experimented with this big flat-tail rat and have no data upon which to base a positive opinion. But there have been so many exaggerated stories in which

the writers have allowed their imagination to run riot regarding the habits of the beaver, that I think I might say that this animal fed upon roast beef and pudding without exciting much surprise.

But if the information is incomplete regarding what rodents eat, we all know that they themselves are not a bad article of food. Beavers' tail is a historic delicacy of the backwoods.

MUSKRATS

are regularly served at the table in some parts of this country, and not unknown in New York City, while squirrels and chipmunks have been looked upon as delicate articles of food ever since this country was settled.

I have been told by two gentlemen who lived in a certain rural district in England that it has been the custom from time immemorial in that particular place to

DINE ANNUALLY ON RATS;

but both men were very careful to explain that they did not eat "house" rats, using only those which were trapped in the granaries and hence not garbage fed; "granary" rats they declared to be clean animals.

As far back as the time of the Cæsars, a Mr. Bambonselvergius (the man who is credited with inventing sausages), wrote a treatise in a very learned manner, telling how to fatten dormice for the table. In those days they had dormouse

fricassee, dormouse on toast, dormouse soup and dormouse hash, and dormouse served with a sauce made of a mixture of poppy seed and honey.

In the North Woods

THE INDIANS EAT PORCUPINE,

boiled porcupine occupying the place of Thanksgiving turkey among the Northern Indians. I have never eaten porcupine and the one I prepared for cooking was left at Sin-Yale-A-Min Lake in the Mission Mountains when we broke camp to hit the trail for McDonald Lake. I am told by Mr. Belmore Browne, the artist, hunter and wilderness man, that this animal should be boiled in not less than two or three waters or it will be too strong for white man's taste. If the reader should want to know

HOW TO COOK A PORCUPINE

he can learn from the Indians by watching them as they prepare a porcupine for the table, but for fear that all my readers will not have this opportunity or like "Injun" cooking, it may be well to say that the first thing to do is to suspend the animal over a blazing fire, or throw it bodily into

the fire and turn it over with a stick until the quills are thoroughly singed; then roll it in the grass to brush off the burnt quills.

With a short knife slit the skin up the middle of the belly from the tail to the throat, peel off the pelt, cutting off the feet as you come to them. It is

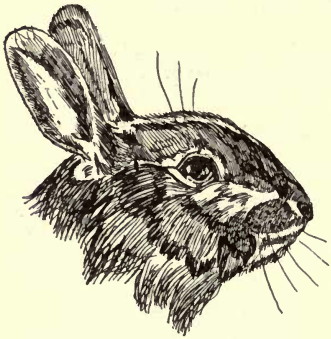
THE RULE OF THE WILDERNESS

to always burn porcupine skins, but scientists do not always follow this rule and tenderfeet do not know of its existence. Professor Elrod, of the biological surveying party, carefully preserved the skin of the porcupine killed at Sin-Yale-A-Min Lake so that it might be stuffed and mounted for the university museum. During the process of preserving the skin a number of the spines became detached and lay around upon the ground where we were accustomed to sit when we gathered for songs at the evening camp-fire.

After this occurrence, I spent six weeks in camp, and during all that time I wore the same hunting suit, only changing it for "store" clothes when I came East. When the trout season opened the next year I put on my same old camping clothes and went out to fish in a brook in Pike County, Pennsylvania. At noon time I selected a mossy stone upon which I might sit while I ate my lunch. Pike County is infested with rattle-snakes, so I looked carefully around before taking my seat and although I saw nothing suspicious, I sprang from that stone with a yell, under the firm belief that I

had seated myself on a snake and had been struck by its poisonous fangs; upon putting my hand to the wound I found there a quill of the Sin-Yale-A-Min porcupine!

This long spine had remained hidden in my trousers during the whole time I spent in camp, only to reveal its savage purpose a year afterwards in a part of Pennsylvania which is free from porcupines and two thousand miles away from Sin-Yale-A-Min Lake.



THE PORCUPINE MAY BE BOILED OR ROASTED.

The latter is done by suspending the animal by its forelegs and roasting it over a bed of hot coals. When properly cooked its meat is said to be as delicious as any that can be found in the wilderness, and

THE TAIL, IN PARTICULAR, IS MOST SAVORY,

is very meaty, and, like beef tongue, the meat is full of fine bits of fat. Split the tail, take out the bone, and roast the meat over the hot embers. Cooked in this manner it is known by the suggestive name of Yum-Yum.

But enough of this, it is not my intention to fill a book with accounts of dead animals or of cook-

ing recipes. One live animal is more interesting to us, and of more real value to humanity than a carload of dead ones. We have abundance of domestic animals to supply us with meat, and it seems outrageous that beautiful little creatures, like the gray squirrels, for instance, should be killed to supply our table. I once owned

A GRAY SQUIRREL NAMED CUDJO.

It was during the war time, my room was in the third story of a brick house, and, like the pack rat, I filled my nest with all manner of useless things. The walls were decorated with the junk from the camps and at one end of the room hung a pair of glazed leather boots. They were broad-toed, after the fashion of the day, they had big bulging calves to allow room for the baggy trousers which were then in fashion, the boots were cut away under the knees to allow free play of the man's joints, in front they extended up above and protected the knee by rounded tips.

They were in fact full dress officers' military boots of the war of '61. One of these boots was selected by Cudjo for his home and down in the foot of it he slept during the night.

He spent the days in romping around the room or sitting in the window with one foot on the sash and the other curled up under his body while he watched, with evident interest, the boys at play, or the passing of regiments of soldiers and the six-mule team government wagons, but whenever a

dog ran by, the squirrel became very much excited and kept up a continuous scolding as long as his enemy remained in sight. The scolding consisted of a continued repetition of its own name, Cudjo! Cudjo! Cudjo!

It has always been my habit to rise early, but as a regular custom I awakened earlier while

CUDJO AND I

occupied the same room, than I hav before, or since. This was because Cudjo himself was a very early riser. How he knew when daylight came while he was down in the dark toe of that boot, in the dark end of the room, is a mystery still unsolved. With the first light upon the eastern horizon Cudjo would awaken, and, climbing to the top of the boot leg he would poise himself on the edge of the leather, give a mighty spring and alight upon my chest with a resounding thump.

Cudjo knew me to be a kind master, a boy with a gentle, even temper, but he had also learned that it is not always safe to awaken suddenly even a good-natured boy by jumping with all four feet on his chest, so, no sooner did he knock my breath from my body than he was instantly off again, and while I lay in bed and said things, Cudjo the squirrel, from a safe distance on the mantle-piece or the top closet shelf, would sit and chatter back volubly in squirrel language.

There can be no mistake regarding the object of the squirrel's thump on my chest. Cudjo meant to awaken me and in this he never failed. If my chest happened to be an inconvenient place for him to land, he had no hestitancy in landing on my head. After being once awakened, if I fell asleep again the squirrel would climb back to the boot and make another jump and he would repeat this operation until he compelled me to get up. As soon as I arose Cudjo would begin to romp around the room, run up my leg, sit on my shoulder, and in every way express his joy in a manner as unmistakable as that of a dog when wagging its tail.

Cudjo was very considerate in some things, and unlike most rodent pets, he refrained from gnawing the boots, furniture, or woodwork in the room. But he did delight in creeping down between the sheets and hiding a lot of walnuts and hickory nuts there. It was my habit as a boy, when retiring for the night, to undress as hastily as possible, throw my clothes on a chair, put out the light, then in the dark hastily pull down the bed clothes and with one bound alight in the middle of the lower sheet.

Cudjo would place the heap of nuts just where I would strike them when springing into bed. This, to my boyish fancy, he did purposely, though of course the position of the nuts was entirely accidental.

The sensation caused by sitting down very hard on rough shelled walnuts and pointed nose hickory nuts, when one is in one's thin night-clothes, is

such as to cause unpremeditated and ungrammatical remarks. It gives me pleasure to be able to say, however, that I was a moral and clean-minded boy and did not use "swear" words on any occasion, but I am afraid the emphasis with which I made my simple statements and expressions of feeling sounded to the squirrel much the same as real bad "cuss" words would, because even though he could not understand my language, he did understand the meaning conveyed by the tone of my voice—and he seemed to enjoy my irritation.

But this was probably imagination. Cudjo was never savage or ill natured, and although he would not allow me to take hold of him with my hands, he would sit on my hand, wrist, or shoulder, climb into my pockets in search of peanuts without the slightest fear, nor would he resent it if I stroked his back. In this particular he was unlike

ROBIN THE RED SQUIRREL

before he took to drink. Robin was caught in a box trap set in a swail, where the high ferns grew and the yellow moccasin flowers and baneberries bloomed, on the shores of Big Tink Lake. Robin proved to be a veritable savage, he was as ferocious as a diminutive tiger might be. He would spring at the bars of his cage and savagely bite the wires whenever any one approached him. We kept him for several weeks and although he ate what food we gave him, we had to be constantly

on guard to prevent him from biting our fingers while we were placing the food in his cage.

One day all of us got in a wagon to drive to the nearest market town, and left Robin to watch the house. When we returned it was dark and rainy, Robin was forgotten and the poor fellow's cage hung all night exposed to the cold drizzling rain. In the morning we thought he was dead, but upon removing his wet, dank and chilled body from the cage we discovered a slight movement of his hind foot, and immediately hunted up some pieces of warm flannel, rolled him up in the cloth and placed him in the oven of the stove; taking precaution to leave the oven door open so that we could watch and see that poor Robin was not baked alive.

In a little while our patient began to move, twist and kick, at length he kicked the covers off, then the cook removed him from the oven and going to the closet, filled a spoon with a mixture of "cooking" sherry and milk, which she administered to Robin with the belief that the wine would warm him up inside and set him on his feet again; but it set him on every part of his body except his feet.

As the fumes of the liquor ascended to his wicked little brain, Robin began to make a disgraceful exhibition of himself. It was plain to see that he was drunk, outrageously, hilariously drunk! He jumped up in the air and alighted on the top of his head, he stood on his hind legs and whirled

around, he ran through the hot ashes in the open fireplace of the dining-room, he jumped hurdles, and at last catching sight of the cook, ran up the outside of her dress and before she was aware of his intentions, sunk his chisel-like teeth through the nail of her thumb, biting into the bone.

This was going too far even for a drunken rodent, so the squirrel was grasped roughly by the nape of his neck and thrust back into his cage, where he curled up and slept off the effects of his too generous libations.

Then a wonderful thing happened, Robin the savage, Robin the ill-natured, from that time became one of the most gentle and lovable of little pets which I have ever possessed. It may have been that he was shamed into gentleness by the memory of his disgraceful behavior, or it may have been that he felt grateful for the care he received after his soaking in the rain, or it may be that the strong drink rearranged the gray matter in his little brain, destroyed the wicked thoughts and developed the good ones. But whatever the reason, Robin had a change of heart. At the end of the season, when the reformed red squirrel was given his freedom, he seemed to leave us with real regret, and, as if reluctant to part with his human friends, he several times returned to his cage at the log house before finally disappearing with a whisk of his tail down in the swail where he was first caught.

It is not my intention to advocate intemperance as a means of grace on the part of one's pets, nor do I say that the wild orgy indulged in by Robin was the cause of his regeneration. I only tell the incident as it happened and leave the reader to draw his own conclusions as to the advisability of high license, prohibition, local option or free rum for red squirrels.

RED SQUIRRELS KILL PIGEONS.

Since writing the above I have made a visit to Litchfield, Connecticut, where the red squirrels are very abundant; while there I met Mr. James Newton Gunn, who has a summer home and keeps pigeons at this charming old town. When he visited his summer place during the winter he found with dismay that some creature was devouring his pets. He supposed, of course, that the ravages in his dove-cot were committed by rats; but resolving to investigate the matter thoroughly, he arose early one morning and crept very quietly up to the pigeon loft and peering in, he saw a red squirrel in the very act of killing one of his pigeons.

The peculiar and interesting part about this is, that the squirrels only ate the heads of the birds, and then making a hole in the pigeons' breasts, devoured the contents of the crops. As far as I know, this is a new record of the predaceous habits of the red squirrel and a novel way to procure grain.

As for these animals' well-known predaceous habits, while in a wild state, and their vicious treatment of their beautiful long tail gray cousins, I offer no defense, but can say that the red squirrel is a plucky, pugnacious little animal, and that after it is tame it makes a good pet.

Somebody started a discussion in one of the New York papers about the habits of the chipmunk, claiming this rodent did not climb trees. It was done as a joke, but many of us were surprised to find how ignorant city people are about the habits of this little striped animal.

It is a popular belief that most of the men in the city originally came from farms, but this can scarcely be true, for every country boy knows all about the habits of the chipmunk, and I seriously doubt the ability of some of the people who rushed into the newspaper discussion, to tell the difference between the chipmunk and a skunk.

Every season, for many years, I have watched the chipmunks at Wild Lands, and have frequently seen them climb to the top of trees 60 to 70 feet high. They may have done this in play, but I am sorry to say that I am inclined to believe that these gentle little animals are

SOMETIMES BLOODY MINDED.

Last summer I saw a white-eyed vireo dart at a couple of chipmunks on a white oak tree and knock them both from their perch twenty feet or more to the ground, this act aroused the suspicion

COMMON CHIPMUNK

that the little bird might be more familiar with the habits of the chipmunk than our city-bred naturalists, and that perhaps she has good reasons for driving the chipmunks from the trees.

It was on account of this suspicion that I made some experiments and attempted to discover what sort of food *well-fed chipmunks* would eat. By this I mean animals with a constant supply of food at hand so that hunger could in no wise tempt them to an unusual diet. Two chipmunks which I had confined in a wire minnow box were most gentle and interesting little pets and one of them now occupies a squirrel cage along side of me as I write.

THE WHITE FOOTED MICE

discovered years ago, that there is a bountiful supply of food in the pantry of the log cabin, food which is more palatable than that to be found in the surrounding woods, so these beautiful little creatures became a regular nuisance and were as annoying to the housewife as are their degraded brothers, the Asiatic mice, to the housewives of our cities. Consequently I set traps for them and caught five in one night. The little rascals had deservedly forfeited their lives by taking their abode in the pantry, but I did not care to become their executioner, so I took a tin cracker box and cut a hole in it as near as I could judge to be about the size of a mouse's body; then filling the tin box with soft nesting material and the five mice, I placed it

FIELD SKETCHES IN PENCIL OF WILD WESTERN CHIPMUNKS

IN THE CAGE WITH THE CHIPMUNKS,

my idea being that the chipmunks would run around the cage in the day time and sleep at night, while the mice would run around at night and sleep during the day. I was perfectly right in my conclusion, but made a grave mistake of judgment in regard to the size of the hole which a chipmunk can enter, and when I visited the minnow box in the morning the rags with which the chipmunks had made a nest in the corner of the cage still occupied their accustomed place; there was no means of escape visible by which the prisoners might have freed themselves; but no chipmunks were in sight.

I violently shook the cage, and to my great surprise the two chipmunks, one following the other, emerged with some difficulty from the small hole

in the box which had been cut for the mice, but, as every thing seemed peaceful and mice unharmed, there was apparently no reason for separating them, so the mice and their big cousins were allowed to sleep together. The mice appeared perfectly willing to do this, but the chipmunks, it seemed, had their own idea of the manner in which this should be done. At the end of two days all five mice were resting

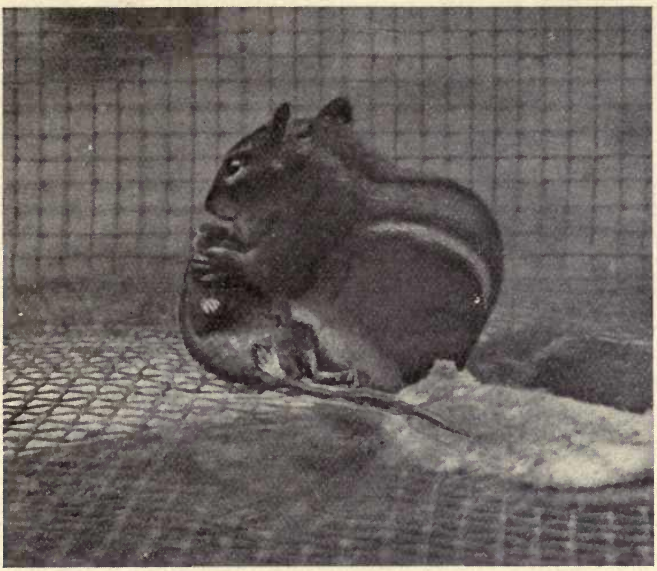
INSIDE THE CHIPMUNKS!

In capturing its prey the chipmunk springs upon a mouse, and grasping it in its arm, severs the jugular with its chisel-like teeth. It then eats the eyes of its victim, next its brain, and after that the rest of its body, bones and all. The neatness and dispatch with which they do this, and the manner in which they leave the skin of the mouse intact with only the feet, tail, and skull attached, plainly indicates that the chipmunk is no novice at this sort of work. A young friend of mine now employed in the Museum of Natural History at Central Park, tells me that he shot a chipmunk with the fresh scalp of another chipmunk in its hands. From my own observations I think that at times all rodents are cannibals.

Once having captured

A VERY LARGE GARTER SNAKE

I put it in with the chipmunks, not for the purpose of causing trouble, but because the chipmunks



CHIPMUNK IN THE ACT OF EATING A WHITE-FOOT MOUSE, WHICH IT HAD JUST CAPTURED

occupied the only available cage, and I thought that they could take care of themselves. In this I was again right, but the manner of taking care of themselves pursued by the little imps was altogether unlooked for by me.

The animals showed not the least alarm or even excitement in the presence of the snake; on the contrary the biggest rodent suddenly leaped upon the intruder and although the serpent, after the manner of a true constrictor, quickly wrapped the chipmunk in the folds of its sinuous body, the struggles of the "garter" were of no avail and not even noticed by the chipmunk as it busied it-

self biting the snake through the neck. A moment later the little chipmunk was sitting on its haunches holding

THE SERPENT'S HEAD IN ITS DAINTY PAWS

calmly eating it as it would an acorn or a hickory-nut. After that my snakes were put in a box by themselves.

A ROBIN HAD ITS NEST IN THE CHESTNUT TREE

near the stone chimney of the log cabin. Underneath the spreading branches of this tree, and directly under the robin's nest, a load of sand had been dumped for our little baby daughter's playground. It rained hard one day and packed the sand so firmly that when one of the young robins lost its balance and fell on the hard sand, it was instantly killed, to the great grief of little Barbara, who witnessed the accident. I took the young robin and tossed it to the chipmunks and they fought over it as savagely as two dogs over a bone. All of which leads me to believe that while a chipmunk does not make a regular practice of

ROBBING BIRDS' NESTS

and probably does not disturb the eggs as do some other four-legged scamps, still, I do think that in its occasional excursions to the tree tops it would not pass by a nest of young birds without helping itself. If the truth were known, I believe

that all rodents are more or less omnivorous and not disinclined to add meat to their diet.

THE COMMON BROWN RAT

was once undoubtedly a wild animal and as such most probably lived on a diet of berries, seeds and nuts, just as its wild cousins do today, and probably for the same reason, that is, because it is difficult for such wild animals to procure meat.

Only a little while ago I saw a gray squirrel on Bowne Avenue, in Flushing, Long Island, pursued by a flock of English sparrows. It was just in front of my house, so I hurried across the street to discover the cause of the pursuit. As the squirrel ran up a large pin oak tree I saw that in its mouth was, not an acorn, but a *full-grown English sparrow!* I have never heard the gray squirrel accused of nest robbing. However, from this incident it seems probable that it does not object to varying its diet of nuts with the taste of bird's flesh. My

CHIPMUNKS WILL EAT RAW MEAT,

mice, bread, cheese, milk, and in fact anything that a human will use as an article of food except fish and eggs. They will also hunt, catch and devour frogs, eat flies, beetles, butterflies, moths and other insects.

A half tame chipmunk at Whip-poor-will cottage, near Wild Lands, was in the hot pursuit of

SKETCH OF WESTERN CHIPMUNK FROM LIFE

a large pickerel frog when the latter, by a skilfully executed back jump, threw the chipmunk off the trail. The grass was long and to get a better view of the field the chipmunk mounted a large stone and from this vantage ground watched with keenest interest the grass about him, but the frog had had a narrow escape from a foe with which it had had previous encounters, so it lay quiet, concealed by the grass until its enemy, tired of its watch, went to the kitchen door for its accustomed bit of table leavings, then the frog hastened to its home under the board steps. This little bit of wood play was enacted in full view of an interested audience in the cottage, people who were the personal friends of both the frog and its foe.

My readers must not understand by these remarks that I approved of, or even intentionally,

took a hand in causing any of these sanguinary encounters; but when one is collecting live specimens for sketching purposes, even though one gives them all their freedom after they have served as models, there are bound to be some unadvertised and unscheduled scraps where the race problem comes to the front, and the hereditary prejudices and antipathies have an opportunity of venting themselves.

A little white-footed mouse which I had in a cage with a garter snake (but for which I provided a safe retreat in one corner, so fixed that the snake could not enter it), became so enraged at the presence of its enemy that it left its safe retreat to attack the monster snake, for monster it was in comparison with the size of the little mouse; but I doubt if this would have happened in the open.

It was probably the maternal instinct which prompted the little mother mouse to come out and attack its great foe, but, whatever it was, out she came and jumped right for the snake, much to the latter's surprise. Her small teeth, although capable of inflicting a painful bite on my fingers, were not long enough to do any serious injury to the garter snake, and before I could open the cage to interfere the latter had bitten the mouse severely on one of its hind feet.

For the comfort of the tender-hearted reader, I will say that I took the snake from the cage and liberated it; also, that I kept the mother

mouse until her foot had healed, and when I let her go to the woods her injury was only perceptible by the presence of a slight limp as she went hopping over a moss-covered log to her old home in the hollow trunk of a tree.

CHAPTER VI

THE BATS I HAVE HAD

SYMBOLS OF DARKNESS—BATS IN HIS BELFRY—ANIMATED AEROPLANES—HOW TO MAKE AN OBSERVATION BAT HOUSE —BAT HOUSES ON FARMS—BATS AT "WILD LANDS"—A DISREPUTABLE BAT—TWO LITTLE BABY BATS—DEATH OF THE MOTHER BAT—HOW WE FED THE ORPHANS—TOO KIND-HEARTED—DOLLS' NURSING BOTTLES FOR BABY BATS

There are many very interesting, harmless and pretty creatures in this world which are looked upon with disgust by the ordinary uncultured person. Old-time witchcraft and superstition, poets and artists, all have unintentionally done great injustice to some of the animals of this world and given many of them a reputation which is entirely undeserved.

Because owls and bats are nocturnal animals they have been used from time immemorial by artists and writers as

SYMBOLS OF DARKNESS.

Physical darkness has also been used as the symbol of ignorance and thus the owl and the bat are often used to represent ignorance. But because of an imaginary wise appearance the owl is also

represented as a symbol of wisdom, not so the poor bat. Today there is a common slang expression used to indicate a disordered mind, and when a man is said to have

"BATS IN HIS BELFRY"

we know that there is something wrong in that person's head; that bats correspond to disorderly thoughts and the belfry to the head.

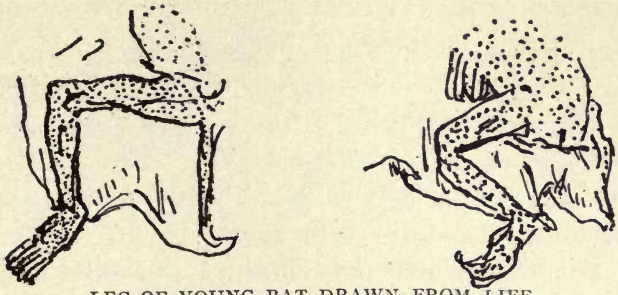
In this manner and by this process bats have become associated in everyone's mind with superstition, ignorance, darkness, lunacy, and a lot of other disagreeable and uncanny subjects. For all of this the bat itself is not to blame; it is a useful, beautiful and extremely interesting little animal and the only mammal capable of flight.

THE FLYING SQUIRREL DOES NOT FLY,

it is simply an animal aeroplane, capable of sailing down from a high point to a lower one; but the bat has the same powers of flight as a bird, although when it is on the wing it more truly resembles a butterfly in its movements than a bird. Any one who wishes to make a study of bats and their habits may easily do so by

MAKING AN OBSERVATION BAT HOUSE.

Take a board the size of a cellar window sash, nail four small blocks about one inch thick to the four corners and nail the window sash to these



LEG OF YOUNG BAT DRAWN FROM LIFE

four blocks. The board should be rough and unplaned so as to

GIVE THE BATS A FOOTHOLD.

A door to cover the window sash can be made of a second board. The bat house must either hang like an old fashioned tavern sign, be nailed up flat against the side of a stable, barn or dwelling, or fastened to a pole; but wherever it is placed it should be set upright upon its edge in the position a sash occupies in the window of a house. If this frame work is boxed in so that the sides and the top are closed to protect the inside from the rain, but left open at the bottom, the bats will enter from below.

A door or shutter made of another piece of board and swung from hinges at the top, can be arranged so that it will hang over the sash and give to the interior the darkness which the bats so dearly love.

THE SHUTTER

should fasten with a hook at the bottom to prevent the wind from banging it back and forth. When the space between the sash and the back board is occupied by the bats, they can be examined at any time by opening the shutter and watching the inmates through the glass.

Bat houses constructed on this or a similar plan should find a place on every farm, because bats feed exclusively on night-flying insects and moths which are as a rule most injurious to vegetation. But bat houses can be made of only two pieces of board each and when they are not made for observing the inmates, of course they need no sash.

The open spaces between the logs of my house at Wild Lands have from the first been favorite homes for families of bats. In company with a friend I was cleaning and adjusting my fishing rods one summer day when I was startled by a scream coming from the bedroom overhead; dropping our tools we both made a rush upstairs, and there we found my devoted help-mate in a great state of excitement because she had "heard a rattlesnake in the walls."

I thought that she was mistaken, because it is not an act characteristic of a rattle-snake to climb to the second story of a house, but when I struck the wall with my fist the blow was answered by a rapid rattling noise which startled all three of us. Each time I made the experiment of pounding on the wall the "varmint" inside replied by making

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SKETCHES OF TWO SPECIES OF BATS

the same alarming noise. After the first excitement was over I was positive the noise was not produced by a snake, but what did cause it was an unsolved mystery.

When I put a ladder against the outside of the house, however, to search for the intruder, I pursued my investigations with the utmost caution, notwithstanding my firm conviction that it was no snake, but, to use a familiar expression, "there was nothing doing," so we again returned to our various occupations; and the incident would have been forgotten had not my fisherman friend chanced to look up and in doing so discovered a small head protruding from a chink in the wall. It was the work of an instant to mount again the ladder and investigate. There I found, not a snake, but the measliest moth-eaten, crippled, old battered veteran of a bat that I had ever laid my eyes upon.

There was scarcely any hair upon the animal's back and the slits in its ears and cuts on its face were evidently the marks received in battle. Every time I moved, the bat scolded me by emitting a rattling sort of noise. I took it down from the house and discovered that it was unable to fly, so I hung it up in the hollow of an old oak tree and left it to its fate.

The bat was reasonably plump, did not have a starved appearance and consequently must have been able to capture its food without flying after it. It appeared to me as if it was suffering from

old age and a quarrelsome disposition and that its joints were rheumatic; the old reprobate had the gout, and whenever it attempted to crawl or move it would begin to swear, in bat language, just like a gouty human sinner. Far more interesting than this crabbed wreck, were the mother bat and

TWO LITTLE BABY BATS

which a small boy captured for me on a tree in Flushing. I made careful studies of the little bats and after their death preserved them in alcohol, but the drawings have been misplaced or lost, the alcohol in the bottle long since evaporated and the bodies disintegrated. I am very sorry for this, because I know of no good picture of baby bats drawn from life. The two little babies, when captured, were clinging to the breast of their mother, and when I put her inside the wire cage, built for the white-footed mice, the babies did not loosen their hold of mamma.

I fed the old bat with small pieces of fresh meat, which I gave to her from the point of a hat-pin. Perhaps the red meat was too strong for her stomach, or it may be that the old mother bat was injured by the boy when he captured her; at any rate she did not live long in confinement.

Under the circumstances it did not seem strange that the bat should perish, but her actions and preparation for death struck me as being very novel and interesting. It was her custom to hang all

day by her hind feet with her head down and with her two babies folded in her winged arms.

At night she was more lively and would clamber all over the cage; but on this particular occasion she seemed disinclined to move; at length, however, she disengaged her two little babies and carefully hung them side by side to the wires of the enclosure.

Previous to this occasion the two babies and the mother had never been separated, so, when I saw what she had done, my curiosity was greatly excited and when the little mother slowly and painfully climbed down to the bottom of the cage, let go her hold and rested upon her back, I was surprised, for I had never before seen a bat voluntarily assume this position.

I did not see how she removed the young ones from her breast as the act was unexpected, but I saw her with the babies and the next moment they were hung on the wires and a few hours afterwards when I looked at her again, I was still more surprised to find that she was dead. Was this accidental, or did the poor mother feel that her time had come and prepare for it by tenderly hanging her babies out of harm's way? If an accident it was interesting, if an intelligent act it was pathetic.

I had now two orphans on my hands and how to feed them was the question. At first I put a rag in a saucer of milk and the other end in a baby's mouth; this seemed to answer the purpose and to be in a measure successful, but the babies

bedaubed themselves all over with milk and the process of feeding was tedious. I next secured two dolls' nursing bottles and they answered the purpose beautifully.

The little bats were greedy babies and had to be limited in the amount of milk given to them. Shortly after this I went on an exploring expedition to some islands lying off the extremity of Long Island. It was out of the question for me to take the baby bats along with me and so I turned them over to my sister-in-law, knowing that the helpless little things would appeal to her kind heart. But Lord bless her soul, she was

TOO KIND HEARTED!

In the hurry of my departure I forgot to caution my volunteer nurse regarding the amount of food to give the babies. She tenderly placed the little things in a warm bed of soft wool and gave them each a bottle full of warm milk. Although the nursing bottles were made for dolls, each bottle was larger than the baby attached to it, and the consequence was that the greedy little bats sucked away at the bottle until they were both distended like two little round bladders, filled with milk. Sad to relate, they both perished from an acute attack of expansion.

CHAPTER VII

DO MEN THINK?

DO ANIMALS POSSESS INSTINCT—THE EFFECT OF THE CHINESE GONG UPON THE HOTEL GUESTS—NEGROES AND OXEN—WHAT IS INSTINCT?—HOW TO CONCEAL IGNORANCE—HOW TO UNDERSTAND THE ACTION OF LOWER ANIMALS—EARLY NATURE FAKIRS—FUNNY OLD HENRY VII.—THE GRIZZLY BEAR WHIPS THE KING OF BEASTS—RATS UNABLE TO SOLVE A NEW PUZZLE—WISE MEN FOOLED ON THE FIRST OF APRIL—BROWN BESS THE BAR LIFTER—THE COON THAT SOLVED A NEW PROBLEM—HE EATS THEM ALIVE—A MONKEY THAT SOMETIMES TURNED THE HYDRANT OFF—THE ROCKY MOUNTAIN GOAT KID WHICH PLAYED THAT THE HOTEL TOWELS WERE SNOW—FOOLISH COWS THAT EAT SHIRTS

Twenty-five years ago the dinner-gong was in common use at hotels and boarding houses and there are men living today who can remember when this noisy oriental instrument was first introduced, and all of them can remember the first time they heard one of them.

When the Chinese Gong was introduced in the Burnett House in Cincinnati, at the first quivering noise the guests sat up straight in their chairs and looked wildly at each other, as the clamor increased in volume the guests rose hastily from their seats, and when the noise was at its worst there

was a panic; the office, barber-shop, and bar-room were empty and the terror stricken customers were fleeing from what they thought to be a house falling about their ears.

The first Chinese dinner-gong used for a dinner call at Memphis, Tennessee, not only

STAMPEDED ALL THE OX-TEAMS

within hearing, but the planters and negroes as well. The oxen threw up their heads and bellowed, the negroes showing the whites of their eyes, jumped to their feet, and the languid planters vied with their slaves and animals in fleeing down the streets to escape the shapeless horror which pursued them.

As soon as experience taught the men that this sound meant food, they welcomed it with glad smiles and no fear. As soon as experience taught the oxen and negroes that no danger lurked in the sound of the dinner-gong, fear vanished from among them and thereafter when the gong sounded the planters strolled to the dining-room, the negroes lounged around, the oxen calmly chewed their cuds and paid no heed to the clamor. The same sort of sound might stampede a sloth of bears, a route of wolves, or a clowder of wild cats, or a herd of elk, but if no harm accompanied the sound, these animals, like the planters, negroes and oxen would soon learn not to be frightened.

To understand properly the living creatures of this world we must

ATTRIBUTE NOTHING TO INSTINCT,

this vague word has too long blocked the threshold of the study of animated nature.

It must be taken for granted that everything in the natural world can be explained in a practical or natural manner and we must remember that such words as "instinct" are invented, not for the purpose of enlightenment, but

TO CONCEAL IGNORANCE.

When we do not know what a thing is we give it a name and thereafter speak familiarly of it, calling it by name (the name we gave it) and deceive ourselves into thinking that it is all explained.

While man's intellectual powers are acknowledged to far exceed those of the brutes, the most casual observer cannot help noticing that the brutes possess a mind peculiarly their own, probably differing in its possible development, rather than in its nature, from that of the man.

We can neither imagine nor conceive a thing which does not correspond in some manner with our own personal experience, because the imagination feeds upon and is composed only of the things of which we are conscious through our senses.

Hence, it follows that to understand the action of the lower animals, it is necessary for us to be able to place ourselves mentally in their position and think how we would act with the beast's limitations and surroundings.

The student must be able to imagine how he would express his emotions with vocal organs capable of producing only grunts, whines, growls or bellowing; he must think how he would act if, like the dog, his sense of smell was so acute that each individual stick, stone, tree, and shrub; each patch of earth, sand or water, possessed to him a distinct and recognizable odor; how he would move if he had the body of a frog, a snake, a turtle, or an elephant.

He must conceive how he would conduct himself if, like the hawk he had a sight so keen as to be able to know food, drink, friend and foe at distances, only possible to him now, when his human eyes are aided by the most powerful field glasses.

Formerly it was the general custom of writers to endow the birds and

BEASTS WITH WONDERFUL HUMAN MINDS,

and more than human sentiment. There has been a change since those romantic days, and now everything in the scale of life below man is, by many, called an automaton, in other words a machine.

In the ancient *Book of English Dogges* printed in the sixteenth century a story is told of Henry the Seventh becoming angry because

FOUR "BANDOGGES" CONQUERED A LION

in fair battle, and he "commanded all such dogges (how many soeuer they were in number) should

A RESOURCEFUL 'COON

be hanged, beyng deeply displeased that so ill favored rascall curre should with such violent villany assault the valiant Lyon King of Beasts!"

In an ancient history of this same King, quoted in the old Latin dog book, it tells how King Henry also ordered that a falcon should be killed because it presumed to attack an eagle, the *King* of birds.

It is a pity that the old pumpkin headed Henry was not present at Laredo, Texas, when a plebian grizzly bear seized the terrible man-eating lion "Parnell" by the shoulder, swung his royal highness high in air and slammed him down so hard on the ground that the King of beasts lay there limp and unconscious.

It is entertaining to think how indignant King Henry would have been had he witnessed this act of "lèse majesté" and it is not difficult to guess

what the fate of the grizzly would have been—if the King's orders were obeyed as well as are those of a certain brilliant but vain and childish emperor, who sends a laborer to nine months in prison for sticking out his tongue at him.

But long ago before Uncle Remus had taught some of our modern romantic nature writers his peculiar method of viewing Natural History, long before the reaction which teaches us that animals are nothing but living machines, there was a time when animals were not only thought to be endowed with human reason, but also with human morals and human tendency to crime. A proof of this is in the fact that they were frequently brought into court with lawyers to defend and lawyers to prosecute them for their misdeeds.

But the careful observer and student who has freed himself from the loose reasoning of the first writers and the narrow reasoning of the last ones, cannot help being astonished, both at the

POWER OF "INSTINCT," AND THE LIMITATIONS OF "MIND"

in insect, beast and man.

The scientist who prepares an elaborate labyrinth with which to test the reasoning powers of a rat, forgets that he should not venture beyond the previous experiences of the rat. Many of the so-called reasoning human beings are as helpless as the rodent when confronted with entirely new

problems, problems which former experiences will not help them to solve.

Because a rat is unable to find its way out of one of these puzzle boxes invented by the scientists, does not prove a lack of reason on the part of the rodent.

To illustrate this as well as to give a lesson in temperance, I once caused frozen jelly in cocktail glasses to be served to a company of two hundred men; each glass had a cherry in the bottom of the jelly and the latter was as firm and hard, almost, as if it was a part of the glass.

The men represented the most intelligent and cultured class of New York City.

Yet regardless of the fact that they were assembled for the purpose of celebrating the advent of the first of April, when, as Toast Master, I proposed

AN APRIL FOOL TOAST

which in itself should have excited their suspicion, these two hundred intelligent human beings stood on their feet for at least three minutes and tried to drink the solid bit of jelly from their glasses.

Not satisfied with one or two attempts, they held their glasses up to the light, looked earnestly at the supposed liquid, and then tried again and again to suck it down their throats.

If some grave old scientist had tried this experiment in order to determine whether men were possessed with reason or whether they were machines, would the experimenter have decided, upon

the evidence before him, that the eminent judges, authors, writers, artists, publishers, and leading merchants were all machines?

I do not claim that the lower creatures possess a human intellect, far from it; but inasmuch as it is admitted that our brains have grown or developed from something possessed by a lower form of animal,

THE ADMISSION ADMITS

that the animal must have possessed something from which an intellect could be developed, in other words a mind, which by education gradually becomes a human intellect. If, according to science, man is but an educated animal, it is evident that we need some new definition of reason, intellect, and instinct in order to escape endless misunderstanding and discussion and make a platform on which all may stand and from which we can reach some common-sense conclusion. But to give the wishy-washy sentiments of the old writers to the beasts, or to take the Uncle Remus school of nature writers seriously is as absurd as the automatism asserted by some of our modern naturalists.

AN OLD BROWN COW

I once knew was always sleek and fat; whether the grass crop was good or bad mattered little to her.

Like other cows,

BROWN BESS

had a pasture, but she only used it as an exercise ground and loafing place. When she really wanted food she selected the garden patch which contained the vegetables her highly cultivated appetite craved. After appeasing her hunger she would return to her pasture lot and contentedly chew the cud.

Another cow possessing the same ingenuity, but with less self-control, would have foundered in the first red clover field, or miserably perished from overloading her numerous stomachs with sugar corn, or died in an agony of colic from the consumption of too many green apples; but not so with old Brown Bess! She grew plump and fat, and her rotund sides appeared as if they had just been brushed, combed and oiled for exhibition at the county fair.

I was curious to find out how she managed to live so well, when all her companions were "rangey" and lean, so one day I shadowed her.

When I discovered her she was cropping the grass by the roadside in company with three other cows and a young bull. Bess gazed at me so innocently with her big soft eyes that I was willing to swear that she had been slandered by the envious people who owned the thin cattle with moth-eaten tails. After pausing, however, to exchange greetings with her, scratch the cowlick on her forehead and pat her glossy sides, I stole away and hid behind a tree.

For a time the cattle all browsed in a nonchalant manner, but presently Brown Bess raised her head and looked around with studied carelessness. Her big, intelligent eyes took in the landscape at a glance; evidently her mind was not occupied with the dusty grass at her feet.

Bess had a pair of

BEAUTIFUL LONG HORNS,

which sprang from her head in wide, graceful curves. After the manner of cows, she began to rub them against a tree growing near the post and rail fence which enclosed a field of young growing corn.

Nothing suspicious being in sight, she ceased to dissemble, then walking up to the fence she skillfully inserted her curved horns under a rail, lifted her head until the end of the rail was loose in the hole in the post, and then, by turning her head slowly to one side, slid one end of the rail from the hole and gently deposited it on the ground.

It is possible that this might have been an accident, but the rapt attention and expectant attitude of the young bull and other cows plainly showed that they did not look upon it in that light.

The most enthusiastic believer in animal automatonism could not honestly say it was accidental when Brown Bess removed two more rails in the same manner, and then, stepping over the low bottom rail, led her companions to a feast that would make their lean sides swell to the danger mark.

Evidently this old cow, alone and unaided, had experimented until she solved the problem of a post and rail fence, just as she had also discovered a way to unhook a gate. In other words, she had solved a puzzle box's secret, and had she been human we would say she did it by common sense and reason, but as she was only a cow I must call it instinct to prevent some of my good friends among the naturalists from dealing harshly with this book.

A RESOURCEFUL 'COON.

I once owned a 'coon which was extravagantly fond of craw fish, and kept me busy seining the riffs for these fresh water lobsters.

When a big, vicious specimen was thrown to the 'coon, the animal took great care in approaching until it was within easy reach; then it gently placed both its hands upon the middle of the crustacean's back. Moving its hands in opposite directions, the 'coon would gently but firmly smooth out the jointed and armored tail, and at the same time lay the strong pincers flat upon the ground, and thus with claws and tail extended the helpless captive was pinioned to the earth to be

EATEN ALIVE.

Even a powerful salt water lobster's strength would not avail him in such an emergency.

Of course, raccoons have hunted craw fish and eaten them in this manner ever since 'coons and

craw fish existed, and the method of capture might be claimed as an "inherited automatic instinct," whatever that may mean. But no inherited knowledge could have helped my pet to solve the following problem which I invented to test its common sense and power to reason—excuse me, I mean instinct.

Selecting about a peck of the largest, huskiest craw fish the river could produce I dumped the whole of the fighting, armored creatures in a heap in front of Mr. 'Coon.

No similar experience of its ancestors could help the four-handed fisherman in this dilemma, but the 'coon was equal to the emergency.

Walking up to the rustling heap of claws and long waving antennae, the raccoon straddled its legs wide apart, covered the animated heap, and gently settled down upon them as a brooding hen might settle upon a nest of eggs. To my surprise, the craw fish made no effort to escape, apparently "thinking" that they were safely concealed from their enemies.

With what seemed to me to be a twinkle in its cunning eyes, the 'coon proceeded to fish out one craw fish at a time and leisurely devour it, until all that remained of that heap of armored knights was a lot of scattered claws and tails, marking the spot where, by 'coon sense, a 'coon had solved a difficult problem in a simple, practical, common sense manner.

THIS MONKEY KNEW HOW TO GET A DRINK.

A monkey we had at home soon discovered the use of the hydrant and would turn on the faucet, hold its mouth to the stream of water, take a drink and turn off the water again—*sometimes.*

A ROCKY MOUNTAIN GOAT'S ARTIFICIAL SNOW FIELD.

At Field, B. C., I saw a Rocky Mountain kid which had been captured by a guide. I had heard that the Rocky Mountain goats paw away the melting snow in order to feed upon the succulent grass beneath. There was no snow nearer than the top of Mount Stephen to test the story, but there was a clothes-line laden with white towels. In a spirit of mischief I told the hotel guests of the habits of these goats in the snow field and then announced that we would make a make-believe field and see what would happen. I then gathered an armful of towels and spread them over the grass to make an artificial snow field.

The kid trotted over to the towels. After capering around on them for awhile, she began to paw with her front foot until she had displaced a towel; then she greedily nipped the exposed grass. She went through this performance again and again, and ended by lying down in the middle of the artificial snow field to the great amusement of the spectators.

If she had been a domestic goat she would have ignored the grass and eaten the towels, which reminds me that goats are not the only animals addicted to eating manufactured fabrics.

Once, while looking out of the window of a dining car, I saw a young cow in a back yard calmly chewing and

SWALLOWING A FRESHLY-LAUNDERED SHIRT.

She ate one whole shirt, and the sleeve of a second disappeared as my train pulled out.

Where the Licking River empties into the Ohio, between Covington and Newport, Kentucky, on the Covington side, there is a retaining wall of stone built to keep the high bank from being washed away during the floods. The top of this wall was formerly a favorite lounging place for the Covington youngsters and the shale bar below was a favorite spot from which to swim during low water.

One day while sitting on top of the wall watching some boys in swimming I saw a young cow walk up to the boys' heap of clothes below me and calmly eat their damp little shirts; as the tail of the last shirt disappeared I left, because the boys were bigger than I was and I well knew that I would be held responsible for those shirts and that the cow story would not be believed. This showed caution and *boy* sense on my part, but shirt eating does not appear to be an intellectual pursuit even for a cow.

CHAPTER VIII

BIRDS AND INSECTS THAT WILL TAKE AN ARTIFICIAL FLY

CAT BIRDS AND HORNETS, DECEIVED BY PICTURES—THE ICHNEUMON FLY MADE AN ATTEMPT TO PUNCTURE A NAIL—INCIDENTS SHOWING POOR JUDGMENT OR POOR INSTINCT ON THE PART OF OUR UNDEVELOPED FELLOW CREATURES

We are all familiar with the story of the painter, who painted the grapes so well as

TO DECEIVE THE BIRDS OF THE AIR,

so that they flew down and pecked the painting mistaking the flat surface of the picture for the luscious fruit; probably most of us have looked upon this story as a pretty bit of fable; but it is not an improbable story.

ANY ONE CAN DECEIVE A BIRD

with the crudest sort of a representation of bugs, or insects, even if they are only black silhouettes upon a piece of white paper, as I have proved by experiment, and as for the insects themselves, I have seen

HORNETS

time after time attempt to carry away the heads of nails from where they appeared on the surface of the framework of houses. The hornets only saw a black dot and mistook it for a fly.

THE ICHNEUMON FLY

is a strange wasp-like insect; the female has a long tube at the end of her body, composed of the furrowed pieces of the sheath of her gimlet, which she uses for the purpose of piercing the bodies of helpless grubs.

To do this it is necessary for her to locate the grubs in the wood and this she does by probing the worm holes with the long instrument attached to her body.

The particular ichneumon fly of which I am speaking made a similar mistake to the one so often made by the hornets, she, however, unlike the latter did not mistake the nail for an insect, but she evidently thought it to be a worm hole and the

ACROBATIC FEATS

she performed in trying to thrust her egg bearing tube into the head of the nail were most laughable; she stood on her head lifting her tail high in the air so as to be able to thrust her spear vertically down, it would not go; she felt all around the nail and tried every device known to her ex-

perience without results, for the thirty minutes and more I watched her before I was called away.

At last she faced about and standing facing the nail head she bent her body up over her head bringing the ovapositor in front where she could watch the process and in this position I left her working on the kitchen window sash of my camp.

The cook afterwards told me that "the long-tailed fly" worked away until dark, until I suppose, the metal head of the nail had dulled her instruments to such an extent that a grindstone would be necessary to put them again in working order.

If the ichneumon used any reason at all it reasoned something like this: "This is a piece of wood, it has a dark spot on it, my previous experience has taught me that the dark spots on a piece of wood are worm holes, therefore I should be able to thrust my ovapositor in this dark spot."

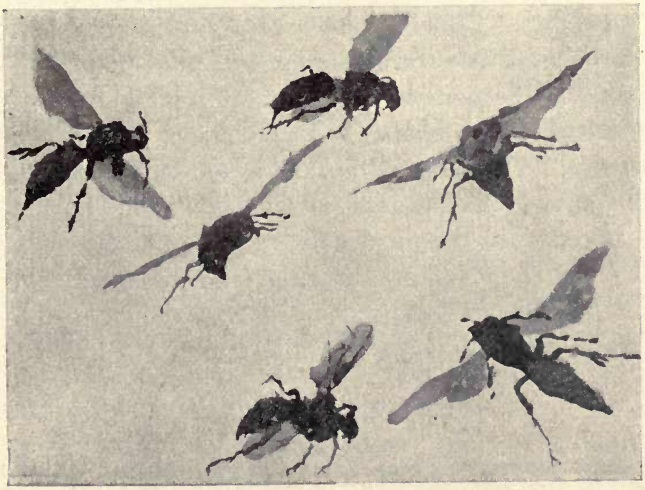
The two hundred men, previously alluded to, reasoned, if they reasoned at all, in this wise: Here is a glass, there is something in it that looks like drink; our previous experience teaches us that glasses on these occasions are used to contain drink, therefore this must be liquid, and we will drink it.

But, personally, I do not believe that either the hornet, the ichneumon, or the men upon these particular occasions reasoned at all, they took things "for granted."

With these facts in view it is not at all wonderful that birds and insects should be easily deceived by the objects resembling other things.

FLY-FISHING FOR HORNETS.

Late in the afternoon while fly-fishing for bass on the lake it is no uncommon occurrence to have the night-hawks sweep down with a w-h-r-r-r-r! after the feather lures; indeed, upon more than one occasion I have jerked my fly away for fear of hooking one of these interesting and useful birds. But the night-hawk is not the only bird which will take the artificial fly. All of the fly-catchers, phoebe birds, king birds, or any of their kin will take a fly as readily as a trout. In the branches overhanging a dark, deep bass hole, where an "old settler" of generous proportions used to lurk, two gnatcatchers had built their nest, which I only discovered from the fact that every time I made a



HORNETS IN FLIGHT

cast there, one or both the little birds made a swoop for my fly.

Not only do various

BIRDS READILY TAKE THE ARTIFICIAL FLY,

but the big, black, paper nest-building hornets will dart at the feather-decorated hook upon every occasion, and more than once I have had dragon flies try to devour my lures under the impression that they were real live insects.

At Whip-poor-will Cottage, near Wild Lands, Pa., where I am now writing, I related the last incident, and it was met with incredulous smiles. In the oak tree shading the door of the camp is a goodly sized paper balloon of a nest, occupied by black hornets, who busy themselves searching for house flies. Piqued at the reception of my story, I proclaimed the fact that I would fool these hornets with a picture of a fly, and forthwith drew one with a soft lead pencil on a paper pad, while all the "Whip-poor-wills" sat round and watched. It was only a few moments until a big hornet pounced upon the picture fly, to the great astonishment of the "Whip-poor-wills" and my great joy, for I had never before tried the experiment, and a failure would have been embarrassing.

THE DIGGER WASP.

One summer when I was attempting to show some small boys how to handle fireworks with

safety, a pot of red fire exploded in my face, blinding me for the time and terribly burning my whole face.

As I began to recover, my appearance was such as to make me bashful and to cause me to wish to hide myself from the sight of my friends. With this purpose in view I went to Maine and located there among the farmers. It was while I was resting my shattered nerves and injured eyes that I sought entertainment in watching the black Digger Wasps in the road-way.

I noticed that they first dug holes in the hard surface of the country roads and then went to seek their prey, which was apparently "cached" in the near neighborhood.

WHEN DIGGING THE HOLE

the wasp went down head first and then came out backward, carrying a little pellet of earth in its mouth which it deposited in a heap, very much after the fashion of an ant, near by.

The game which these black digger wasps captured were grass-hoppers.

In some way or manner the wasp has the power of benumbing and stupefying its captives without killing them. The insect books say that it is by using the sting, but while I have frequently seen the wasp pounce upon its prey I have never been close enough at the time to say with a certainty that the thin-waisted highwayman uses its sting upon its victim, though I do know that the vic-

tim is stupefied by some process so that it can neither walk, hop, nor fly, but passively allows itself to be buried,

PUT IN COLD STORAGE

so to speak—and kept for the young wasp to feed upon when the egg is hatched. In order that I might more readily observe how the black digger proceeded to bury its victim, I sat down in the dusty road with my legs spread each side of a wasp hole.

When the digger arrived with a grass-hopper it seemed very much annoyed by my presence and walked 'round and 'round, making a threatening buzzing noise, but when it discovered that I did not molest it, it went back to where it had left the grass-hopper and grasping the stupefied insect by the head with its four hind legs, the wasp used its two front legs for running.

In this manner the grass-hopper was dragged to the edge of the hole. After reaching this point the wasp entered the hole tail foremost and taking hold of the grass-hopper, this time with its front legs, with some difficulty and not without considerable work, enlarging the hole at points where its narrowness interfered with the grass-hopper's progress, it dragged the latter slowly out of sight; the chamber at the bottom of the hole must have been larger than the passage, because after a time the wasp came out again and in doing so it must necessarily have had room to pass around the body of the grass-hopper.

But the most interesting part of the work was yet to come; in front of the hole was a little heap of dirt which had been deposited by the wasp while making the excavation; this dirt must now all be replaced and I was greatly entertained by watching and learning how the wasp did this, I saw the insect turn its back to the hole and working its front legs, make the dirt fly

EXACTLY LIKE A DOG

when it is digging the dirt for a wood-chuck; every once in awhile it would stop digging the dirt and peer down the opening, occasionally crawling in as I rightly supposed for the purpose of packing down the dirt inside; I say rightly supposed because as the cavity filled I could see exactly how she did it.

I had my sketching pad on my knee and made drawings of the insect at all stages of the work so that I can vouch for the accuracy of these statements. Whenever the wasp had what it thought to be a sufficient amount of dirt in its hole it would use its head for a mallet and by butting would hammer the dirt until it was packed tightly in place. It kept up this process until the hole was completely filled up so that no trace of it was apparent.

One day while we were eating dinner in our log house in the woods of Pike County, Pa., we were entertained by a number of white-faced hornets, which were busy catching the flies that hovered

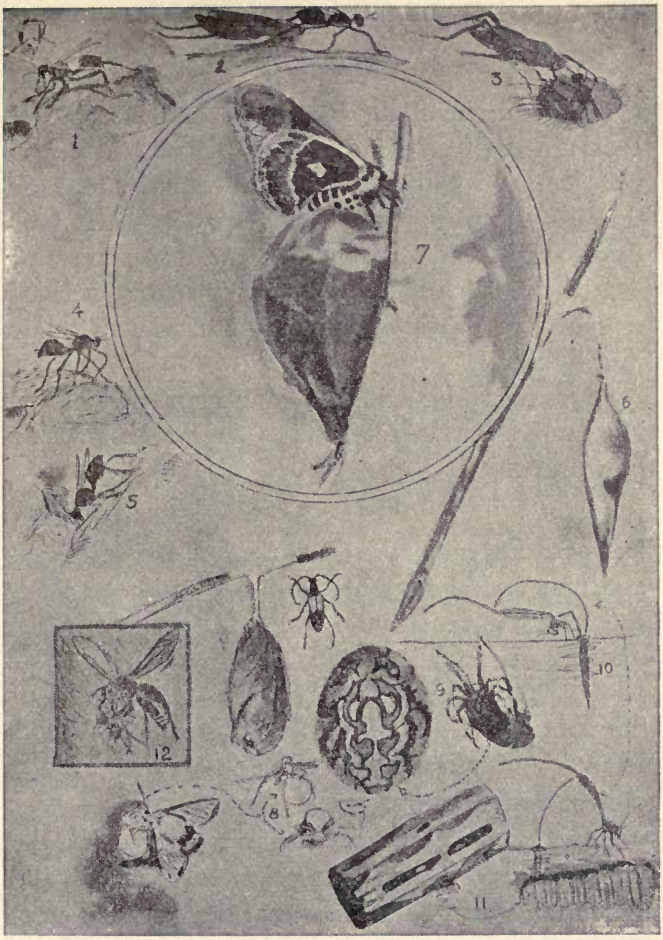
over the table. They even caught the flies from the back of my hand and lifted them gently from the bald spot on my head.

One hornet pounced upon a fly which was busy rubbing its two front legs together, as it clung with the other four to the fringe of the tablecloth. Buzz as the hornet would, it could not carry away that fly. It had gathered up some fibers of cloth along with its prey and, of course, was unable to pull the tablecloth along with it.

As I sat laughing at its futile efforts I saw that in its occasional pauses the hornet itself seemed to have an idea as to what held the fly, for it would nip off a fiber here and there, and try again. At length, in despair, it ceased its efforts and devoured the fly then and there. Afterwards it caught another fly from the butter dish, and, with its last victim in its claws and its first in its stomach, flew triumphantly out of the window. There are many

INSECTS WHICH WILL LIVE IN CONFINEMENT

and make amusing pets, but the only people I know of who make a practice of keeping insects in confinement for this purpose are the Japanese. However, there is no reason why we should not derive a lot of enjoyment and entertainment from captive native insects of our own country. There are a number of crickets and grass-hoppers, beetles, and aquatic insects which can be kept in confinement with very little trouble. I once had



FIELD SKETCHES FROM LIFE

1.—Digger wasp backing out of hole with pellet of earth.
2.—Digger wasp running on two front legs and grasping a grasshopper with its four hind legs.
3.—Digger wasp pulling a grasshopper into the pit dug for it.
4.—Digger wasp scratching dirt like a dog with its front legs.
5.—Digger wasp using its head to ram down the earth.
6.—Cocoon of a Samia cynthia moth.
7.—Cecropia moth shortly after emerging from its cocoon.
8.—The "White Death" catching a Heman's moth—under side of spider. Back view and enlarged diagram showing crescent arrangement of eyes.
9.—An orange-colored spider, showing, in the enlarged view of its body, the Oriental rug pattern of its decorations.

A LARGE KATYDID

which I caught in the back yard late in the fall, I gave it the freedom of my library and it became very tame, would feed from my hand and lived through the winter until after the Christmas holidays; then it met an untimely death by creeping into the open fireplace to keep warm and being scorched to death in the morning when the fire was lighted.

A friend of mine used to amuse himself by keeping captive basket caterpillars on the desk where he worked.

THE BASKET CATERPILLAR

had been fastened by a short thread, one end being attached to the cone of the basket and the other end to a pin which was driven in the desk in the yard master's office of the O. & M. R. R. This allowed the prisoner to creep only the length of the string and the poor thing traveled for hours around and around the circle described by the radius of the thread.

After a time my informant noticed that the caterpillar had ceased its monotonous crawling and had retired to the seclusion of its basket home. While he was examining it, the caterpillar's head suddenly peered through a hole which it had made in the top of the basket. Finding the thread, it bit it apart and freed itself. With its own silk it carefully mended the hole in the apex of the cone, and, after again turning a somersault inside of

the basket, the little head once more appeared at the proper aperture.

The caterpillar was allowed to crawl away to its well-earned freedom, still burdened with its conical snail-like house tottering on its back.

When I visited the Rev. Dr. McCook of Philadelphia and was shown to his library I found it

INHABITED BY SPIDERS

of all sorts, and shapes and forms, and their webs stretched over the books, making many passages from one end of the library table to the other and suspension bridges across the chasms formed between the piles of books.

Besides these loose spiders there were numerous other ones confined in glass-covered boxes. I suppose these spiders were tame, for they showed no alarm at my presence and they were probably the pets of the Doctor who has written so much interesting matter about spiders, ants, and other insects.

I have never tried to tame an oyster or a clam, but as far as my experience goes I believe that anything with intelligence enough to live on this earth also possesses intelligence enough to learn to know its friends and that is all the intelligence required to make it tamable.

FEROCIOUS SPIDERS.

The mention of Dr. McCook's spiders recalls to mind some interesting experiments performed

by some young men with these creatures. It seems that one of them, not knowing the solitary habits of the spider, and the fierce manner it has of resenting intrusion by any member of its own race, attempted to collect a number of the various kinds to be found in the woods near my camp and keep them together.

The interesting time came when a job lot of spiders had been put in confinement together, and it was evident that every mother's son of them looked upon every other one as his mortal foe, I say "his" but the truth is a number of these pugnacious creatures were females, the matter of sex, however, seemed to make little difference in their treatment of each other. There was one great big hairy old lady spider who had an exceedingly bad temper. She was a wood spider and when caught she was bearing a large white cocoon or silken bag filled with her precious babies. By means of a stick she had been

SEPARATED FROM HER BAG OF BABIES

and her grief did not tend to soften her temper; in fact she was so ugly, brave, and vicious that she would jump at one's hand if it was brought near her. She, however, remained in one corner while the other spiders sparred for a good lead by which they might take advantage of each other. There were a number of deaths in the box before nightfall, but the hairy old wood spider took no part in the fights. What she did at night we can only

imagine, for in the morning she was the sole survivor. This so aroused the admiration of one of the young men that he immediately proclaimed that his spider could

WHIP ANY SPIDER IN THE WOODS!

The challenge was accepted by several of the other campers who immediately set to work to scour the stumps and stones and trails in search of gladiators. Learning that I had a big white spider at my camp, one of the lads came over and borrowed it and I afterwards learned to what use he put it.

The white spider appeared to be an expert in the art of Jiujitsu and it slew all comers until a little unknown spider which the boys named "Teddy" was introduced in the arena. Not only did the white spider bite with fatal results, but it had a mean way of disabling its foes by amputating their legs; it cut all the legs off of the big wood spider and left it unable to move. Whenever the "white death" was put in with its fellows their limbs strewed the field.

The little strange spider called Teddy after losing two legs, killed the "White Death" as the boys called my pet, and it was the death of the "White Death" that the lads had to explain, which gave me the interesting account of the failure of their collection, as such, and its success as a gladiatorial contest; I saw the battle ground and the carnage but did not witness the conflict. You can make pets

THE "WHITE DEATH" CATCHING A BUMBLEBEE.
SKETCHED FROM LIFE

of spiders as I have often done, but they will not tolerate companions of their own kind in their confinement.

It is not at all difficult to deceive human beings, with either fake animals, or fake animal stories, of course there are some people who will not believe anything that they have not seen with their own eyes, and these are the ones whom you can most easily deceive, even with home manufactured artificial animals. When I was a lad in Painsville, Ohio, I made

A SPIDER OF CHEWING GUM,

painted its body with brilliant colors from my father's paints and slyly stuck its legs to a show case in a hat store, then lounged around until some one chanced to see it.

It created a great sensation and the proprietor of the store called his neighbors in to see the wonderful big spider. No one doubted the genuineness of the thing and when at last one of the spectators poked at it with a cane and pushed it from its perch the wax spider fell to the floor and its legs broke into fragments to the great astonishment of all the spectators none of whom even then doubted that it was a real live spider and they would not believe that it was an imitation until I picked it up in my hands, softened it by my warm breath and rolled it into a shapeless mass between my fingers.

When but a small boy in Kentucky I often amused myself with modeling

HUGE LIZARDS OF BLUE CLAY,

drying them in the sun and then placing them on the neighbor's door steps, ringing the door bell and hiding to watch results. None of the neighbors suspected that they were but clay lizards, but without exception they one and all mistook them for live reptiles. I am willing, however, to swear that no such lizards as my awkward boyish hands had fashioned ever lived on this earth; yet to the great

delight of myself and the other boys I had let into the secret, the good people tried to kill the clumsy clay things with sticks.

CHAPTER IX

A GREAT NOSE

A GREAT NOSE—FIRST OPPORTUNITY TO SKETCH A LIVE SEA-COW—HOW A SEA-COW LOOKS—ITS BAG-LIKE BODY AND ITS SMALL HEAD—THE FINNED MAMALIA, WOMAN FISH, COUSIN TO THE LITTLE BEARDED MAN—THE ADVENTURE OF MR. DIMOCK WITH A TWELVE-FOOT MANATEE—A SEA-COW THAT KNEW ITS KEEPER—USE OF THE HIDE, ITS OIL AND FAT—HUMBOLDT LIKED MANATEE MEAT—A SCHEME FOR MAKING USE OF OUR IDLE RICH, WHY NOT A MANATEE RANCH.

The mosquitoes were singing, with a noise resembling the sound of a distant saw-mill and they floated in spiral columns like steam clouds above the bastard palmettoes on the shore; water turkeys with snake-like necks were swimming in the stream, while living rafts of ducks floated on the smooth surface of the water just out of gun shot. This was before the days when our fashionable women had murdered all the white herons to furnish "aigrettes" for their criminally ignorant heads and the beautiful white egrets boldly displayed their slender and graceful forms, their dazzling white plumage making conspicuous spots in the green marsh and on the dark mud banks.

As my boat idly drifted with the tide the al-

ligators would slip from the banks or fall with a splash from water logged tree trunks into the stream and swim away, conspicuously displaying the black and yellow markings of their armor-plated tails. Stretched prone upon the bottom of my boat with my chin hanging over the gunwale lazily watching the water, I noticed that between me and the shore some floating weed or grass was moving in apparently an unaccountable manner; not only did the floating vegetation move without regard to the direction of the tide, but portions of it constantly disappeared beneath the flood; presently there was a ripple on the smooth surface of the water near the floating grass and

A GREAT NOSE, WITH COW-LIKE NOSTRILS

and stiff bristles startled me as it appeared above the surface; it was visible but a moment before it disappeared and then a bulky shadowy form could be seen swiftly and noiselessly gliding away under water. There was no chance to make sketches of this thing, and the modern snapshot camera was not then invented, but I retained a mental photograph of that nose in my mind.

It was at the old New York Aquarium that I first had an opportunity to examine at close quarters and make drawings of a live sea-cow. That was years ago when the institution was located on what is now known as Herald Square. When I first came to New York, along with my other work, I was illustrating and writing natural history articles for

MAMMA HIPPO

the *Scientific American* and I entered the Aquarium for the purpose of sketching the

GREAT SEA-COW OF FLORIDA.

Passing the many tanks, allowing the finny occupants to swim and flop unnoticed, I proceeded straight to the pit formerly occupied by a baby hippopotamus. As I stood looking into the vat there was a disturbance in the water and again I saw a cow-like nose armed with stiff bristles appear for a moment above the surface and then sink out of sight; this was all that happened to tell me that the tank was occupied and all that could be seen, until through the kindness of the keeper the water was drawn from the tank.

As the water lowered, an apparently shapeless mass, enveloped in a wrinkled, slate-colored skin,

with white bristles scattered sparsely over it, was disclosed. When the tank was almost dry, I could get a fair view of its occupant, and found it to be a large, uncouth animal, somewhat resembling a seal in shape, but with the hind limbs replaced by a broad, fleshy tail or caudal fin, and two flippers in front corresponding to forelegs; but really the animal looked more like an animated leather bag than anything else.

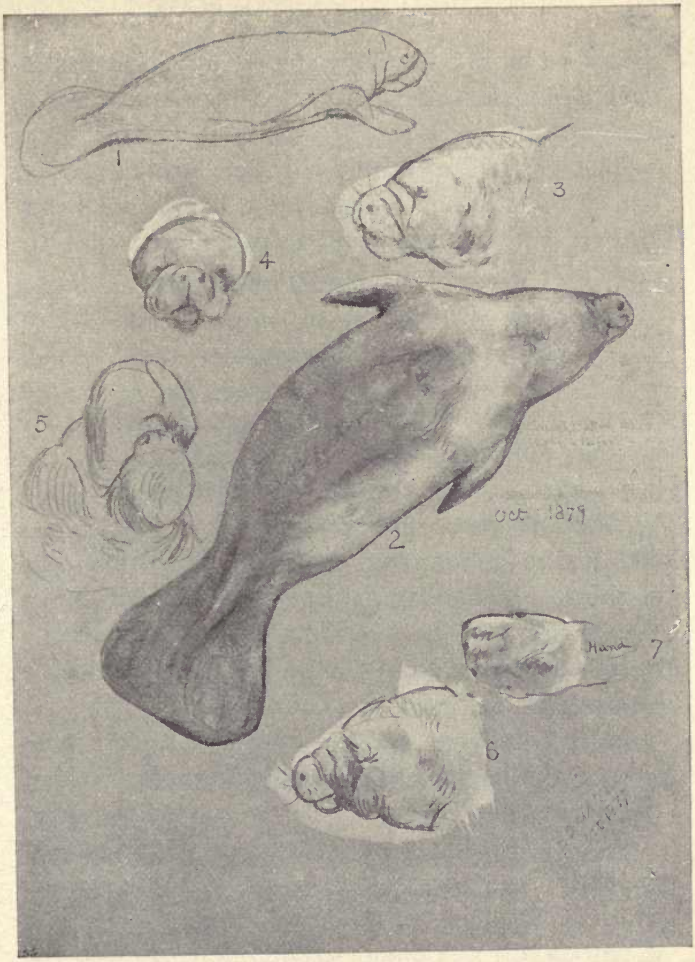
Bent down, with its nose upon the bottom of the tank, was

A RATHER SMALL HEAD

with an odd, wrinkled countenance. As the huge, unwieldly monster moved, its body became corrugated with large wrinkles.

This was a Florida manatee, the first live specimen of this animal ever exhibited in New York City and the accompanying drawings, I believe, are the first published sketches made from a *live specimen* of the seacow of Florida, the finned "mamalia," the "woman fish" of the Spaniards, and a cousin to the little "bearded man" of the Dutch.

Not long ago, my good friend, Mr. Dimock, spent six hours in the water with a twelve-foot manatee, which he was endeavoring to persuade to take a trip north and exhibit itself to the crowd at the New York Aquarium. Mr. Dimock was successful in anchoring the manatee; but while he was making preparation to ship the animal north, it made its escape. It will be interesting to the "old" boys to know that this gentleman who could



STUDIES MADE FROM LIVE SEA-COW

1.—Side view showing arm and hand extended.
2.—Top view—forearm and hand folded under, so that arms appear like flippers.
3.—Profile of head.
4.—Front face.
5.—Showing mouth, chin and neck.
6.—Profile of head.
7.—Hand.

spend six hours in the water struggling with a twelve-foot manatee had passed his sixtieth birthday.

The manatee is entirely harmless, docile, readily tamed and the one I sketched evidently knew its keeper, and would move awkwardly around to meet him when he waded into the tank.

THE SEA-COW'S HEAD

is round and on the muzzle are a number of bristles, each of which is said to connect with the brain by a nerve. No opening to the ears could be detected from a position outside the tank. The eyes are so minute that they are hidden by folds of skin. The hands of the manatee have five nails (see sketch in illustration). The structure of the bones allows the hand to turn in any direction at pleasure.

In the study of the top view, or back of the animal, the hands are doubled underneath so that the arms resemble fins.

The tail is about one-quarter of the length of the body, and in this specimen 3½ feet was just the width of the body at its broadest part. The skin is remarkably thick and tough. It is used in the place of rawhide or leather in the manufacture of articles where great strength is required. I have seen a walking cane made from the skin of a manatee, killed at the head of navigation in the Magdalena River, in South America.

The oil from the fat is free from that rancid odor common to most animal oils, and is held in high esteem. The flesh is edible, and pronounced by Humboldt and others, sweet and palatable. When salted and sun-dried it will keep for a year or more. By Catholics it is considered fish, and eaten by them on fast days.

The true manatees are confined to the Atlantic side of America. The largest species is found in the United States upon the Florida coast; a smaller kind inhabits some of the rivers in South America.

The manatee is placed by Cuvier among the cetaceans (whales), but Prof. Agassiz compared the skull of one with that of the mastodon and with that of the elephant, and in a discourse before the American Society for the Advancement of Science, over a very perfect skeleton, he proved that Cuvier was wrong in many of his statements regarding the anatomy of the manatee, and ended by pronouncing it an embryo type of the thick-skinned animals, such as the elephant, hippopotamus, etc.

By domesticating and rearing Florida sea-cows for the market there is an opportunity for some people of wealth to find occupation and win fame far more lasting than that gained by society notices in the newspapers. It is possible that they could save from extinction a very valuable food animal and benefit humanity by adding a new and valuable domestic animal to its lists. Just think what fun it would be!

The sea-cow's pasture is all under water and any lagoon in the district inhabited by these animals might be fenced in by a strong net anchored across one end and would make a novel cattle ranch; but I am afraid that none of our idle rich is possessed with high enough ideals to attempt the domestication of any sort of wild animals and if our native creatures are to be saved from annihilation it must be done by the common people through their government or by clubs, and societies of the people formed for that purpose.

At Behrings and Copper Islands, away up in the cold arctic country, there formerly existed a very large cousin of the manatee, known as the rhytina. When Behring was on the island he had with him an enthusiastic German naturalist by the name of Stella, and it was this German who published the first description of the rhytina. Twenty-seven years after these animals were discovered there was not one left; the crews of the whalers had killed and eaten all the rhytina that there were in the world and wiped this useful food animal completely out of existence, just as the modern whalers are at this very moment killing and eating all the remaining musk-ox in the north country.

It never occurred to the people in the olden times to leave enough of these animals alive to keep up the stock, and it does not occur to our frontier people today to leave anything alive which can be used for fresh meat; that the rhytina might be transported and

planted around other desert islands in the same region is an idea too altruistic, too advanced and too practical to occur to the men in Behring's time.

There is still another creature which is classed by the scientist with the American manatee under the family name of sirenia, and this is the dugong, a name which the Malays have given it. The dugong is reported to be found in the Red Sea, Eastern Africa, Mauritius, Malacca, the Indian Archipelagos, and on the west coast of Australia. All this and much more you can find in any up-to-date natural history. Personally I have never seen a dugong and I am too young to have ever met a live rhytina, and while I have made illustrations of these last two animals, they were made "out of my head" and the pictures published unsigned, in the good old box-wood days when nobody questioned any nature fakir's work, whether it was a book or a picture. Ah! those were great days for the engravers if not for the illustrators. The latter made pictures as the engravers directed and the engravers knew as much about natural history as a cow does about Christian Science.

CHAPTER X

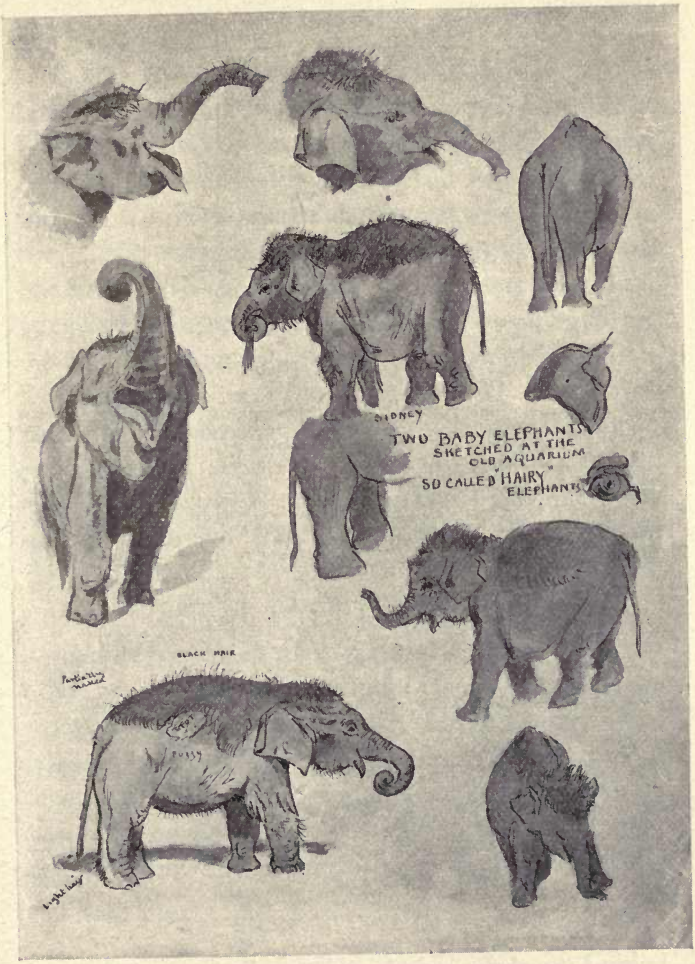
THE OLD UPTOWN AQUARIUM

THE OLD UPTOWN AQUARIUM—BABY ELEPHANT FROM JAVA—THE TROUBLES OF AN ARTIST WITH THE HAIRY ELEPHANTS—PUNISHING A REBELLIOUS MODEL—THE BAD ELEPHANT'S REVENGE—HOW AN ELEPHANT LAUGHS—THE CAMEL THAT TRIED TO GET IN THE ARTIST'S LAP—MURDEROUS TRICKS OF OLD ELEPHANTS—JUMBO, THE GOOD NATURED—TREATING THE COMPLEXION OF THE WHITE ELEPHANT, AND THE COSMETICS USED ON JUMBO.

The old Aquarium which used to stand where Herald Square is now was a most interesting place and there were often things there which neither could be called mermaids or fishes. At one time they had a couple of little baby elephants from somewhere in the neighborhood of Java. They were advertised I believe as

HAIRY ELEPHANTS

or dwarf elephants. At any rate I went there to make some sketches of them and the keeper kindly furnished me with a chair inside the enclosure where the little things were kept; he then went off about his business, leaving me to my own devices. I put the chair down in the straw; seating myself, I began to work, but as usual when sketching animals my models did not choose to pose. The lit-



TWO BABY ELEPHANTS SKETCHED AT THE OLD AQUARIUM
—SO-CALLED "HAIRY ELEPHANTS"

tle elephants were about as tall as an ordinary table, but they were strong and

HAD WILLS OF THEIR OWN.

Both of them exhibited the keenest curosity and insisted upon looking over my shoulder while I was working. I suppose very few of my readers are art students, but such of them who paint and draw from live objects will at once see the impossibility of making a sketch with one's models looking over one's shoulder. I tried to push the baby elephants away, but they did not or would not understand. Then I got down on my knees, and pushing with all my strength succeeded in placing one of the little brutes in position; this made the other one very jealous and it crowded my chosen model out of position so I took my drawing pad and

SLAPPED THE DEFIANT ELEPHANT

over the head, driving it to a position behind my chair, to the great delight of the other baby, who now seemed to understand what was expected of it and proudly held its pose. I sketched hastily, as one must when dealing with such models, supplementing my drawing with written pencil notes, and just as I became absorbed in my work

THE BAD LITTLE ELEPHANT

behind me slyly curled its funny little trunk around the leg of my chair and then with a quick pull removed the chair, leaving me sprawling on my back

in the straw with my legs spread out and feet over my head.

It was just at this moment that Mrs. Olive Thorne Miller, the celebrated writer of books on birds, came in and looking over the railing smiled sweetly as she said: "How do you do, Mr. Beard." I did not take off my hat to the lady for the reason that the elephant had already done that for me.

I do not *know* that

AN ELEPHANT LAUGHS

or that scientists will admit that they are ever guilty of such an expression of mirth, but I do know that when I regained my seat both of those little imps came up to me and throwing their trunks back over their heads and opening wide their mouths they thrust their faces close to mine and made a noise like this: Sh—a—s—s—s—s! and it would take a strong argument to convince me that this was not an elephantine laugh. It was only after a continued vaudeville performance during which I played the clown and the elephants took the part of ring master that I succeeded in making the rude sketches preserved to this time and here reproduced.

There used to be a

WEE BABY CAMEL

up at Central Park which was fondled by everybody. The baby grew rapidly, but seemed to be unconscious of that fact, and when my brother, J.

Carter Beard, went up to the Park to make a sketch of it he found that the animal had grown to be a long-legged youth. Mr. Beard had not taken his seat, however, before this big thing

ATTEMPTED TO GET INTO HIS LAP.

My brother is quite a stout gentleman and has not any lap worth mentioning, so when the almost full-grown camel tried to climb aboard, the chair gave away and chair, man and camel rolled over the ground to the great delight of the spectators who had gathered around the enclosure to watch an artist at his work. There are always more or less humorous incidents in the work of sketching live animals, often exciting and sometimes even dangerous, but I know of no serious accidents ever happening to animal painters and illustrators while engaged in their chosen work.

If baby elephants are playful with the artist, the full-grown elephants are not at all inclined that way, at least I have not found them so, for whenever I have attempted to sketch them I have been compelled to keep on the alert to save myself from serious consequences. The old fellows will usually stand

SWAYING THEIR BIG HEADS,

apparently not seeing the artist busy at his work, but their wicked little eyes are watching for an opportunity to injure him. This they will not do openly for fear of their keeper, but I have had them more than once slyly manoeuver to get me

between them and a wall in such a position that they could work their huge body around and crush me against the wall without apparently intending to do so. If, in place of being in their winter quarters they happen to be under their summer canvas, then I must watch them for fear of being stepped upon. They have numerous other tricks "up their sleeve" by which they can make life uncomfortable or even squeeze it out entirely from the body of an ambitious artist, and they try to do it in an apparently accidental manner. I am not speaking here of vicious elephants, but of the ordinary circus animal, in truth the only elephant in whose society I have felt at all safe was poor old Jumbo. Jumbo was an African elephant, but whether that had anything to do with his good disposition or not I am unable to state.

When they had

THE "WHITE" ELEPHANT

they used to scrub it and scrape its toe nails to make it appear as light colored as possible; the effect was also greatly heightened by a pink electric light. To make the "white" elephant appear still lighter in color, poor old Jumbo was painted with a coat of lamp black and grease or some similar substance; this made the contrast between the two, when standing together, quite noticeable, but I doubt that there would have been much difference in their color if the two elephants had been turned out to pasture for a week or two.

CHAPTER XI

THE FIRST LIVE MUSK-OX EVER SEEN IN NEW YORK

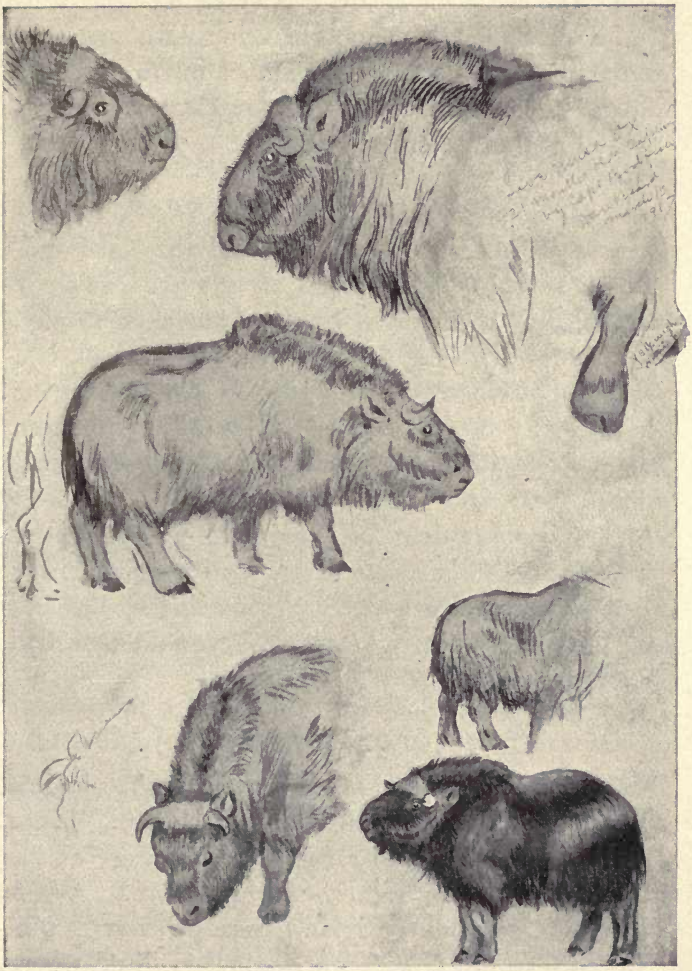
CAPTAIN BODFISH OF THE GOOD SHIP BELUGA—THE FIRST LIVE MUSK-OX EVER SEEN IN NEW YORK—FATE OF ITS COMPANIONS—ITS TRAVELS FROM SAN FRANCISCO TO NEW YORK CITY—THE FIRST SKETCHES FROM A LIVE MUSK-OX EVER PUBLISHED—LOCKED UP IN THE CAGE WITH THE MUSK-OX—DESCRIPTION OF "OLIVE" AND THE PLACE WHERE SHE BELONGS—JIBES OF THE CROWD—ADAPTED BY NATURE TO COLD COUNTRIES—THE MUSK-OX SHOULD BE PROTECTED AND DOMESTICATED—"BUFFALO" JONES' HEROIC EFFORTS—WOLVES SLAY HIS DOG AND INDIANS SLAY HIS CALVES.

All Arctic travelers and natives know Captain Bodfish of the good ship Beluga, so also do those New Yorkers who were fortunate enough to be counted among the members of the old Camp Fire Club.

Captain Bodfish is

A VETERAN WHALER

and spends his winters on the northwest coast of the American continent with his ship frozen in the ice in some protected cove well known to the adventurous sailor.



LIVE MUSK-OX—TWENTY-ONE MONTHS OLD, CAPTURED BY CAPTAIN BODFISH AND SKETCHED BY THE AUTHOR, MARCH, 1907

It was while his steam whaler Beluga was wintering in the neighborhood of Cape Bathhurst that a party of the captain's Eskimo hunters ventured inland about thirty miles to a point north of Great Bear Lake and there captured

THE FIRST LIVE MUSK-OX

ever seen in New York. Indeed the flat-faced, fur-clad hunters captured four live musk-ox "calves," if their parents belong to the ox family, or "lambs," if it is decided that the musk-ox is a sheep. But whatever the position in which scientists may finally decide to place these queer northern animals it cannot be denied that they were young ones.

The wolfish dogs belonging to the Eskimos killed two of the captives before the thirty miles had been traveled necessary to reach the ship and on board the ship the same wolfish animals killed another, leaving only

ONE SURVIVOR,

which was exhibited in November, 1901, in San Francisco, from there it went to Chicago, thence to New York, where I found it in a cage at the Sportsmen's Show, and where William C. Whitney paid $1,600 for it and then generously presented it to the New York Zoological Park, where it died.

At the present writing only three specimens of the musk-ox have ever reached civilization. In

1899 a Swedish exploring exposition captured two on the eastern coast of Greenland, both of which were sold to the wild animal man, Carl Hagenbeck, of Hamburg. The Duke of Bedford bought one of these from Hagenbeck and the Berlin Zoological Garden bought the other. As far as I know

THE SKETCHES

here published are the first ones ever made from a live musk-ox.

To make these drawings I had to enter the cage with the animal, and I must say that I found it as gentle and well behaved a young lady as ever posed for me; she was at that time (March, 1902) twenty-one months old. "Olive," as they called her up at the Zoo, stood two feet three inches high at the shoulder, with a total length of four feet ten inches, as measured by Mr. Hornaday. She had short ears, protected inside and out by a thick growth of woolly hair, the actual length of the ear, according to my measurement was four and seven-tenths inches. She wore a thick woolly coat with long hair on the outside to shed the sleet and rain. There was a thick mane like a long cushion reaching from the back of her head to a point back of her shoulders. The hair was long and thick around her throat, protecting the neck and hanging down over her legs to her knees. The general color was a dark brown, with a yellowish white short hair upon the exposed part of the legs, and a gray streak on the head extending from one horn to the

other, also a gray place extending from the end of the mane to the tail. When

OLIVE GENTLY LICKED MY HAND

I noticed that her nostrils and lips were black, that her muzzle was gray or a dirty white, and that her tongue was pink in the middle and had a black border.

Lately the musk-ox has been placed between the ox and the sheep and honored with a genius of its own called ovibos.

In the Barren Grounds north of Great Bear Lake, "Olive" lived upon twigs and grass, but she took kindly to civilized food and contentedly munched the crackers which I had brought in my pockets to please her.

The sketching of wild animals is always attended with more or less inconvenience on the part of the artist, in the wilderness; he must get his poses with hasty sketches made from life and make his finished drawings from the dead animal or from the zoological specimen confined in the garden, but this is not always a simple task. I have been in more serious danger

SKETCHING IN WILD ANIMAL STORES, MENAGERIES,

and such places, than I ever have been in the wilderness.

While I was in no danger shut up with "Olive" in her little cage, I found it anything but

an easy task to make my drawings with my model so close to me; although an old hand at this kind of work, I found it more or less disconcerting whenever I would look up from my work to see the cage surrounded by a crowd of curious people.

Neither did it relieve my embarrassment when such questions as: "What are you locked up for, old man?" "How many days did the judge give you?" "Do they feed you on hay?" "Do you have to sleep with that cow o'night?" were hurled at me from various quarters of the compass.

These sallies of wit were greeted by the rest of the crowd with unconcealed merriment, but notwithstanding the inconvenience of the small space, and the public exhibition of myself as a caged wild man, I shall always remember gentle little "Olive" and my visit to her with pleasure and never cease to regret her untimely death.

The musk-ox is perfectly adapted by nature to the barren, cold countries where it lives. Its flesh is good for food, does not taste of musk and it probably saved General Greely's party from starvation. Lieutenant Peary is also indebted to the musk-ox for many much needed additions to his stock of provisions.

However, unless some

STRINGENT MEASURES

are introduced the musk-ox, like the poor buffalo, will be wiped out of existence. If it was domesticated it could be used by settlers in the north coun-

try where it would thrive. The domestic herds of this animal would supply food and clothing and render the country habitable for people for all time to come and the time is coming when that country will be settled as is northern Europe today. There is no doubt that in its own climate the musk-ox could be made as much of a range animal as the reindeer is in Lapland, and it would be far more useful than the domesticated reindeer, so carefully imported into a country already supplied with magnificent native beasts perfectly adapted to the climate, food and country.

"Buffalo" Jones. whose heroic efforts at

DOMESTICATING BUFFALO

and crossing it with our domestic cattle have been so little appreciated by the unthinking public, made an expedition to the Barren Land of the north in order to secure some musk-ox calves with which to start a herd. After enduring great hardships and going through many adventures he was successful in capturing a number of the young animals. The calves in his camp attracted the wolves which he had literally to fight away in hand-to-hand conflict during which the wolves killed his dog.

But he saved the calves only to have them treacherously slaughtered by his Indian hunters so that the doughty Colonel returned to his home empty handed with a new lot of thrilling experiences added to his already long list of personal adventures.

CHAPTER XII.

THE DEER I SHOULD NOT HAVE KILLED

THE DEER I SHOULD NOT HAVE KILLED—SPLENDID WHITE TAILS—HE MUST HAVE A DEER—ALL THE GUILT OF A MURDERER—HOW THE HUNTER SHOT HIS BUCK—NO WOODCRAFT IN KILLING CHICKENS AND BUTCHERING CATTLE, AND NO FUN IN IT EITHER—REAL SPORT IN PHOTOGRAPHING BIG GAME—EVERY WILD ANIMAL KILLED MAKES ONE LESS IN THE WORLD—A GUMMER AND A LUNGER—HOW THE AUTHOR'S LIFE WAS SAVED BECAUSE HE LOOKED MORE LIKE A MOOSE THAN A DEER—THE KING OF BIG AMERICAN GAME ANIMALS—THE LITTLE FAWN AT BELTON, MONTANA—BUCKS ARE DANGEROUS AT CERTAIN TIMES IN THE YEAR—FIVE FULL-GROWN DEER NOT LARGER THAN RABBITS—KILLED BY THE POISON BREATH OF A FURNACE—A PIGMY MUSK DEER—HOOFS MEASURING ONE-QUARTER OF AN INCH THE BROADEST PART—SUSPENDED BY THEIR TEETH.

Armed with a camera, a sketch book, and field glasses, but otherwise unarmed, I once took a journey to the woods where I was met by a botanist friend of mine and we put up for a short time at a small hotel on the verge of the forests. Often in the morning while dressing, I could see from my window the deer digging potatoes with their forefeet in the hotel potato patch. Each day in our tramps we would meet with one or more of these beautiful creatures,

then we would clap our hands and watch them spread

THEIR SPLENDID WHITE TAILS

as they bounded away unharmed in the woods. Just before we pulled up stakes to start for a camp further back in the forest, a hunter, a good shot, but poor woodsman, complained bitterly of his hard luck in not being able to get a deer to bring home with him or even to get sight of one.

It was our last day at this place when this hunter put his rifle into my hands and told me

HE MUST HAVE A DEER.

The season was open for deer, but I am not a killer. With the gun over my shoulder I walked back about two miles where a buck was feeding in a windfall. A child could have shot this deer; it required no skill and no courage to kill it as it stood broadside towards me. I fired, but just as I pulled the trigger the deer started forward, so instead of the bullet striking him in the shoulder, as it should do, it pierced his side (paunched him), the poor animal staggered a short distance when the botanist fired to put it out of misery and it fell under a tree and lay there kicking until we came up and cut its throat. I felt

ALL THE GUILT OF A MURDERER;

we hung the body up by its heel joints, disem-

boweled it, buried the refuse, and left the thing hanging on the tree; then we washed our bloody arms and hands in a dark pool and cleaned the blood off our knives with the brown dead leaves, blazed the trees to the road and with a guilty conscience I returned to the little hotel, returned the rifle to its owner and sadly told him that if he would walk out to a certain woodpile, then follow a spot trail, he could *shoot* a buck.

The next morning as we were on our way to our distant camp we met a hunter proudly returning with his only deer. It did not take long for me to wash the gore off my bloody hands and arms and to clean my hunting knife, but I shall never rid myself of a feeling of guilt when I think how unnecessary it was to kill that animal, and how weak I was deliberately to kill a deer simply because a man asked me to do it. That deer was killed by me because of the friendship for that man and the man wanted it for the same reason an Indian would wish a scalp to put in his belt, he wanted it as a "trophy" of

HIS SKILL AS A HUNTER.

Now please don't misunderstand my position. I would not hesitate to purchase and kill chickens or even cattle, if we needed them for meat, neither would I think it wrong in a game country to supply the camp kettle with the necessary food from the abundance which the forest offered, but *I do not like to kill*

chickens; I would hate worse to kill cattle, and I see no pleasure in the killing of game. The danger of the chase and all the hardship, and all the skill of a woodsman are required of the man who successfully photographs or sketches wild creatures, and it is these qualities which give real zest to the hunt, not the bloody butcher's part of it.

There is another side of the subject which we must keep in view; every chicken which we kill, every steer which is slaughtered or any domestic animal of any kind which is sacrificed for the table or market, creates a demand for these animals, and the farmers feeling the demand, raise more domestic animals, so, strange as it may appear, the more domestic animals you kill the greater will be the supply; but

EVERY WILD ANIMAL KILLED

makes one less wild animal in the world, so you can see that the more game there is destroyed the less there will be in the world.

It was on this same vacation after we had made a hot and fatiguing tramp through the woods and climbed over some fallen trees lately felled by a baby tornado, that we reached the shore of a lake and I seated myself upon a log in an open spot. We pulled off our brilliant colored sweaters so that the breeze from the water might refresh us. Out on the lake a few hundred yards distant, a canoe appeared occupied by two men. Suddenly the man in the bow with evident excitement pointed his fin-

ger at me as I sat upon the log. The manner in which he pointed me out to his companion, for some reason or other, gave me an uncomfortable sensation, so I hastily arose from the log and waved my cap. The only effect this had was to increase greatly the excitement in the canoe, and when the man in the stern reached for his rifle I ran down to the water's edge and shouted. At that both men took up their paddles and continued their journey.

I am not a vain man and my physical appearance occupies a small part of my attention, but since that incident, what little vanity I had has disappeared. I afterwards learned that the occupants of the canoe were

A GUMMER AND A LUNGER,

the gummer being a man who spends his time in collecting spruce gum for the market and a lunger a man with defective lungs who has been ordered to the woods by his physician. The season was closed for moose, but open for deer and the game marshal at that time was somewhere in the neighborhood. It seems that the gummer in the bow of the canoe when he caught sight of me, exclaimed, *"There is a moose!"* while the lunger declared that I was a deer; if the gummer had not been so positive that I was a moose and the game marshal had not been known to be near by, this story would never have been told, and maybe if I had not run down to the water front and shouted the game

laws might not have been observed, but whatever might have happened, the fact remains that my life was saved because

I LOOKED MORE LIKE A MOOSE THAN A DEER.

Up to the time of that adventure I had been disposed to laugh at a moose, his long ungainly nose, short neck, and badly drawn body, have always appeared absurd to me, in fact, the moose seemed to me as if the Creator had made him while in a humorous mood, but now it is different. I look upon the moose as an exceedingly dignified and noble beast; neither do I hesitate to declare him boldly to be the king of American big game animals. Pshaw! Alongside of a moose a deer is but a weak effeminate creature!

When I was last in the Rocky Mountains a big mountain lion drove a beautiful little fawn down to the railway station at Belton, on the Great Northern Railroad, and the kind-hearted station master fed the little spotted fawn from a bottle just as human "bottle babies" are fed.

Deer make beautiful pets, but the bucks are very dangerous at certain times of the year. This, however, depends upon the size of the buck. One full-grown deer that I once owned had legs smaller than the pen with which I am writing, and its body was not as large as a big jack-rabbit. Of course, this toy deer was not dangerous any time of the year. But the pigmy musk deer of Java are far from numerous and seldom seen in this coun-

BULL MOOSE, HORNS SHED. MOOSE CALVES

try. The one I owned was killed by gas from the furnace of our house.

One winter while we New Yorkers were bringing into requisition all modern appliances within our reach to ward off the cold waves that came rolling over us from the mountains and plains of solid ice of the northern frozen regions, while our ears and noses, our fingers and toes were tingling in the frosty air of midwinter, the crew of the good ship Janet Ferguson were sweltering under the burning rays of a tropical sun. The ship was on her return trip from Singapore to New York with a cargo of pepper and spices. When passing through the Straits of Sunda she was met and surrounded by the usual fleet of native bum boats laden with fruits and curiosities. Among the miscellaneous cargo of these sea peddlers' boats there were some of the most graceful,

BEAUTIFUL LITTLE CREATURES

one could well imagine—five full-grown live deer, not larger than rabbits. The captain of the Janet Ferguson, after some parley, succeeded in purchasing them, giving in exchange an old silver watch. The ship's carpenter soon built for them a convenient little house, about the dimensions of a small dog house, with "Deer Lodge" neatly painted over the door, and in these comfortable quarters the little midgets made in safety a voyage of 136 days, becoming great favorites with the crew. One fawn was born during the trip, but when discov-

ered by the mate of the vessel the buck had eaten off its legs and it was dead.

Arriving off Sandy Hook the Janet Ferguson encountered a cold wintry gale, all hands were kept busy, and during the confusion three of the little creatures which had

MANAGED TO ESCAPE

from their snug little house, perished with the cold. Immediately after arriving at port the fourth, a fine buck, fell a victim to our inhospitable climate. The only survivor,

A BEAUTIFUL DOE,

represented in the painting, came into my possession; but she only lived about ten days. In spite of all my care she too expired, killed by the poisonous breath of our furnace.

She was a timid little creature, and although perfectly tame, objected to being handled, but she would take food from my hand and allow me to stroke her back. She had the pose and action of our ordinary deer. When watching her as she leaped over a footstool, or stood, head erect, with one forefoot gracefully poised, in an eager, listening attitude, or crept timidly and stealthily close to the wall and behind the articles of furniture, it was as difficult to realize that it was a real live deer as it is to believe that some of the human midgets are actually living specimens of mankind.

THE PYGMY MUSK

is common in the peninsula of Malacca and the neighboring islands, frequenting the thickets. They are nocturnal in their habits, and are often surprised by the natives in the act of making a raid upon the sweet potato patches, and captured by throwing sticks at their legs or caught in nooses; in the latter case they frequently escape by feigning death.

The Malays prize them both as articles of food and as domestic pets. It is of this species that a "Nature Fakir's" story is told to the effect that when closely pursued by the hounds the deer will leap into the overhanging branches of some friendly tree, and hang

SUSPENDED BY THEIR LARGE CANINE TEETH

until the too eager foe rushes by, then dropping to the ground they will calmly retrace their steps. It is said that the creatures can make most extraordinary leaps, and that they display great cunning. They have no musk bag, and like the rest of the family are destitute of horns. The antlers we see upon stuffed specimens in the windows of the taxidermist are artificial.

The doe in my possession measured fifteen inches in length; the head rather large, being four and one-half inches from point behind the ears to the tip of its nose; nose movable, always wet and cold like a pointer dog, and, like that dog, she possessed

a keen scent. The round, short ears gave the animal the appearance of a mouse. The canine-like tusks were short, slender, and sharp, and, unlike the buck's, did not extend below the lips. The ten-inch mark upon the rule came above the highest part of her back. The legs were extremely delicate; a Faber lead pencil looked thick and clumsy beside them.

THE TINY HOOFS

only measured two-eighths of an inch at the broadest part, where the cloven parts united. The color is a general reddish brown, darker upon the back, where the hairs are tipped with black; an indistinct dark band runs from a point between the ears to nose; rather stiff gray hairs upon the sides and back of neck; fawn-colored sides; three white streaks under part of neck; soft hair upon belly and the anterior upper part of hind limbs and the posterior upper part of fore limbs; the lower jaw is also white.

These animals could in all probability be acclimated in our Southern States, especially in Florida, abounding as that State does in swamps and thickets, where the animals could secure coverts and breed.

CHAPTER XIII

LAND OF ETERNAL SNOW

STARTED FOR THE WEST—ENGLISH TOURISTS—OUR CONTEMPORARY ANCESTORS—LOOKING FOR MY MODEL'S NAME ON A TRUNK—SHE MOVED IN THE HIGHEST OF CIRCLES—THE WHISTLING MARMOT—TOWERING FLOWER GARDENS—LAND OF ETERNAL SNOW—ICE HUNDREDS OF YEARS OLD—ABOVE THE CLOUDS—A FAINT BABY CRY—DEATH IN A ZOÖLOGICAL GARDEN.

It is very difficult to secure a model who accords with the artist's ideal and almost impossible if she must also be suited to the particular subject the artist may have in view. Understanding this the reader may imagine with what a keen sense of joy I read a letter from Mr. Chester Fox, of Seattle, a student of the Art Students' League, who at the time was on his way to his home in Seattle to spend the summer. Mr. Fox said that he had discovered a model exactly suited to my needs.

After that I lay awake nights thinking about her and when slumber would at last claim me the beautiful model haunted my dreams and as soon as I could arrange my affairs I

STARTED FOR THE WEST.

Before long I found myself in the heart of the

Selkirk Mountains, and under the shadow of Mount Stevens, nestling in a bank of brilliant flowers, I found a little hotel; not particularly small as compared with other hotels, but very small and puny compared to the surrounding mountains.

The reader must bear in mind that the largest hotel in New York City would be but

AN INSIGNIFICANT OBJECT

perched on the side of Mount Stevens and that there are very many higher mountains than Stevens.

In front of each room, standing in the hallway of the hotel were the black enameled trunks and

TRAVEL WORN BATHTUBS

of English tourists.

Both trunks and tubs were plastered over with carefully preserved pasters of hotels and transportation companies until they looked like New York bill poster boards. But the

STRANGEST SIGHT TO AMERICAN EYES

was that of the owners' names and *full titles in white letters five inches high painted* on the funeral-like trunks and globe trotting bathtubs.

These strange contemporary ancestors of ours advertised their comical titles as an American quack does his patent medicine.

In vain did I look for my charming model's name on trunk or tub, it was not there.

Not only do our funny old-fashioned cousins from the other side of the water bedaub their baggage with their names and *full titles* until it looks like an American circus man's luggage, but, with the most unconscious bad taste they scrawl their titles across the hotel register in this fashion:

Major General Beefjuice, Sir and Lady, Hongkong.

Lady Milldew and Maid, London.

The Right Reverend Bishop of Moosjaw.

Colonel Pigsticker and Valet, South Africa.

Below which may appear:

Bill Jones and Valise, Yonkers.

But nowhere in this distinguished company could I find my brown-eyed model's name or title; it was not on the register, yet I knew she was stopping at this hotel and that her family was as old as any of the titled names registered on bathtub or trunk. In truth my model family always moved in circles more exalted than those frequented by the queer but genial and pleasant mannered tourists from old England or even Bill Jones from Yonkers.

MY BEAUTIFUL MODEL NANNIE

was a born aristocrat whose parents moved only in the highest circles.

Indeed, if you wish to visit her family estate you must be first certain that your heart is all right,

NANNIE AND THE AUTHOR.

otherwise that important organ may go on a strike when you are most in need of its help.

You must climb far beyond the limits of the devil's clubs whose thorny cudgels threaten you as you pass and you must cross the foaming, tumbling, wild waters of the mountain torrent by walking on the perilous bridge formed by a fallen tree.

Up! Up beyond the quaking aspens, where the deep blue fringed gentians, the flaming Indian paint brush, and the lavender-colored asters thrive.

Away above the dim twilight of the mysterious forests of the giant trees. Above the Jack pines to where the

WHISTLING MARMOT

startles you with his call and the little chief hare scuttles with its mouth full of grass to its home in the slide rock.

Here you may rest and regain your breath on the mountain meadow and see the great patches of snow holding their own in spite of the rays of the summer sun, and admire the profusion of beautiful blossoms which mosaic the verdant spots caused by the water which exudes and trickles down from the softening snow beds. Here strange, comical looking goblin thistles apparently twist their hairy necks to peer at the intruder, the yellow Senecio blooms and mingles with the red tips of the still present Indian paint brushes, where asters and the blue Polymonium nestle in the rocky recesses.

You must walk through patches of heather-like plants which cling close to the rocks and whose blossoms dare not thrust their heads far above the protection of their foliage. You must tramp through masses of twin flowers and as your cruel hob-nailed shoes crush these delicate blossoms their only protest is a faint but fascinating almond-like perfume exuded from their wounds.

Leaving this Alpine garden far below you must climb the snow-powdered, towering rocks whose frail projections break from the parent stone under the grasp of your hands and crumble away from beneath your feet to go crashing with wild leaps to the blue world below you.

Up these rocks to the

PENCIL SKETCHES OF A LIVE ROCKY MOUNTAIN GOAT KID, PROBABLY THE FIRST PUBLISHED SKETCHES OF THE ANIMAL MADE FROM LIFE

LANDS OF ETERNAL SNOW!

Up to the birthplace of the awe-inspiring glaciers, whose

EMERALD ICE, CENTURIES OLD,

never ceases its imperceptible, but certain movement to the bluff foot where pieces hundreds of feet in thickness break off and go thundering down the mountain-side, cutting great swathes through the forests of tall dark trees below. Here on the edge of the beetling precipice

FAR ABOVE THE CLOUDS

you will find gentle little Nannie's nursery.

On the twenty-ninth day of May, 1890, "Christian," the guide, murdered Nannie's mother; but do not think too badly of Christian if he did not live up to the high ideal suggested by his name. Few men think it

WRONG TO TAKE LIFE

even of a mother animal for the fun of the thing; few women will deny themselves the pleasure of wearing in their hats the badly upholstered bodies of little birds, for the sake of saving some of their humble fellow-creatures from extermination.

Christian thought himself to be a sportsman and the killing of a mother animal is considered "sport"

NANNIE

by more enlightened men than this Swiss guide. After the death of the mother goat

A FAINT BABY CRY

attracted the hunter's attention to a small white object on the rocks of the mountain top. This was the poor little orphan Nannie and when the big man with the picturesque costume, and the terrible gun, picked up the baby goat, the kid took the man's fingers stained with its own mother's blood, in its mouth and tried vainly to secure the life-giving nourishment expected when nursing.

When I met Nannie in the Selkirk Mountains she had grown to be a

BIG FLUFFY KID

and though extremely bashful was quick to form a friendship for those who treated her kindly. In fact she became so very friendly that when I would seat myself on the grass near by to make sketches, my model would proceed to climb up my back to a perch on my shoulders, there she would push off my hat to lick the bald spot on my head, a scandalous thing for an artist's model to do, but it greatly amused Hasler and Bohrn, the Swiss guides. These two men came to New York in October, 1901, and brought with them poor little Nannie, the Rocky Mountain goat and sold her to the Philadelphia Zoological Society, I believe, where she probably died, for it is a tough goat that can live long in a zoological garden.

CHAPTER XIV

CHARGED BY A HERD OF BUFFALO

CHARGED BY A HERD OF BUFFALO—FAMOUS PABLO ALLARD HERD—THE COWS WERE MAD—PHOTOGRAPHING THE HERD—SKETCH OF THE BUFFALO—HOW A BUFFALO PREPARES TO CHARGE—HE MUST LICK HIS NOSE, ROLL UP HIS TAIL, AND PAW CRESCENTS IN THE EARTH—BUTTED BY A BUFFALO BULL CALF—THE PHOTOGRAPHER WHO DIDN'T GET A PICTURE AND WHAT BECAME OF HIS CAMERA—HOW MY PLATE LOOKED WHEN DEVELOPED—WHY I DID NOT SHOW THE PRINT TO MY COMRADES—ONE HORNED IKE, THE MAN HATER—A BIG DIGNIFIED BUFFALO BULL—HIS SPIRITS WERE HIGH—AN ORDINARY RANGE BUFFALO—A DANGEROUS INHABITANT—THE DEATH OF ONE-HORNED IKE—SHORT ON ALTRUISTIC IDEALS—FAILURE TO SAVE THE PABLO ALLARD HERD—A PLEASANT WORLD TO LIVE IN—ENGLISH SPORTSMEN KILL DOMESTIC BUFFALO.

On July 26, 1900, we were driving over Horse Plains, between the deep canyon of the Pen d' Oreille and the snow-capped Mission Range, Montana. As we rounded the foot of a big, drab, sway-backed hill, known as Saddle Butte, we were confronted by a herd of between two and three hundred magnificent buffalo. They were thoroughly wild, although the herd was the private property of an old "Breed."

Such a sight was not only novel but awe-inspiring. This was

THE FAMOUS PABLO ALLARD HERD

which has lately been sold and shipped to Canada. The bulls were magnificent fellows and stood ready to meet all comers, they had no fear of man, and a human being on foot would stand but a poor chance for life in their presence.

As our wagon, heavily loaded with tents and camp materials, approached the herd they all threw up their heads and "rolled" up their tails, then with a deep vibrating bellowing let us know in no unmistakable manner that we were trespassers on their domain.

CHARGED BY A BUFFALO HERD.

The bulls pawed the dust and came running towards us followed by the cows, the latter with the hair on their humps standing erect like that on the back of a mad moose or elk.

THE COWS BELLOWED

more like our domestic animals but in a savage manner and came on a trot towards the wagon, their

PRETTY LITTLE CALVES

running along behind them. Our camping outfits, wives and children were in the wagons, to which were harnessed "Injun cayouses" without bits in their mouths, the reins attached to halters. The half-wild horses paid no heed to the buffalo, even

BULL PREPARING FOR A CHARGE—(TAIL "ROLLED," CRESCENT PAWED IN EARTH)—FIELD SKETCH OF PABLO ALLARD HERD, FLATHEAD RESERVATION, 1900

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when the whole herd halted within twenty feet of us, bellowing and pawing up clouds of dust, the bison seeing that we did not move either for a retreat or for a belligerent purpose, pawed dust a few moments, but made no further attempt to attack us. What they said, however, we understood as well as if they had used the English, "If you want to take a fall out of us, come down and fight!" We being of Quaker ancestors were content to take shots at them with our cameras from our perch on the wagon, and in a few moments they slowly moved away.

Three times our squaw-man drove up towards the herd and three times the herd went through the same evolutions.

There was not a house in sight, the prairie ending on one side at the foot of the snow-peaked Mission Ridge, and beyond, the invisible canyon of the Pen d'Oreille in distant blue mountains on the other side, while to the right and to the left the prairie rolled up against the horizon. In the distance were bunches of cattle and horses almost as wild as the buffalo.

It was always my ambition to

PHOTOGRAPH A CHARGING BUFFALO

and to do this it was necessary to have plenty of room, for while buffalo can, and often do charge in zoological gardens, they never get under full headway, the distance being too short. When we were opposite Saddle Butte our squaw-man pulled

BUFFALO CALVES AND DOMESTIC CATTLE

up his spotted cayouses, and pointed with his finger to the foot of the big, drab, sway-backed hill where some shapeless black lumps stood motionless on the sun-baked prairie. I knew that these things were outlawed bulls hovering around the outskirts of the distant herd which disowned them. So I took my camera and slid down from the wagon and approached one of these lonely veterans. It was an outlawed bull without doubt, an old fellow whose temper was sour because he had been driven

from the herd by a younger rival. He was a "has been" and consequently

HE WAS DANGEROUS.

As I approached the bull he was cropping the short sun-dried grass and thinking of the time when he was young and had helped chase other outlawed bulls from the herd, but if this bull had been chased by a rival, it had never been chased by man, especially had it never been threatened by a man afoot and consequently a pedestrian inspired no awe in his bullship's heart, but a buffalo bull has a certain formula through which it must go before it can actually make a charge, a sort of buffalo red tape, so to speak, which must be religiously observed because other buffaloes observe it.

In the first place

THE BUFFALO MUST LICK HIS NOSE;

my buffalo stared impudently at me for a few moments then licked his black nose. In the next place it must paw the dirt with one forefoot, swinging its body around with its hind legs as a pivot, thus making a perfect arc of a circle or a complete semi-circle of pawed earth; during the process it throws the dirt up over its shoulders in the same manner as does a domestic bull when it is angry. This much of the program having been faithfully performed, his bullship drops on his knees and rolls over in a great cloud of dust; if the enemy

has not fled when the demonstration has gone thus far

THE BULL "ROLLS" HIS TAIL,

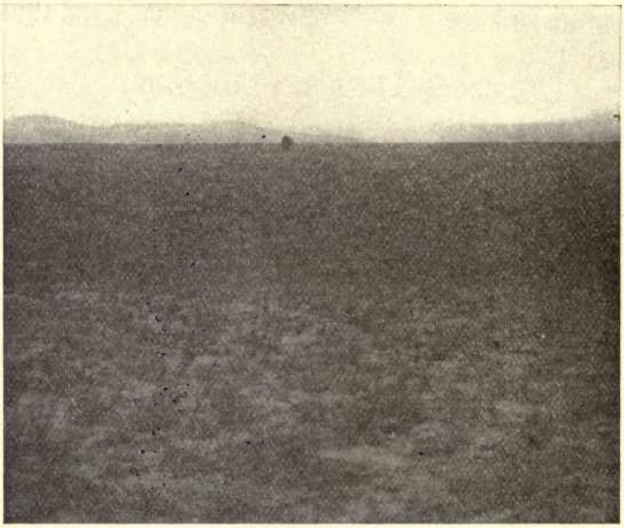
that is, holds it in a stiff curve, then it lowers its head and comes thundering at you like an automobile. If the buffalo ever hits you the results will be just as bad and redress as unattainable as it is when you are struck by an automobile.

Once when the brawny and genial Howard Eaton of Wolf Ranch was

ROPING WILD BUFFALO CALVES

on the plains, he secured a fine young bull. Gripping the end of his "lass rope" tightly, Eaton ascended a little mound to scan the horizon in an effort to locate his companions. With one hand shading his eyes and the other holding fast to the lariat, he did not notice that the rope had slackened until all of a sudden he woke up to find himself on his back gasping for wind and staring at the sky over head, and this was caused by a blow from only a calf.

A few months before I visited the Pablo Allard herd, a photographer with a very large camera and tripod attempted to get a picture of the last of the bison, but he did not succeed. The photographer reached Selish in a very excited state of mind and a somewhat exhausted state of the body. Fortunately for him, his big camera was so conspicuous that the animals devoted their entire attention



A CHARGING BUFFALO
The photograph that I did not show to my camp fire friends.

to the camera and gave the operator a chance to escape. They played battledore and shuttlecock with the camera and trampled the fragments deep into the dusty earth.

Now, while I was most anxious to get a photograph of a charging buffalo I had no desire to experiment with its butting power, so opening my camera, I stood facing the enraged bison for some time before I touched the button. I waited until I thought it was so close that its image in the negative would overlap the plate. After touching the button, I "hit the trail," but only the high places on it, until I reached the wagon and clambered aboard, where the bull did not follow me.

I could hardly sleep nights until I had that plate developed. I planned how I was going to bring that home and show it to my Camp Fire Club companions, but I *never* have shown them the picture and the reason is that my eye magnified more than the lens of the camera. When I made a print from the negative there was a line of sky and a line of prairie and it took a magnifying glass to discover that the little fly-speck on the paper was the charging buffalo. This was all very annoying, but I have since thought it over and feel convinced that had I waited until the buffalo appeared as a large object on the negative, the plate might never have been developed. Mr. L. S. Huffman of Mile City, who was with me when I visited the Flathead Reservation, was

AN OLD BUFFALO HUNTER

and plainsman as well as a pioneer photographer of big game animals. Mr. Huffman did succeed in getting one very good view of the herd and I secured some hasty drawings.

ONE-HORNED IKE, THE MAN HATER.

Every once in awhile the owners of this herd of buffalo were accustomed to sell to showmen or ranchmen a few of the animals. They sold them in this way: The purchaser would ride out to Horse Plains and meet the owners, together they would trot down to where the bison were grazing,

there the owner would make the bargain and collect the money in advance at so much a head on the animals to be sold and leave the purchaser to get his animals as best he could—they were there, he might take them. On one occasion the purchaser succeeded in herding his animals successfully down at the station at Selish, where there stands an ordinary western cattle corral. All of my readers who have traveled in the West are familiar with the big enclosures built of cottonwood logs and know what substantial affairs they are. Among the animals driven into the corral on this occasion was

A DIGNIFIED BULL BUFFALO;

the bull did not seem to realize that he was a prisoner until the bars of the corral had closed upon him and then he began to paw dirt and say things and utter dire threats against the cowboys, station hands, half-breeds, and Chinamen assembled around the railroad station. Either these people did not understand buffalo language or they thought bull threats were idle boastings, for they paid no attention to the animal until they were aroused by the frightful splitting of timber as the enraged bison came bodily through the splendid corral, then everybody sat up and took notice and before the bull had time to shake the splintered wood from his hide there was not a man in sight. Just to show the people what he could do when he tried, the big beast turned around, made a charge

A NEARER VIEW OF THE BISON WHEN IN GENTLER MOOD

at the corral, going through one side and coming out the other. By this time his bisonship was feeling good,

HIS SPIRITS WERE HIGH

and he looked around for something else more difficult to tackle than the corral. On the siding of the railroad track stood a locomotive and just about this time the gathering steam lifted the safety valve and escaped with a threatening roar. The bull's eyes flashed; he pawed the dirt until the cloud of alkali dust almost concealed the animal; the next moment from out the cloud he came thundering along straight for the challenging locomotive. He struck the locomotive and it is needless to say that the latter paid no attention to the attack, although just about this moment the steam ceased to escape from the safety valve and the threatening roar which had attracted the buffalo bull's attention ceased with its cause. Whether the bison took this as a sign of surrender or whether the loss of one of its horns with the impact of the locomotive caused it to desist, no one knows, but the railroad men, cowboys, half-breeds, and Chinamen from their hiding places saw the old bull stand back, shake his head, and mutter dire threats and challenges to everything on earth, then turn and walk off up the hill with the blood dripping from the broken horn and a piece of rope or lariat dangling from the good horn.

Previous to this adventure One-Horned Ike had been only

AN ORDINARY RANGE BUFFALO BULL,

but after it he became a menace to everyone who traveled in his neighborhood. Day after day One-Horned Ike would post himself on the top of one of the buttes and from this vantage ground scan the horizon watching for his hated enemy, man. Half-breeds, red men, and white men all learned to look for this bull and whenever they would see silhouetted against the sky, the form of a buffalo with but one horn and a piece of rope attached to that, they made a wide detour to escape meeting One-Horned Ike, the man-hating buffalo of Horse Plains. On various occasions men had gone out for the expressed purpose of ridding their reservation of its

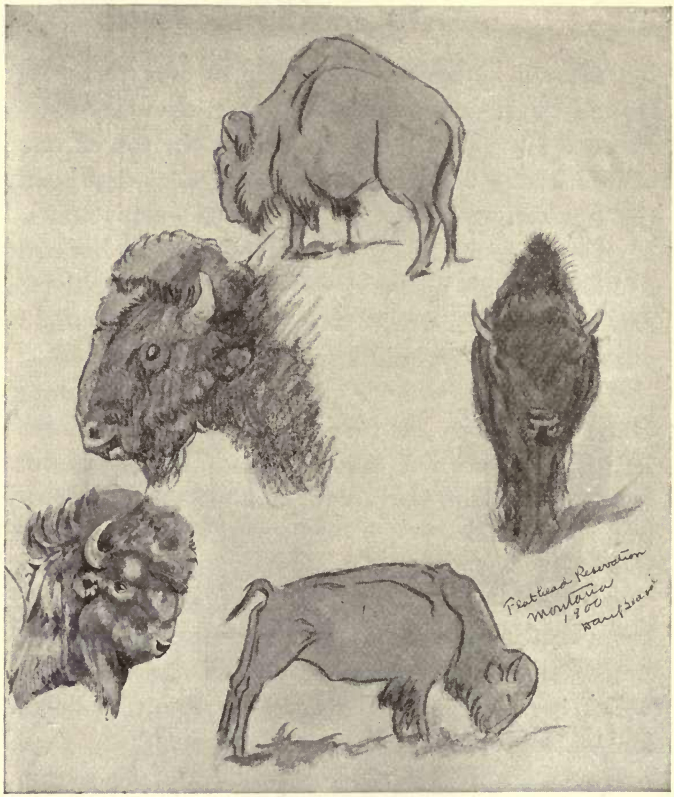
DANGEROUS INHABITANT,

but when they came back the heaving sides of their horses, their wide distended nostrils, and the sweat which dripped from their hides was more eloquent and said more than did the horsemen. At last, however, an Indian took his rifle and by worming his way through the grass, he gained a position from which he could draw a bead on One-Horned Ike and this ended the days of the man-hating buffalo.

When we Americans allowed

THE PABLO ALLARD HERD OF BUFFALO

of the Flathead Reservation to be sold to Canada,



SKETCHES MADE BY THE AUTHOR ON FLATHEAD RESERVATION

we lost the last herd of grand, historic and noble American bison.

Here was a living herd of American bison large enough to increase without the danger of degenerating from too close interbreeding, located in a fertile valley apparently just suited to their needs, and we have allowed it, the last real herd of buffalo in

existence, to be sent out of our country! There are a number of small groups of buffalo and single individuals scattered around the country, but none of these are composed of enough buffalo to prevent the danger of close interbreeding and gradually such small groups will die out and my young readers will live to see the day when none exist.

While editing *Recreation,* I formed a committee composed of some of the most prominent men of this country from all walks of life, for the purpose of saving this herd of buffalo to and for the people of the United States; I went so far as to have Mr. Howard Eaton get an option on the animals, but to my great surprise, I found that many of the people of Montana, where the herd was located, were bitterly opposed to making a buffalo reservation in their State, and some of the most prominent politicians to whom I applied, some of whom occupy seats in the United States Senate, were unable to appreciate either the historic value, patriotic value, and sentimental value there would be in a national herd of historic animals. In our work for the preservation of the bison we had the enthusiastic support of our broad-minded President and the editors of *all* the leading papers of New York City, but neither the President, the committee of citizens, nor the editors of New York papers can put through a move of this kind without the support of the people themselves and the financial part of my magazine became discouraged before we had awakened the popular conscience.

We have in our country very many wealthy people, any of whom could have bought this whole herd without noticing the expense incurred as much as many of my readers would five cents given to charity, but unfortunately, our very wealthy people seem to be short on high ideals.

The following incident published by one of the Western papers is a good example of what some wealthy people call sport.

A party of English sportsmen came to Montana in quest of big game. They had a retinue of servants, an armory of high-power guns and they were "out for blood," but after a number of days' hunting they only succeeded in killing a few coyotes, jack rabbits, and prairie dogs. This did not satisfy their thirst for gore so they went to the Flathead Reservation and paid $500 per head for the privilege of shooting down two or three range buffaloes. The half-wild cattle on the same plains or horses would have been just as difficult to shoot as the bison. However, our English cousins are now pointing to the upholstered heads of the range buffalo as trophies of their powers as great hunters.

What an exceedingly pleasant world this would be to live in if the public could devote its time to enlightenment and refinement and if the so-called rulers of the nations were really endowed with the higher order of intelligence and in any way could prove themselves in their ambition to be above the savage chieftains. Suppose, for instance, that the billions of dollars spent within the last few

years by the different governments to uphold an absurd, Kentucky moonshiner's idea of honor, had been spent on internal improvements, parks, forest preserves and scientific investigations! Boys, such things are too grand for us men to realize in our lifetime, *but not in yours.*

CHAPTER XV

THE STORY OF FAUST AND MARGUERITE

FAUST AND MARGUERITE—TWO YOUNG RED FOXES—FAUST STEALS A JOHNNY CAKE—CUB FOXES JUMP SIX FEET HIGH WITHOUT ANY TROUBLE—HOW THEY DISFIGURED THE LAWN—THE AUTHOR'S FIRST DRAWING FROM NATURE—MORE ROOM FOR FOXES AND BOY—FOXES STEAL GEN. GRANT'S CHICKENS—THEY STEAL CHICKENS FROM ALL THE NEIGHBORS—HOW THEY DID IT WITHOUT BEING UNCHAINED—A SUSPICIOUS TRAIL IN THE DUST—SHOWING THE WHITE FEATHER—WHAT THEY NEVER COULD LEARN—FOXES AND DOGS NATURALLY ASSOCIATE TOGETHER—HOW A FOX BARKS—THE SOLITARY FOX HUNT—THE SHREWD COUNTENANCE OF A FOX—HOW REYNARD THREW THE DOG OFF THE SCENT—THE HOUND LOOPS THE LOOP—ANOTHER SOLITARY FOX HUNT—THE FOX WATCHES THE HOUND ON ITS (THE FOX'S) TRAIL—JIP AND THE PIKE COUNTY FOX—THE FOX MAKES A FATAL MISTAKE—THE BALL OF FUR WHICH ROLLED DOWN A HILL—FOX'S TRACKS IN THE SNOW—WHAT DOES HE DO IT FOR.

While the author was a schoolboy in Kentucky, he was made supremely happy by a gift of

TWO YOUNG RED FOXES, FAUST AND MARGUERITE.

When the truck backed up to the front sidewalk and delivered the packing case containing the foxes there was no place ready for their reception, so the box was carried down cellar. After the cellar doors were closed, a board was knocked off the box and the long-legged, wolfish looking youngsters allowed to escape to the confines of the cel-

lar. The next morning when the cellar was visited each of the foxes was discovered to be occupying a window; this incident may appear to be trifling, but it did not so appear to the boy, because each window-sill was higher than his head and as near as he can now calculate, they must have been almost six feet above the floor, which was a pretty good jump for cubs. Before the foxes had remained long in his possession the Kentucky schoolboy was ready to believe that his pets could easily have jumped from the ground into the second-story window of the house; that they never did make this jump was no proof to his mind that they could not make it if they tried.

THE FOXES BECAME VERY TAME

and were not vicious, but they would bite when there was something to be obtained by using their teeth.

Once when the writer's baby sister was watching the little foxes at play, Faust discovered that the child was eating a big round, corn johnny-cake; the Eastern readers probably have never seen a real johnny-cake, and for their benefit it may be well to explain that this article of food is made from corn-meal and water, patted with the hands until it is about the size of a saucer and about an inch thick, it is then fried in grease until it is a rich brown color on both sides; being made of the sweet field corn which grows in the Southwest; it is not sweetened with sugar, and does not taste so much

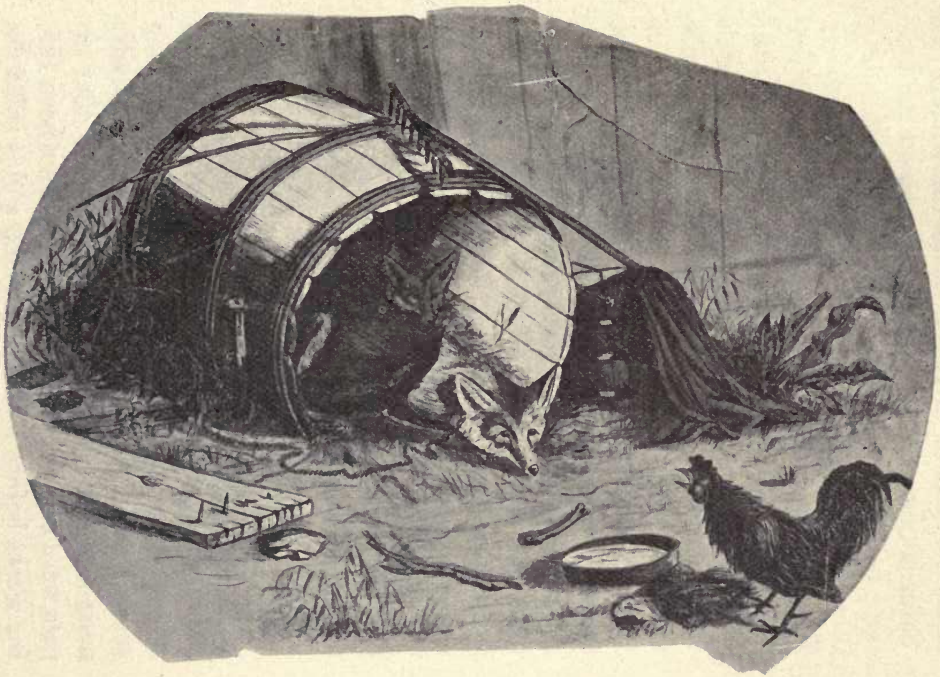
like sand as do the corn-meal cakes made of flint corn in the Eastern States.

THE SOUTHERN JOHNNY-CAKE

is really delicious, as Faust's nose told him, so he gamboled up to the side of the little girl with a series of undulating bounds and then without warning he nipped the dimpled hand that held the johnny-cake. The surprised child gave an indignant scream, dropped the johnny-cake and ran to tell her mother. Faust immediately snatched up the abandoned cake and ran into the dark corner of the cellar to devour it.

There was a terrace in the back yard which ran up to an elevation of at least twelve feet; this terrace was covered with a beautiful coat of green grass; to give the foxes a little taste of sunshine, they were taken to the back yard and securely chained to stakes firmly driven into the earth, when their owner returned from school that evening there was a pile of fresh earth on the grass in front of the terrace, but no foxes in sight. They had burrowed to the full length of their chain and were lying on the cool damp earth at the far end of the hole enjoying themselves.

This disfigurement of the lawn was against all rules and regulations and the boy was held responsible for the misdoings of his pets; so he took a spade, filled up the hole, placed a piece of sod over the spot and raked off the grass; he then secured an old barrel and placed it in another part of the



FAUST AND MARGUERITE

First attempt of the author at painting from nature.

yard to serve as a house for his pets. He fastened them to a stake driven close to the barrel. On Saturday he took his paints and made

HIS FIRST PICTURE FROM NATURE;

the picture is amateurish, but he has kept it unto this day and a reproduction of it accompanies this chapter. The author prizes this picture because it is the first attempt he ever made at a serious drawing from life.

Shortly after this incident the boy's parents moved to a larger house with more extensive grounds, and Faust and Marguerite had a box made for them with a round hole in its center for a door-way. The box was buried in the ground about a foot so that the hole or door-way of the box was even with the surface of the ground; the dirt from the excavation was packed over the top of the box so that

THE FOXES' HOUSE APPEARED

like a mound of earth.

Here they lived happily for a long time, running around the neighborhood at night and loafing around their den in the daytime; but the reader must not suppose that their master knew that his pets were roaming free. They may have been free for weeks before it was discovered and it is known that they were free for at least four or five days while they were supposed to be tightly chained to the door of their den.

One morning the author's Sunday School teacher, who lived on the opposite side of the street near the home of the parents of General U. S. Grant, complained that the foxes had killed some of his fine chickens; this was indignantly denied by the boy, who declared that the foxes could not kill the chickens, because they were securely chained to the door of their den and he took the neighbor in the yard to where Faust and Marguerite lounged in front of their door with their noses between their paws watching their visitor. Wholly unconvinced the Sunday School teacher turned away. Next General Grant's father complained of the loss of chickens and several other neighbors

FILED COMPLAINTS AGAINST THE TWO FOXES.

There was something uncanny about this work; foxes have the reputation of being very sly, but no one ever heard of a fox that could unchain itself at night and *then chain itself up again* in the morning. Still each night the chickens continued to disappear, and the storm clouds to threaten. So one morning the boy arose very early to make investigations; no wagons had passed that morning save the milk-cart, and the white dust of the macadamized street was undisturbed and any track or trail might be easily discerned.

Reaching diagonally across the white, dusty street from the writer's front yard to the sidewalk of his Sunday School teacher's, he discovered

TWO VERY PECULIAR LINES IN THE DUST,

and it did not take him long to arrive at the conclusion that these lines were made by trailing a chain or chains across the street. No sooner had he made up his mind to this effect than he took a stick and hastened to obliterate the tell-tale tracks; then he went over to look at Faust and Marguerite. The foxes were full grown at this time and both of them beautiful specimens. When their master approached they both lay perfectly quiet in front of their den. This was the second time that they had received him in this manner, and there was something suspicious about it, for it was the habit of these foxes whenever their master approached to dive into their den and suddenly emerge again; thus going backward and forward they expressed their delight; this action taking the place of the frisking of a pet dog.

"Faust, you rascal," exclaimed the boy, "what have you been doing?" Faust made no reply, nor did he move until his master pushed him to one side with the toe of his shoe and discovered

A WHITE CHICKEN FEATHER

protruding above the ground. Faust was now inside of his den with his pointed nose just visible at the opening. Marguerite was still immovable. When she also was pushed aside she too retreated to the den. To make a long story short four chickens were dug up from the spots where the foxes lay. These were carefully buried again by

the owner of the foxes, because the lad could think of no good explanation that the neighbors would accept and concluded that the best policy was to call that incident closed. For a long time he stood leaning on his spade lost in thought; at last it occurred to him that, maybe,

THE FOXES WERE NOT CHAINED,

so stooping down and gathering up the chains he discovered that their ends were fastened to nothing. By slyly watching the animals he discovered that they freed themselves by twisting the chain round and round until it made a hard lump over the swiveled spring snap (which was fastened by being strung on a ring bolt in the side of the box). The twisting of the chain around the snap forced the spring back and unfastened it.

It was no doubt an accident that first freed the foxes, but after they had once learned how to do it, it was probably purposely and consciously done. To show the limitation of their instinct or their reason, however, when the two animals were chained together they

NEVER COULD LEARN TO GO THROUGH THE SAME OPENING

between the bars of the iron fence of the front yard and thereafter they never succeeded in reaching the neighbor's hen roost, or going further than where their chain caught on the fence.

There was another thing the author learned about foxes and also about dogs which surprised him, and that is that

DOGS AND FOXES WILL ASSOCIATE WITH EACH OTHER

and play together unless the dogs have been previously trained to hunt the fox. There was not a local or stray dog in our neighborhood that did not stop to have a romp with Faust and Marguerite and after the accidental death of Marguerite, Faust was so lonesome that whenever there was a dog in sight or hearing he would call him by barking. I never knew Faust to make more than three barks in succession and seldom less than three. His call was bow—wow—wow, very quickly given and then, after a considerable pause another bow—wow—wow, or it may be more properly speaking bow—bow—bow. Whether it was the novelty of this bark or something peculiarly winning in its tone, is unknown, but the fact is well known to all who remember these foxes that the call seldom failed to bring a dog into the yard. Black-and-tans, poodles, fices, and even

BULL DOGS CAME AND PLAYED WITH THE FOX

and in all the rough-and-tumble gambols there were no times when either party showed ill temper. Occasionally the fox's chain would take a hitch around the dog's leg and cause it to yelp;

occasionally the dog would be a little rough and the fox would dive down into its den, but it would always appear again after the dog had apparently promised to be more gentle.

A SOLITARY FOX HUNT.

Once when spending the summer in the neighborhood of the White Mountains, I was sitting on the shore of a wild little lake watching some great northern divers with a little black fuzzy baby diver disporting themselves in the water, when I heard the voice of a hound away off in the distance. The sound grew nearer and nearer, but long before the dog approached my neighborhood there was a rustle among the leaves near the shore of the little lake and I saw

THE SHREWD COUNTENANCE OF A FOX

peering out, apparently more interested in the northern divers than it was in the distant hound. The voice of the hound sounding again much nearer, however, reminded the fox of the necessity of caution; it trotted along the bank opposite to a place where a log was floating in the water, then it turned and disappeared in the woods, made a short loop and reappeared again at the same point and without any hesitancy lightly sprang through the air to the floating log. It then ran along the log to where it approached a fallen tree which lay half covered with water with the roots at one end

extending in the air and the branches at the other end almost submerged. The old tree was at least fifteen feet from the shore. Trotting along the full length of the trunk it jumped from one piece of driftwood to the other, then sprang to the shore.

THE BAYING OF THE HOUND

was approaching closer and closer. Nevertheless, the fox calmly stopped to look once more at the interesting group of water fowl, and then in a careless manner it trotted off and disappeared in the woods. Soon the voice of the hound told that it was hot upon the trail and in a few moments it appeared fairly bellowing with excitement. It reached the edge of the water, ran around the loop, back again to the water, where it suddenly stopped its baying and nervously sniffing the ground, went back and forth on a trail around the loop again and again. At length it commenced sniffing up and down the shore, and it must have been almost a quarter of an hour before a sudden and joyful baying announced that the hound had discovered where the fox had jumped to the shore.

THERE WAS NO ONE WITH THE HOUND,

it was having a solitary hunt on its own account, and there is little reason for supposing that it ever caught the fox.

Another time when the writer was seated on the doorstep of a Pennsylvania farm-house, which

from his position commanded a splendid view of the other side of the Laxawaxen River, he saw a fox chased by a hound, come trotting along the trail amid the stones and big rocks of the mountain-side. Like the Massachusetts fox this one appeared to be in no hurry, seeming to have perfect confidence in its own ability to get away from the hound. Presently it hopped upon a stone about the height of a man's waist, from there it jumped to the slanting trunk of a chestnut tree which gave it just sufficient foothold for another spring to the top of a rock about eight feet high, landing on the flat surface of this large stone it coolly walked over to the edge and squatted in a position to command a view of the trail.

IT WAITED THERE FOR THE HOUND TO GO BY.

The observer was expecting an important letter, the mail train was late and he had ample time to watch the fox and the hounds and the latter afforded plenty of entertainment to pass the time away; apparently the fox enjoyed the hunt as much as did the hound, for after the hound had passed the rock the fox would jump down from its perch and go through the same tactics again and again to the utter bewilderment of the dog. It never seemed to occur to the dog to look up or about, or to use its eyes in the search, but it depended entirely upon its nose to find the object of its pursuit.

A FOX ONCE LIVED IN A CLEARING

or the woods adjoining it, back of a little farm-house, on the edge of the trout brook which runs from Big Tink Pond to the river. Every day for "sport or play" this fox would come out in the clearing and bark at "Jip," the farmer's dog. Jip was a mongrel, principally black-and-tan and the rest dog.

JIP COULD KILL A RATTLESNAKE

with safety and dispatch; he knew all the wiles of the woodchuck and just how to get between this rodent and its hole; he would tree partridges for his master, was an excellent coon dog, and death on squirrels and chipmunks, but the fox had no fear of Jip. All summer long this play went on. About the same time each day the fox would dare Jip out and each day after having fun with the dog, would leave the chagrined and bewildered canine barking up some tree which a fox could not climb, or slinking back with its tail between its legs in conscious defeat to the house. One day, however, the fox made a fatal mistake. Jimmy, the farmer's boy took Jip along with him to hunt snakes, while he (the boy) cut brush. At the usual time the fox appeared and gave his challenge to the farm-house dog. The fox did not look behind him or he might have escaped, for this time Jip was right back of him and Reynard had but just finished his third bark when

JIP WAS UPON HIM.

Now Jip was about the same size as the fox and the fight should not have been very unequal. They clinched and made a ball of fur which rolled down the hill-side, but when it separated into two parts, one part was the triumphant Jip and the other a dead fox.

Last winter, in company with a schoolboy, a scientist, and a sportsman, I took a run out to the woods. A heavy snow storm followed our arrival at camp; the thermometer dropped as low as fourteen below zero, so that, within a little over a hundred miles from New York City, we were enjoying an Arctic experience. We went to the woods to study the tracks of animals as well as to wear off the effects of too confining work indoors; we were successful in both objects and had a week of most

EXHILARATING AND STRENUOUS FUN,

but what I want to speak of here is the story told by

THE FOXES' TRACKS IN THE SNOW.

After the storm had cleared up and the weather moderated to zero, all the wood folks began to venture out and write their adventures in the white snow. We could see where the deer walked leisurely along the tote road dragging its feet through the snow, moved on again, crossed the trout stream on a bridge of a single fence rail, took a drink, then, as other tracks told us, a man had ap-

proached, and the deer's tracks showed in a series of big leaps marking the road for a mile or so. We could see where the mice had tunneled their way out of the snow and the tracks of their feet and tails running across the surface to the trunks of trees, where they disappeared into other tunnels, and where Molly Cottontail had made little paths. We found

THE FOOTPRINTS OF A WILDCAT

in the old wood road and everywhere about, Reynard, the fox, left his trail. Now, the interesting part about the fox's trail was this: The fox had been pursued by neither man nor dog, there was nothing after it, yet every time we struck a fox's trail we discovered that the hunting fox was just as cautious and adopted the same tactics as the ones already described as those of the *hunted fox.*

EVERY MUSKRAT HOUSE

along the edge of the lake had been investigated by a fox, but in no case did the fox go directly up to the muskrat house. The tracks in the snow told us that he first circled around the snow-covered mound once or twice before he ventured to examine it and mark it with his private seal; neither did the fox follow a straight trail for any length of time. It was plain to be seen that the animal was constantly avoiding some imaginary foe; he was trying to mislead possible pursuers. This it did by trotting

along the center of the road, then suddenly making a side leap of six or more feet, then trotting along near the road and parallel with it; then out in the woods making a circle, coming back on his first tracks, following them back for a short distance, then side leaping from them and continuing along parallel with the other side of the road for some distance before he made another jump to the center of the road, to continue the journey. Whenever we found a fox's trail, we discovered that it went through the same or similar manoeuvers.

I must admit that the examination of these foxes' trails in the snow proved a stronger argument to me in favor of animal automatism than any argument I have read in books or heard at lectures, for I suppose that anything that is done through habit is done more or less unconsciously and I really do not believe that the foxes who left their tell-tale tracks in the snow, deliberately reasoned out the subterfuges they adopted to mislead any possible foe, and I have not the least doubt that a tame fox that never knew an enemy would leave the same sort of a trail.

CHAPTER XVI.

CAPTURING WILD ANIMALS WITH NAKED HANDS

CAPTURING WILD ANIMALS WITH NAKED HANDS—BOY WHO LIVED IN THE WOODS LIKE A WILD CREATURE—WHAT A CAT CAN DO A BOY CAN DO—HOW PUSS CAPTURES HER PREY—CLOSE QUARTERS WITH A GREAT HORNED OWL—BOTH ENDS OF IT WERE DANGEROUS—STALKING WILD ANIMALS—CAPTURING FULL-GROWN BIRDS ALIVE—THERE WAS AN OLD CROW, BLIND IN ONE EYE—HOW HE WAS CAUGHT WITH NAKED HANDS—ALL BIRDS WITH BALD HEADS ARE NOT EAGLES—BITTEN BY A TURKEY BUZZARD—A TURKEY BUZZARD IN THE HANDS OF THE GAME COCK—MARKS ON THE SNOW LEFT BY THE RUFFED GROUSE.

As a lad it was my ambition to capture alive and tame every wild thing I saw. Traps did not appeal to me and I never had the desire to kill, consequently there was but one method left for me to secure the creatures for my backyard zoo and that was by capturing them with my hands. It is needless to say that my first efforts in this line were failures. But some volumes of Hall's Western Tales chanced to fall into my hands and like every other book pertaining to the wilderness, or pioneer life, these books were read by me with the keenest of interest. Among the stories told by this pioneer historian of the West,

was one about a little outcast boy, who lived in the woods like a wild creature and captured live things with his naked hands. This fascinated me and appealed so strongly to my imagination, that I spent many hours in brooding and studying over plans by which I might be able to capture wild animals without the aid of guns or traps. It occurred to me that our cat might give a hint, for

TABBY WAS A VERY SUCCESSFUL HUNTER.

Tabby was only a cat, she was not very big, she had no hands, and not much sense. I was a boy, a human being, I had a pair of very useful hands and brains enough to hold my place with the other boys in my classes at school, consequently it seemed reasonable that anything a cat could do I should be able to accomplish. So I spent hours and days lying prone on the grass with my chin in my hands watching to see how puss captured such wary things as birds, squirrels and rabbits. The first thing that I noticed was that the cat seldom or never moved when the object of her pursuit was looking at her, but took every advantage of inattention on the part of the game to shyly creep nearer and nearer until she was within reach, then abandoning all efforts at concealment she would spring boldly upon her prey. For weeks I practised the cat's tactics to see how closely I could approach the robins, blue birds, cat-birds, rabbits and other small creatures without alarming them, and to my great delight I

discovered that I soon could out-do Tabby in her own chosen field. One day a great horned owl was discovered perched upon a projection in the roof of an out-building in the back yard. I thought that the big bird would make a splendid addition to my zoological garden. Carefully I crept upon the fierce blinking thing and whenever it turned its head my way I would become as rigid and motionless as a setter dog on a point. To my great joy I succeeded in reaching the owl, but I did not know what to do next. The Virginia horned owl is a large and powerful bird of prey, has hooked talons which are capable of sinking through a thick cowhide boot and badly wounding the foot within, as I know from my own personal knowledge, but at that time I had never before experimented with big owls—nevertheless I knew enough about wild creatures to see at a glance that

BOTH THE HEAD AND FEET OF THIS THING WERE DANGEROUS

and I was in a quandary.

If I caught it by the feet its head would be free —if I caught it by the head, those powerful hooked talons could rend and tear my flesh and clothes, so in despair I took the flat of my hand and knocked the astonished bird from its perch. Since then, I have owned live specimens of the Virginia horned owl and have reason to congratulate myself that I was prudent enough to allow this one to escape.

The escape of the large owl was a grievous disappointment to me, at the same time I had proved to myself that the study of the cat's tactics had not been in vain. I had learned the art of stalking wild creatures. Among the live game captured by me in this manner, are gray squirrels, red squirrels, chipmunks, flying squirrels, a full-grown muskrat, opossums, raccoons, and one full-grown red fox. The latter was being pursued by the dogs when it dashed into a house and took refuge under a bed, under which I crawled and brought forth the live animal without receiving a scratch or a bite.

I also captured live full-grown birds, catching the goldfinches by creeping under the big sunflowers and snatching them from their perch while they were feeding upon the oily seeds of the plant. I even caught specimens of such shy birds as the scarlet tanager, bob whites, ruffed grouse, and wild pigeons.

A few years ago there was

AN OLD CROW

that was blind in one eye. He frequented a certain woods where some lumber had been cut and where a pile of decaying logs gave him a perch from which he could survey the surrounding landscape. It was also a famous hunting ground, frequented by wood-mice, shrews, small brown red-bellied snakes, beetles and luscious fat grubworms.

IT WAS A HUNTERS' PARADISE

for a crow. All my readers must know that a crow is one of the shyest and most cunning of birds and that even when a crow is blind in one eye, his capture with one's naked hands is about as difficult a project as even an expert need try to prove his skill. Curious to see if I still possessed the ability developed in my youth I announced my intention of capturing old one-eye with my hands. My first attempts to approach the bird offered me no encouragement, but afforded an inexhaustible source of amusement to Mrs. Beard, who was reared upon a farm, frequented by these birds, and thoroughly understood the difficulties attending my attempts to capture one alive, she freely declared that it was not possible for a man to capture a wild crow, even if it *"were blind in both eyes."* But I was not disheartened and I found that my attempts to approach nearer the bird were rewarded each time by a slight advance over the previous effort. The old crow gradually became less wary. After watching it feasting upon a large sized rodent I made my final attempt. Whenever its blind eye was turned in my direction I made rapid advances, but as soon as the wary bird

FOCUSSED HIS GOOD EYE UPON ME

I stood stock still gazing intently at the sky, at the ground, at a tree, at anything but the crow. Within fifteen minutes after the time of my start

I brought the squawking and frightened bird in triumph to my log house and let it loose before my astonished helpmate. This I consider a record breaker in this line of sport and even more exciting than photographing big game in the wilderness.

If it is difficult to sneak upon game and steal a photograph of it in the open, it is very much more so to creep upon it and capture it alive with one's naked hands.

With all my youthful experience in

HANDLING THE WILD CREATURES

of the woods I have but one scar to show where I received any punishment from them and this scar was made by the beak of a big disgusting turkey buzzard. The bird had fallen into the Ohio River and was captured by two small boys, who brought it to me and said it was an eagle. While I was perfectly familiar with the form of the turkey buzzard when it was roosting upon a dead tree or circling around in its most beautiful and graceful flight, I had never examined one at close range, and when this one was dumped unceremoniously from a bag in front of me I got down on my knees and resting on my hands was studying the creature, not knowing for the moment what sort of a bird it might be.

THE TURKEY BUZZARD

emitted a series of hisses, then waddled over to my

hand and slowly stretching out its neck it grasped my wrist with its beak and placing one foot upon my hand commenced to pull as if to tear a piece of flesh from my arm. It was so very deliberate about this operation that I did not realize its object until the pain in my wrist and the blood from the wound left no reason for doubt. Doubling up the fist of the other hand I struck the buzzard and knocked him from the porch.

When I lived in Kentucky everybody kept chickens and everybody who kept chickens had one or more

GAME ROOSTERS.

Our old game cock had been standing alongside of the veranda for some time watching me with the liveliest of interest, when to his delight the blow from my fist sent the big ungainly bird plump down in front of him.

A TURKEY BUZZARD IN THE HANDS OF A GAME COCK

is about the most helpless creature I ever saw. This one was knocked by a series of blows all over the lawn and at last ignominiously rolled down a series of terraces to a corner of the fence, where it lay upon its back gasping and helpless. There is a little half-moon scar upon my wrist today which serves me as a memorandum of my adventure with the turkey buzzard which the boys wanted to sell me as an eagle at my old Kentucky home.

I have said that I have caught ruffed grouse with my naked hands, but this was when the snow was on the ground, and any boy with ordinary alertness and judgment can tell by the marks on the surface of the snow where the grouse has alighted and buried itself under the soft mantle of crystals. Then by reaching his hands down through the snow at the proper point he can pick out the bird without difficulty, hold it just long enough to prove to himself that he has captured it, give it a toss in the air and allow it to escape with a whirr to freedom.

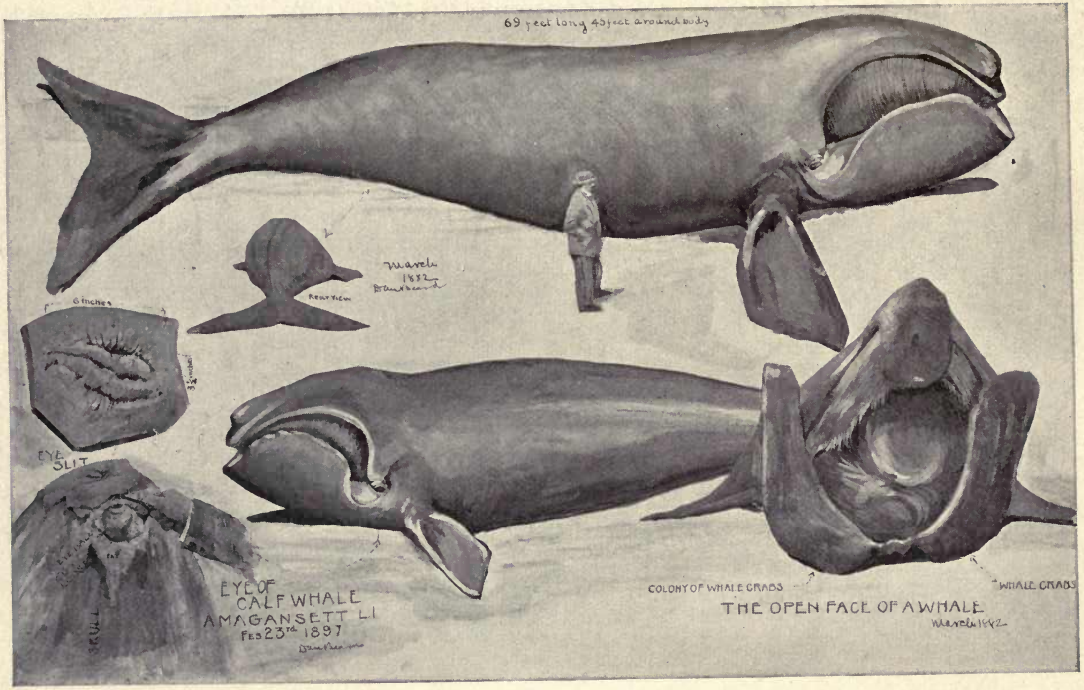
CHAPTER XVII.

"BLACK" WHALE CAPTURED BY AMAGANSETT FISHERFOLK

BLUBBER SERVED AT DINNER—THE MEMBERS OF THE CAMP FIRE CLUB OF AMERICA EAT BLUBBER WITHOUT BEING AWARE OF WHAT IT IS—HOW TO TELL A FISH FROM A WARM BLOODED AQUATIC MAMMAL—WHITE BONES OF GIANT HANDS—THE LONESOME SHORE OF NEW YORK—MILK GIVERS—THE HIND LEGS OF A WHALE—TIME WHEN ALL WHALES HAD TEETH—WHALES WITH FINGER NAILS IN THEIR MOUTHS—HOW I GOT THE EYE OF A WHALE AND WHAT IT LOOKED LIKE.

Amagansett is a quaint fisherfolk town on Long Island. There are buildings there of recent construction and on the ocean front some modern summer cottages, but a neglected old windmill, just such a one as the valiant Don Quixote attacked, stands guard over a small scattered flock of gray, weatherbeaten houses whose hand-rived shingled sides bear mute testimony to their age and respectability.

Among the dust and cobwebs of the attics of these ancient houses are treasure troves that would give an antiquarian palpitation of the heart, old flint-locked guns, with barrels as long as a pike handle, and cartridge boxes containing flints and cartridges, the latter made of the newspapers of



WHALE CAPTURED BY AMAGANSETT FISHER FOLK

revolutionary times, filled with gunpowder gray with age, engraved powder horns with high-pooped and castled-bowed ships of 1650 scratched on their surface, long, straight-bladed swords of the seventeenth century and iron-bound chests suggestive of Captain Kidd's time.

But few strangers know of these things and it is very difficult for an outsider to obtain admission to the lofts where the blue wasps build their mud nests on the old bronze sword hilts, and the ghosts of ancient mariners are said to peer from the dormer windows. Whenever a whale is sighted off shore, the

WHOLE TOWN IS EXCITED.

Every student of whale-lore has read of the late Captain David Gray, who, with the proud title of the prince of whalers, combined the reputation of being one of the most observing and noted field naturalists; but Captain Josh, of Amagansett, has only a local fame as an expert whaler and it is very probable that he has little, if any, knowledge, of the genealogy and history of the whale as it is recorded in books of natural history. Nevertheless our Amagansett whaler is thoroughly conversant with all the tricks and characteristics of live whales and it is doubtful if the prince of whalers himself could excel Captain Josh in his ability to instantly detect the puff of vapor issuing from the blowholes of a distant whale.

From the crow's nest on top the house, Captain Josh, of Amagansett, scans the ocean, and where a

landlubber could see nothing to attract his attention the old salt's quick vision detects the faint cloud of steam on the horizon, which sends the blood tingling through his veins and causes him to shout, "Thar' she blows!"

Up goes the signal flag to spread the glad news that a whale is sighted, in a moment more the church bell is clanging and its brazen throat is trying its best to articulate the words, "Thar' she blows!"

ALL IS HUBBUB.

However unintelligible the remarks of the bell may be to mere strangers, there can be no doubt but that the natives understand it perfectly, and, if they did not, one glance at the captain's signal flag would explain all.

The sound of the bell sets the village wild with excitement and all is hubbub and confusion. "Thar' she blows!" shout the school children. "Thar' she blows!" ejaculates the teacher, "She's blowin' " chuckles the parson as he grabs his hat and makes a bee line for the beach.

In the olden times on this part of the coast they had no church bells, and when the first church was built in the neighboring village of Sag Harbor in 1767, the good fishermen, farmers and pirates used to assemble on sabbath days at the call of the drum, and it is more than probable that this same martial implement was beaten when a whale was sighted off shore; but now it is the church bell which rings the

news, and Captain Josh and Captain Gabe and Bert, Dave and Dan launch their boat amidst the white foam of the breakers and a goodly crew they make, none better pull an oar; but there are other crews and other brave men who jump at the first stroke of the bell, and as the sound reverberates among the houses and fields, shoe-makers drop their lasts, tailors their thread and needle, blacksmiths their hammer and farmers their plow handles, for underneath the thin disguise of merchant, tradesman and farmer are hidden the adventurous seamen and expert whalemen of Amagansett.

WARY OLD WHALE.

All the inhabitants rush for the beach, the kodak man scorching on a wheel with his camera slung on his back, summer boarders, women, dogs and children hasten to be in time to see the oilskin-clad men launch their boats and bend to the oar in the mad race to be first in the chase.

Wise and wary must be the whale who escapes the hereditary foes of its race; but there is one old spotted fellow (perhaps he is a descendant of the celebrated "Moby Dick") who has led the Amagansett people several chases.

The whalers know old "spotty" by the big white marks near his flippers.

The black whale, which is the kind hunted at Amagansett, was supposed to be totally extinct at the time of the American revolution and has only been recently introduced to science as a rediscovery.

SKULL OF CALF WHALE SHOWING INSIDE OF UPPER JAW

BLUBBER DRIED OUT.

Captain Josh and all his hardy race are ever on the lookout and when the captain shouts, "Thar she blows!" his voice is heard in New York City; it comes ticking over the wires in every newspaper office and as the Amagansett boats shove out in the surf, representatives of the press, with pens, pencils and cameras are hurrying by rail to be in at the death.

When the leading boat of the fleet comes up with the whale Captain Josh shouts,

"GIVE IT TO 'EM, GABE!"

and there is a swish in the air and the next

instant Captain Gabe's harpoon is quivering in the whale's body.

Sometimes this happens so far out to sea that the boats appear as mere dots on the horizon. Then, again, the whale is accommodating and allows himself to be struck so near the shore that the kodak man risks a snap shot at the act. Then comes the fight, next the death and then the long procession of boats towing the dead monster ashore, and there is no sleep for the people that night.

Men are busy at the grindstone sharpening their "spades," great chisel-like tools, with long handles, used in cutting up the whale. Implements similar in form to drawing knives, called "mincing knives," are made ready, fires are lighted under the huge iron kettles and horses are hitched to the wagons for hauling the blubber from the beach to the trying kettles.

Hardly are the lines made fast which secure the whale to the shore before a swarm of men with their long-handled spades mount the black carcass and begin work.

NOT VERY GOOD.

The last time I was in at a kill I secured some good, clean blubber after the oil had been tried out, and under a French name had it served at a dinner of the old Camp Fire Club. Some of those who ate it thought it to be toast fried in fish oil, others tripe fried in fish oil, another bacon

treated in the same manner, Yellowstone Kelly said it was beavers' tail fried in cod liver oil, two guessed sea lion, one guessed seal, one said it was some sort of fish a long way out of season and two knowing ones "guessed right the very first time." Personally I must admit that while I can eat blubber fresh from the trying kettle I much prefer bacon. The whale oil is a useful article of trade, but as long as beef and bacon last my advice is do not experiment on whale as an article for the table.

Amagansett people have been known to fry their

DOUGHNUTS IN THE KETTLES OF WHALE OIL,

but Amagansett people are sentimental in everything flavoring of the sea, and even the strangers who visit this old Long Island town pay little heed to the historic relics moldering in the twilight of the attics, but like the native born, the stranger's sole interest is in the most ancient of all objects found there, the sea.

If any reader wishes to distinguish at a glance the warm blooded sea mammals from the great fishes, he can do so with one look at their caudal appendages or in other words at their tails. If the creature inspected is a warm blooded, milk giving air breather which gives birth to its young alive, the tail will be found to be set parallel with its mouth, that is horizontally on the body like this —, but if this useful organ is set edgewise, in other

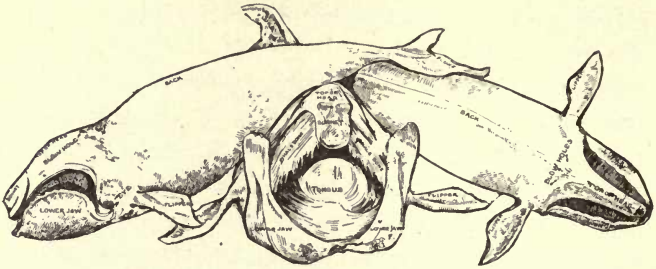


DIAGRAM OF SIDE, FRONT AND TOP OF WHALE

words, with its edge perpendicular, like this | , the creature to which the tail is attached is a fish.

There is a good common sense reason for this that the sculptors, painters and illustrators of

MERMAIDS

may well study, for the nose on the anatomy of the mermaid stamps her as an air breather and *not a fish.*

An air breather must force its head above water whenever it needs more air and the great horizontal tail is most admirably adapted to this purpose in its position ready to slap the water with a down stroke, in fact it is safe to say nothing is better for this purpose; if there is any improvement, nature would have worked it out long ago and some one of the warm blooded progressive sea animals would be rejoicing in the patent.

A FISH'S PERPENDICULAR TAIL

on the contrary, is built to scull the owner through

the water. It is only with considerable exertion that a fish makes consecutive leaps in the air, but the porpoise and the whale roll, leap, and bound above the surface of the water with as much grace and ease, as an antelope does on shore. The fishes secure oxygen from the water that passes through their gills and they only leap above water in play, to capture food or escape being captured.

We know that a

MERMAID IS AN AIR BREATHER

and a milk giver, that is, a mammalian because she is represented with nostrils and lungs and breasts like a woman; we also know that she is a fable, a nature fake, a fanciful creature, but even a fable should be logical and so she should have no scales, but a skin-covered horizontal tail like that of the porpoise and whale.

Scattered on the beach of white sand, bleaching in the sun just above high tide were the remains of the flippers cut from various whales. Decay had parted the meat from the bones, fiddler crabs and sand fleas had completed the work until all that remained of the giant rubber-like flippers were the

WHITE BONES OF GIANT HANDS

of five fingers each. The unexpected sight of these well articulated bony hands make a startling and forcible argument for the evolutionist, and the observer is ready at once to accept as truth the

theory that the whale has been evolved from a four-footed land beast and also to believe that the ocean is older by far than the sandy beach, older than Long Island itself. The ocean pulsates and roars now just as it did before Long Island was pushed out into the sea—just as it did when the Appalachian Range and the Rocky Mountains themselves were but reefs of rock in the primeval sea—when New York State had just emerged above the tide. The breakers dash upon the beach at Amagansett to-day as they did upon

THE LONESOME SHORE OF NEW YORK

untrodden by man, beast or reptile and over which no bird winged its flight. You can well believe that New York was then a nightmare land, covered with a carpet of fantastic and weird vegetation—a vegetation which lived and died without damage from bird, mammal or insect, for geologists tell us that none then existed. Ages and ages after that time when animal life appeared upon all the lands and among them the ancestors of our present

MILK GIVING CREATURES,

one of them loved the water, and while spending more and more time in that liquid it discovered that the buoyancy of the water formed a better support for its elephantine body than the thin air, consequently its visits to the shore became less and less frequent until, after ages, its descendants took up their permanent abode in the open sea.

THE HIND LEGS

were of no further use and had gradually disappeared. The end of the spine had developed a huge tail to aid it in its movements through the water.

ITS FRONT PAWS,

or feet, which had at first probably been webbed were now entirely enclosed in a rubber-like mitten and the pre-historic monster was transformed to a whale. You can see the operation reversed today by keeping a tadpole in an aquarium and watching its transformation to a frog, but while, as a rule, it takes only a season for a tadpole to change into a frog, it must have taken thousands of years for the hind legs of the whale to gradually disappear and be absorbed into the body, just as the useless tail of the tadpole is now absorbed by the young frog.

Although the whale does not now know the use of legs, it apparently hates to give up the institution of its ancestors, so we may still find in a modern, up-to-date whale some useless bones embedded in the coarse, stringy meat and oily fat of their huge fish-like bodies, which is all that is left of the hip bones or pelvis of their ancestors, and like the useless buttons on the back and sleeves of our own coats, their only present purpose is to let us know that once on a time there was use for these things.

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The Greenland whale still retains hip and knee joints with some of its muscles, telling us in unmistakable terms that the forebears had useful hips and knees, but these bones and muscles in the modern whale are only rudimentary and are as useless to the whale as the aforesaid buttons on the back of a man's frock coat.

The nostrils, or nose holes of the whale family are simple slits placed on top of its head, there are sometimes two of them and occasionally only one. It is doubtful if they are ever now used as organs of smell, but probably they are simply breathing holes. When the whale breathes, that part of the throat known as the larynx makes a connection with the nostril, thus forming a free passage for the air to the lungs which the water in the mouth of the whale can not enter even when all but the nostrils are under water.

When the whale exhales the air it sends the vapor out with a rush and the whaler on the look out cries,

"THERE SHE BLOWS!"

It takes millions of myriads of the small molusca crustaceous and jelly-like animals, upon which the

feed, to supply material to build up their huge bodies of oily blubber, but by an ingenious modification of the mouth the whale has contrived a fish net most admirably adapted for the purpose of capturing the small shell-fish, shrimp and jelly-

like animals upon which to appease its appetite. Once on a time the whale-bone whales had teeth, and the sperm whale still exhibits as formidable a display as a dentist's show-case; but the whale-bone whales having no use for teeth, never take the trouble to cut them, although the little teeth are embedded in their jaws, buried there as the anatomical remains of their equally useless hind legs are buried in their bodies. As the balaena gradually changed their habits their huge jaws became modified, what in the roof of a cow's mouth is rough, fleshy ridges, is altered in time to horny, biting ridges in the manatee and becomes whale-bone in the balaena.

The whales are the only creatures which have

FINGER NAILS IN THEIR MOUTHS,

for the whale-bone is practically the same substance as our finger nails and the process of growth is the same. Set about a quarter of an inch apart the whale-bone hangs down from the upper jaws with a smooth horn-like outer surface and thickly fringed with hair-like shreds upon the inner surface, and while these whales do not, strictly speaking, have "hair on their teeth" they do give an observer that impression. On very large whales as many as three hundred sheets of whale-bone hang down on each side of the jaws. Every man's first desire when he is shown a captured whale seems to be to see if it is possible for the animal to swallow a man. As he steps into the open

jaws of the dead monster and views the small throat hole and big wrinkled unwieldy tongue, he is satisfied that the Biblical animal could not have been a whale-bone-bearing whale.

It is safe to say the whale-bone whale never sticks its tongue out at any one because it can't, its tongue is fastened down to its lower jaws almost to the tip, nevertheless it is a very useful organ to the whale.

THE WHALE IS NOT FOND OF DIRTY WATER,

but where the water is clean, clear and of a dark blue color, and where its special food is most abundant the whale chooses its place to feed, which it does by swimming two or three hundred yards and back again to the starting point, with its nose just under the surface, and its mouth open; let them spread their jaws as wide as they will, the drooping net of whale-bone still guards the passage of the mouth and as the mouth is closed the elastic ends of longer whale-bone bend back toward the throat and fit into the hollow formed by the short blades behind them so that the whole trap is neat and snug and ready to be sprung again as soon as the thick tongue, by raising at the back of the mouth forces the water left there through the fringed whale-bone, leaving all the small food creatures entangled inside the meshes.

For an hour or more the great leviathan will swim back and forth feeding, then it takes an after-dinner nap.

WHALE PARASITIC CRABS

The only photograph of this parasite extant.

It was cold, blustering weather while I was at Amagansett and the chilly winds impregnated with the raw ocean spume benumbed my hands and fingers. For some reason or other I had always been possessed with a desire to examine

A WHALE'S EYE AT CLOSE QUARTERS,

but when I attempted with the aid of my jack-knife to cut the eye from its oily socket my fingers became numb, and the muscles holding the eye were so tough that it took me at least twenty minutes to remove it from its socket. The eye was about the size of a regulation baseball and in the same form. I put it in alcohol and presented it to the museum of the Flushing High School, but I am doubtful if any one takes the same interest in this object as I did, and confess that to the unscientifically inclined person it is an uncanny object.

On the protuberances on the top of the head at the front of the jaw, called

THE BONNET,

I found a colony of small crabs, known as whale lice, and Tapan Adney, who was with me, at my urgent request, attempted and succeeded in making a photograph of them while they were still alive. This is interesting not only to the naturalist but to all such people as are fond of unique objects in photography; I think it is the only photograph ever taken

of these live degenerated crab-like animals. It has since occurred to me that my deep interest in the eye of a whale, its odd jaws, and the little crabs which infested its skin are not so much due to my passionate love of nature and natural history, as to the fact that everything relating to the whale excites my liveliest interest, principally because, as a boy in an inland town, I used to read exciting stories of whalers and then wonder if I would ever see a real live whale.

In the illustrations to the boys' books of whaling adventures little care was given to detail of the monsters of the deep; such small points of the anatomy as the eyes and flippers were enveloped in a mystery caused by a lack of knowledge on the part of the illustrators. Hence the eyes, flippers and other details were usually ingeniously covered up with convenient waves or masses of foam. In fact I think that the first correct drawing of a whale, which has appeared in any of the popular natural works, is the one in the Standard Natural History, made from a drawing of the late Dr. Holder, Curator of the New York Museum of Natural History, which he made from some of the very drawings and photographs reproduced in this chapter.

CHAPTER XVIII

HOW ANIMALS PLAY

HOW THE OPERA HAT IMPRESSED THE "COON" AND ASTONISHED THE RACCOON—A COYOTE WITH WHICH I BECAME AQUAINTED—THE CINCINNATI TIMBER WOLF—THE JOLLY OYSTER—INSECTS WHICH LOVE FUN—A TAME KATYDID'S PLAY—THE FISHES' GAME OF "I CONQUER"—A WILD MOUSE ON A LARK—THE CHIMPANZEE'S ROUGH PLAY—TAME PIGS PLAY TAG—HOW A YOUNG BIG HORN AMUSED ITSELF—A ROCKY MOUNTAIN GOAT'S HOUR OF RECREATION

Tame monkeys, like children, are very fond of pets, and take great delight in fondling white rats and other small creatures. Raccoons, on the contrary, do not seem to indulge in live pets; but they are extremely playful and full of fun.

I once had nine dollars saved from my salary of seven dollars per week and with it purchased my first opera hat; it was a great hat and I was so impatient to wear it that I could scarcely wait until evening to don my "swallow" tailed coat and full formal evening attire, but night came in due time and by eight o'clock I was dressed with white tie, broad expanse of shirt front, white vest and patent leather gaiters. It was the first "top to the bottom" evening dress I had ever owned, hence my impatience to put it on. With the opera hat on

I walked a couple of doors to where a most charming acquaintance lived, rang the bell, handed my card to the maid and with an ostentatious snap mashed my hat flat under my arm as I was ushered into the long parlor.

There is little doubt of the effect of that hat on the colored maid, and no doubt that she told "young miss" of my formal appearance and the awe-inspiring tall hat, for "young miss" was a long, long time in making her appearance. I sat bolt upright in my chair with my precious new hat under my arm and waited, it seemed to me, for hours; presently a something came bouncing into the room,

A SOMETHING ROUND AND FUZZY.

It was not a maid or a madam, but it was alive. I was astonished at first, but my astonishment soon changed to interest when I discovered that the thing was a big fat raccoon. The 'coon's antics soon set me to laughing and my innate love of animals made me forget the assumed formality of my call, and, sad to relate, forget all about the lovely girl I was calling upon. In a few minutes I was down on my hands and knees playing with the 'coon. I had just shot my opera hat out to its full aristocratic dimensions with a snap which so astonished the 'coon that it rolled over backward, when I was startled by hearing a silvery laugh and looking up was very much embarrassed to see "young miss," arrayed in an exquisite evening

gown, standing in the doorway looking at her caller and the pet raccoon, both of them on all fours on the parlor floor. Fortunately the charming Kentucky girl and I had been playmates and we had known each other since my barefoot and her pinafore days; otherwise the situation might have been more than temporarily embarrassing. As it was, my very first formal society call proved to be the most informal visit of the kind that I can remember.

YOUNG WOLVES

will accept an old shoe, a ball, or any other object that will appeal to a domestic dog as a plaything. A coyote with which I became acquainted, while visiting the Canadian National Park at Banff, had such a wild frolic with my cap that when I at last regained possession of it the thing was a wreck.

A timber wolf in Cincinnati was the playmate of my elder brother and was in no-wise different from a frolicking dog.

FOXES NEVER SEEM TO TIRE OF PLAYING

with each other; a feather delights them beyond measure, and in pursuit of it they will make phenomenal leaps. I have watched young red foxes playing together for more than an hour at a time, and I doubt if there lives any more graceful and playful creature in wood or field.

YOUNG COYOTE

It would be a difficult matter to determine just

WHAT ANIMALS DO NOT PLAY

for youth and play seem to go hand in hand. It must not, however, be understood from this broad statement that the writer looks upon the oyster, for instance, as a frolicsome, fun-loving creature.

But even this lowly bivalve is a more highly organized animal than might be supposed by any one whose only knowledge of the oyster is its appearance on the half-shell, or its flavor as it goes sliding down his gullet. The oyster has a heart, a liver, an intestine and a rudimentary brain. The baby oyster swims free, and, for aught we know to the contrary, may be a playful creature before it attaches itself to some stationary object and settles down to the stupid vegetable life of a true gentleman of leisure.

By experiment I have found that even

INSECTS ENJOY RECREATION

and apparently have an appreciation of fun. A pet katydid, which I kept in my library one winter, would pretend to fight my finger and assume the most laughable poses while so doing. At the same time it kept up a queer scolding noise, made with its wings, that I have never heard among the trees.

Last summer, from an ambush in the forests, I watched the little four-footed brownies and wood fairies as they rustled among the leaves, peeped from under the ferns or scampered up the tree trunks, but the ones which interested me most were the American white-footed mice, or deer mice, as some call them. One of the little fellows appeared upon a log at the edge of the water, and in the exuberance of its joy, leaped so high into the air that it lost its footing when it again struck the log, and fell with a splash into the water. But this seemed to be part of the game, and the mouse was out again in a jiffy, rolling on its back like a wet dog. Then away it scampered over the water, leaping from one lily pad to another, and noisily disappearing into the top of a fallen tree.

One summer day, as my boat was floating quietly with the tide, my attention was caught by the unusual movements of some killies. The little fish seemed to be engaged in a game of "I conquer" or

"FOLLOW THE LEADER,"

and were leaping over a small raft of salt hay. The killies were not feeding, the closest scrutiny failed to reveal a trace of food on the hay, and it was evident that the bunch of floating straw was being used as a plaything by the aquatic children.

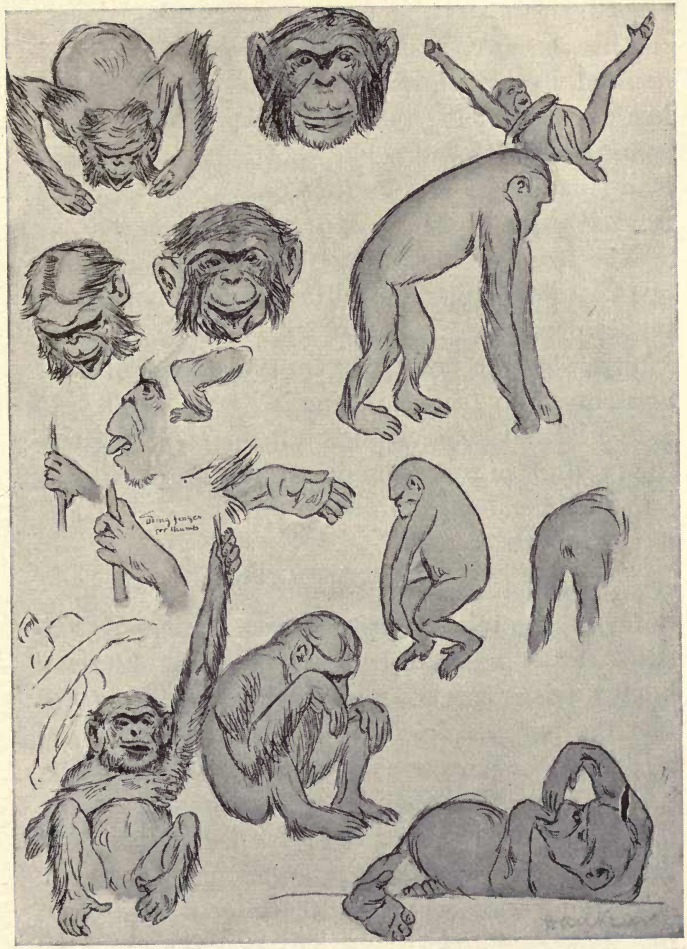
A young chimpanzee resembles a human child so closely that it is not strange that the play of these two children should be similar in many respects; but the young troglodyte is much stronger than the human infant, and consequently its play is much rougher.

WITH PLAYFUL CREATURES

I have found that if an artist wants to get a sketch of them the best way to do is to play with them until they get tired,

then, while they are resting, he has a good opportunity to make his sketches. But, in attempting to follow this policy with Mr. Crowley, I soon discovered that I had over-estimated my own capabilities and under-estimated his.

I was locked in the room where Mr. Crowley's cage extended from one end to the other, and, as there was no audience to embarrass us we had high jinks there for quite a while. I would rush to one end of the room and knock on the floor with my knuckles. Mr. Crowley would tear around on his knuckles and hind feet to that end of the room, availing himself of the flying trapeze, which hung in his cage, to make a giant leap which sent him bang up against the other end of the cage, and then he would get down on his hands and knees to look and see where I had knocked, and listen and pretend to examine the place very carefully. Then looking at me with his comical eyes, his face would assume an expression in which there was discernible an undeniable grin, which is depicted by the sketch underneath the one in the northwest corner where he has his face down between his hands; the next instant he would scramble over to the opposite end of the cage and reach out and knock on the floor with his knuckles. It was then my time to run and examine the place where Crowley knocked. This and other boisterous sports and games we kept up until I had to strip off my coat and vest and at last fell exhausted against the steam heater, much to the amusement of the ape.



A YOUNG CHIMPANZEE

When vainly attempting to make a finished drawing of another one of these animals while it played with a straw, a rung of a chair, and an old silk hat, I was compelled to laugh until, utterly exhausted, I sank helplessly upon a bench. It is needless to say that the sketches made under such circumstances look more like shorthand notes made by a lunatic than serious attempts at pictures, but I learned much of the ways of the chimpanzee.

The sense of the proprieties of life is undeveloped in these animals, and this will prevent a full report ever being made of their outrageous comicalities; but can never prevent the witness of their boisterous fun from enjoying a hearty laugh. In fact, a lack of appreciation on the part of the audience will often cause the primitive comedian to fly into a wild and ungovernable fit of anger.

THE DOMESTIC PIG

is a much misunderstood and maligned animal. True, a pig-sty is not a New England housewife's idea of cleanliness, but it is the best the pig can do under the circumstances, and is never so offensive as some of the human sties which answer for jails in some parts of the country. Like any other prisoner, the pig is dirty when he is forced to live in filth.

A pig I once owned in Kentucky was so clean that its white bristles shone like spun glass, and the pig's skin showed as pink as a baby's foot. There was nothing this pig enjoyed more than a bath from

the garden hose, unless it was the game of tag on the lawn, which followed with its young master and the house dog.

WHEN THE PIG WAS

"It," she would tag the boy by using her snout to trip him, and tag the dog by giving it a toss into the air. Then with "guogh!" away the hog would scamper, with the others in hot pursuit.

Not the lamb which Mary loved, but a big horn lamb from the Rocky Mountains, owned by a Western gentleman, was wont to climb to the top of the tallest pieces of furniture in the house, from which it would playfully leap to the floor, where it landed stiff legged and with feet close together.

A ROCKY MOUNTAIN GOAT KID

I once met would climb to my shoulders and jump to the ground, and for variety's sake would butt me with its little, white, woolly head. I could detect no difference in its play from that of the kid of a domestic goat.

"All work and no play" makes a Jack rabbit as dull as it does a Jack boy; but it is interesting to note that all animals seem to use their play as kindergarten schooling for the more serious pursuits of their maturer years. The puppy engages in a mimic chase, the kitten stalks imaginary mice, and so the idea of play developing the faculties runs through all the animal world.

CHAPTER XIX.

IN A WILD ANIMAL REPUBLIC

IN THE GLOAMING—SMALL NOCTURNAL ANIMALS—GHOSTS OF THE CAMP FIRE—EFFECT OF FREEDOM FROM PERSECUTION—PANTHERS KILL FOR THE FUN OF IT—BAD GRIZZLY IS WALLOPED WITH A STICK BY COL. JONES—SCAVENGERS OF THE PARK—SOME BEAR STORIES—A THING MUST SMELL LIKE A MAN—RAID THE KITCHEN WAGON—GOOD RED BLOOD—HERE THE MOUNTAIN LION PROWLS—PINE MARTENS, FISHERS, OTTERS, MINK, BADGERS, BEAVER, GOLDEN CHIPMUNKS, MULE DEER, ELK, MOOSE—PREHISTORIC ANIMALS—BISON AND BIRDS

IN A WILD ANIMAL REPUBLIC.

All day the July sun has been shining with tropical heat, causing the crystal mountain air to shimmer above the white, dusty roads; but now the fiery ball is sinking behind the Sofatara plateau, the lengthening shadows creep rapidly eastward over glistening geyserite formations, and the coyote chorus proclaims the restful evening. In the gloaming the forests of pine, fir, and black spruce are extremely somber; the camp fires shed a ruddier glow; bats creep from the hollow trees and launch themselves on noiseless wings, and like a flitting shadow the western flying squirrel sails by the camper's face. As the shadows deepen, the small

GRIZZLY CUB IN YELLOWSTONE PARK
Drawn from life. Bears in background are from photographs.

nocturnal mammals come from their subterranean homes and rustle among the dry grasses or the roots of the fringed gentians and Indian paint brushes. Fresh from the snow fields of the mountains, the cool night wind whispers among the trees; objects near at hand become vague, and the increasing gloom materializes into moving forms which steal from the shadows and troop down the broad trail in a cloud of dust. These apparitions are no ghosts of the camp fire, but huge brutes, fierce and sullen.

THEY ARE GRIZZLY BEARS.

The surprising nimbleness of these mighty animals is a revelation to one whose previous knowledge of them is derived from the broken-spirited prisoners of the menageries. Gigantic strength, unbounded courage and astounding tenacity of life make the grizzly the most dangerous foe.

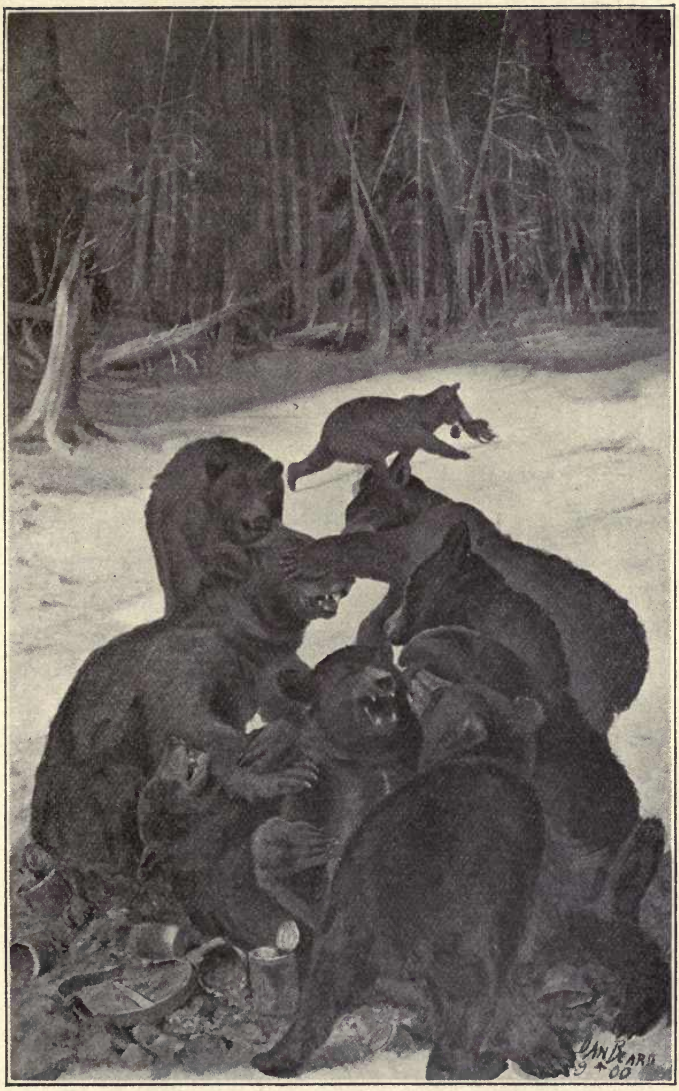
FREEDOM FROM PERSECUTION

will hardly change the nature of an animal, but it will allow him to revert to the state in which he existed before his persecution began. It is plain, too, that the changed conditions will not affect all the animals alike, and that though their wildness may be greatly modified, they will still retain their racial characteristics. One of the most interesting results of freedom from persecution enjoyed by the animals of the Yellowstone Park is its civilizing effect on the grizzlies, which, beyond a doubt, now recognize their novel position, and are loath to bring scandal on the animal community by acts of real violence.

But it must be acknowledged that some of the

BIG SILVER TIPS

are still dangerous to meddle with and criminally mischievous. While Colonel Jones was in charge of the park animals the grizzlies became so troublesome to the foreign laborers that the latter threatened to quit work, so Buffalo Jones fixed a noose on



A MISUNDERSTANDING AMONG THE BEARS OF YELLOWSTONE PARK. PAINTED FROM SKETCHES AND NOTES MADE IN THE PARK. (ORIGINAL OWNED BY MR. WM. E. COFFIN)

a block and tackle and when an impertinent old silver tip visited camp and put its foot in the noose the workmen quickly strung the huge monster up by the hind leg while Colonel Jones administered such a flogging as no bear ever before received. The Colonel exhibited moving pictures of this incident which were as unique as the idea of punishing bad, wild bears. In his talk Colonel Jones said that after the flogging not only that particular bear but all the others gave the camp a wide berth.

Not only do the bears of the park,

WHEN UNMOLESTED, REFRAIN FROM ATTACKING MAN

himself, but they seem to know that they must not prey upon domestic animals; this may be due to the fact that it is less labor to visit the garbage heaps than to capture live creatures, but it does not arise from a lack of opportunity on the part of the bears for their human-like footprints may be seen any morning around the stables and open sheds where the horses and cows are tethered, and where it is no uncommon sight to see little colts frisking around about their dams.

The same thing could not be truthfully said about

THE MOUNTAIN LIONS,

for these big cats, even in the Yellowstone Park, kill apparently for the fun of killing and an examination of some of their dens disclosed more elk

carcasses strewn about than the cats could possibly devour.

BEARS ARE THE SCAVENGERS OF THE PARK,

as hogs formerly were in our cities. A peculiarity of the grizzlies is the marked manner in which they avoid their black cousins, preferring to eat what the black bears leave rather than to associate with them.

A few years ago, before the hotel at the upper geyser basin was burned, the guests of that hostelry were sitting around the big open fire, telling bear stories, when in walked

A LARGE GLOSSY BLACK BEAR.

Conversation died, and the guests sat silent and motionless as the petrified trees at Yancey's, until the bear, bored by such dull company, strolled leisurely to the front door, looked out at the bubbling geysers, then quietly took its departure. At Norris I found the soldiers alternately swearing because bears had looted their tobacco and scattered it over the ground, and laughing at "Larry the lunchstand man." This talkative and genial Irishman thought he could protect his meat house from the bruin by erecting scarecrows at the four corners of the house, but when night came on the bears pulled the stuffed men to pieces.

Bears, like dogs, have keen noses, and

A THING MUST SMELL LIKE A MAN

before a bear will think it a man. Late one afternoon, as we were nearing the end of a long drive, an exclamation from my wife caused me to rein up my horses, and turn in my seat. At the side of the road were two camps of family parties located in a beautiful green glade, separated from each other only by a deep, narrow gully. Seated in the bottom of this hollow was the largest, fattest, laziest-looking black bear we had seen in the park.

It was in plain view of the road, but concealed from the campers. A few feet from its hiding place children were romping and playing, unconscious of its presence, and the big brute paid no attention to the shouts and laughter of the little folks, but idly swayed its head from side to side with a comical expression of weariness. The purpose of the bear was evident. It was waiting for the campers to retire, that it might

RAID THEIR KITCHEN WAGONS.

We afterwards learned that the noise it made in clambering into the wagon aroused the cook, who drove the fat rascal away by pounding its back with a tent pole.

Yellowstone Park is to the birds and mammals of this country a place of refuge from persecution. It is indeed unique in being the first place where

FEEDING THE BEARS

man has allowed the preamble of the immortal Declaration of Independence to apply to his undeveloped brothers of the wilderness; and the only zoological collection, with the possible exception of the Garden of Eden, where animals have been intrusted with self government.

It is astonishing what a remarkable difference there is in appearance between the healthy animals and the old-fashioned stuffed museum specimens of the same creatures. Indeed, so great is the disparity, that it is by no means easy to identify many of the living birds or mammals from a previous study of mounted specimens.

The healthy bodies of the citizens of the Wild Animal Republic, unlike many museum specimens, are not stretched out of all semblance to nature. No odor of camphor or other drugs emanates from them, and no printed labels give you their names in a language as dead as the stuffed specimens. But with

GOOD, RED BLOOD COURSING THROUGH THEIR VEINS

the agile citizens of the Park are a surprise and a pleasure to all lovers of nature. It is only fair to the new school of taxidermists to say that the foregoing was written before the modern artistic manner of mounting animals and birds, such as may be seen at the Natural History museum in Central Park, was in vogue.

Instances are not wanting in which stage roads and even hotel lobbies have been visited by strange guests; but, as a rule, the animals must be sought in their native haunts.

HERE THE MOUNTAIN LION PROWLS

as he did before Columbus blundered on America. The lynx mounts a log, arches its back and gives forth youghs and calls that would make a domestic cat die of envy. The wolverine prowls in search of its dinner, feeling certain that its food conceals no cruel trap.

THE PINE MARTIN AND THE FISHER

no longer dread to crawl under a log for fear of displacing a trigger and being crushed.

THE BRIGHT EYED OTTER AND MINK

look not for human enemies; muskrats and beavers build their winter homes practically undisturbed by the trapper. Several varieties of foxes glide noiselessly through the low bushes, unmolested by hounds and men.

BADGERS SPREAD THEIR WIDE BODIES

to catch the genial rays of the sun. Beautifully colored living marmots, or "rock chucks" run ahead of your team along the rocky roadsides, or peep at you from their fantastic castles, built of

snowy geyserite deposited by geysers extinct years ago. The yellow porcupine gnaws contentedly at his favorite food. Cotton tails, snow shoes and jack rabbits fear none but their natural wild enemies, and little chief hares abound in the slide rock. Along the dusty roads

BIG GOLDEN CHIPMUNKS

and little four-striped chipmunks play and scold passing teams. These creatures are so tame they do not hesitate to enter your tent, and they live royally on grain stored in the Transportation Companies' stables. From the woods by the roadside the

GRACEFUL MULE-DEER

and rarer white-tailed deer gaze with innocent curiosity at stage loads of tourists, never suspecting that, but for an intangible thing called law, these people would be their blood-thirsty enemies. Moose wander in the forest glades at the southern boundary of the Park, and scattered over Hayden Valley many thousand magnificent elk roam free.

Recent discoveries of the remains of

PREHISTORIC ANIMALS,

which once inhabited the Far West, and which have been so beautifully illustrated by Charles R. Knight, should make us put a high value on existing species. The two-ton, four-horned rhinoceros,

YOUNG BIG GAME IN YELLOWSTONE PARK

the ungainly, water-loving Metamynodon, the strange, horse-like rhinoceros, the diminutive four-toed horse, the giant pigs, and the hobgoblin deer with tusks and six horns are a few samples of the nightmare creatures whose comical forms populated the hills and plains of those remote days; they were caricatures of our living species.

Like any human child,

MOTHER NATURE'S FIRST ATTEMPTS AT MODELING

were crude affairs, compared with the fine work of her present art. It took ages of experiment to produce the dainty, swift, and graceful prong-horned antelope and it is a masterpiece of art. There are still several hundred of these gentle little citizens in the Park; but a fence is absolutely necessary for their preservation, and should be built to prevent them from straying over the boundary, as they do, to be immediately killed by game hogs.

THE BIGHORN,

or Rocky Mountain sheep, can be seen by climbing Mt. Evarts, or some other high peak of the Park. They have been so persecuted that it will be long before they will frequent lower ground. There were about 200 in the Park at the time this was written. With care this number can be increased. Inasmuch as these creatures will soon be exterminated elsewhere, it is important that every care

be taken by our rich government to protect the survivors here.

We ask why

THE HERD OF YELLOWSTONE BUFFALO

has been so sadly reduced, and we are told that grizzlies and hard winters have destroyed them. For thousands of years grizzlies and hard winters were features of the buffalo country, and yet the buffaloes thrived and waxed strong.

Buffalo heads are in great demand. Fine ones command extravagant prices. Buffalo skins are eagerly sought by museums and wealthy people and I was told that in the neighborhood of the Park purchasers had paid as high as $2.00 a pound for buffalo steak. The very bones of these animals are in demand, for anatomical specimens for museums; hence a wild buffalo is looked on as a small fortune walking around without an owner. Is it any wonder, then, that skin hunters, adventurers, and settlers have turned poachers at the sight of these poor beasts? These people have no more heart than an automobile to restrain them, and the slight penalties for poaching were easily evaded.

In 1892 Captain George Alexander reported a herd of 400 bison in the Park, 20 per cent. of which were yearlings, and in 1900 there were but twenty-nine!

Among the many strange sights one sees in the Park are the hundreds of swallows twittering and flying around the cliff overlooking the boiling sul-

phur springs. Unmindful of the fumes of sulphur, the proximity of scalding steam, and the alarming subterranean noises, these little birds skim through the air and enter the queer holes and cracks in the cliff, as cheerful and happy as house martens in a farmyard.

At the sound of the rumbling of the Fountain Hotel wagon, which hauls garbage to the dumping grounds, bears appear, and, along with them comes a

PRETTY YELLOW-COATED, RED-THROATED LOUISIANA TANAGER.

This little bird moves unmolested among its big neighbors seeking for dainties in the cast-away food. Nowadays it is a surprise and a joy to see a bird of brilliant plumage alive and in its native haunts, instead of perched askew on a woman's hat.

On Yellowstone Lake and on Yellowstone River

PELICANS MAY BE SEEN

floating or sailing in the air overhead. The sight of free wild pelicans conveys an impression strangely different from that obtained by viewing the same bird in captivity, where its long beak, with its fleshy bag attached, gives the creature a comical, clumsy look, and little prepares us for the graceful bird seen in the Park.

PELICANS IN YELLOWSTONE NATIONAL PARK

GEESE AND DUCKS

are numerous and tame. At one place wild geese marched along the bank of a stream within twenty feet of our surrey, and viewed us without alarm. The ducks only showed their distrust by placing themselves between us and their fluffy little broods. Swans are rarer and wilder. As might be expected, birds of prey are numerous and bold. The crags are crowded with their eyries, and every bit of open grass land has its hovering hawks, on the lookout for unwary shrews, moles, or gophers. Many varieties of grouse inhabit the woods and prairies, and in winter numbers of beautiful magpies. The hoarse croak of the raven can be heard at the Thumb, and crows are seen in all parts of the Park. The black-headed jay, a variety which was new to me, and the Canadian jay, are not only tame, but mischievous. Having occasion to use my pocket knife, I placed it temporarily on a stump near camp, and after twice saving it, by shouts and mad rushes, I was at last compelled to put it in my pocket to prevent the jays from carrying it away.

While many of the smaller birds are new or unfamiliar to Atlantic coast people, their old friend, the robin, makes his home in the Park.

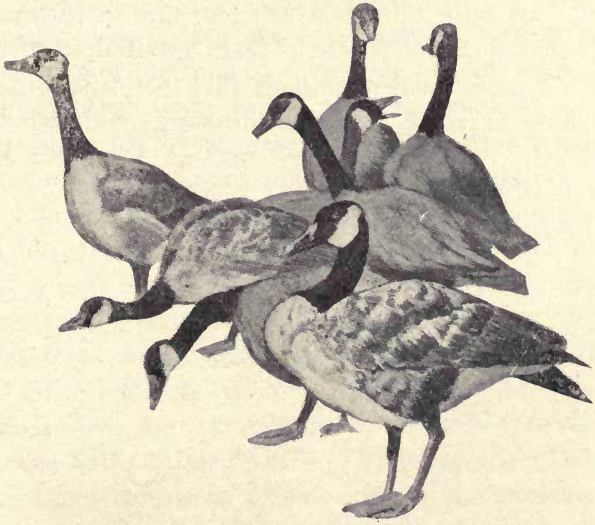
THE INTERESTING LITTLE WATER OUSEL

bobs up and down on the rocks and dives into the water of the Gardiner and the Gibbon, and kingfishers are common.

WE HAVE ALL READ OF OSPREYS,

which, having struck fish too large for them to manage, unable to disengage their hooked talons, have perished, their bodies having been afterward found, still attached to the live fish.

I am now prepared to believe these stories. One day we were driving along the shores of Yellowstone Lake, and saw an osprey fall like a stone from the sky, into the water and disappear beneath the waves. Thinking it had been drowned, we were about to resume our journey, when the fluttering tips of the hawk's wings appeared. The bird slowly arose with an immense fish in its talons, but after three



WILD GEESE ON THE ROADSIDE

times clearing the water, only to fall back again, it dropped the fish and flew wearily away.

To understand the Yellowstone animals we must remember the brutes are direct and practical in their minds, and to what does not immediately concern the gratification of their desires they pay little attention.

Fear greatly influences the actions of man and beast, and creatures absolutely devoid of this governing principle would soon be exterminated. The presence of man has always meant disaster and death to wild animals, so that the taint of his presence in the air is enough to stampede a herd of a thousand elk.

It is easy, then, to understand that "wild animals" are only animals which fear man; and when experience can show their fears groundless, they will no more heed man than they will any other harmless creature. This is the happy state which converts Yellowstone Park into an Eden for all lovers of nature.

Long live the Animal Republic!

CHAPTER XX.

BEARS I HAVE MET

EFFECT OF FIRE ARMS ON THE HABITS OF AMERICAN BIG GAME—GRIZZLY BEARS FEEDING—OUGH—OO—OO!—THE HATED TAINT ON THE BREEZE—IT WAS VERY, VERY, INTERESTING—A LONELY TRAIL—A BRILLIANT IDEA— I LET THEM SNIFF—A BLACK BEAR WHO WAS STOPPING AT THE SAME HOTEL—THE UNFORTUNATE ROOSTER—A BEAR IN THE SUBURBS OF A CITY—THE SAD STORY OF GENTLE MR. DOOLEY WHO IS A MISS—THE BEAR I DID NOT KILL

The panther, the wolf, the deer, the fox and the hordes of smaller creatures walk on the tips of their fingers and the ends of their toes and are each and all graceful after their kind, but Bruin walks on the soles of his feet and the palms of his hands leaving a trail in the mud or dust not unlike the tracks left by a barefooted boy; this plantigrade habit of the bear gives the creature an odd wabbling gait which, with the big awkward appearing body, adds much to the comical appearance of the mischief-loving natural humorist of the wild woods.

After studying the black bear in its wild state in the forests and mountains, in its semi-wild state in the Yellowstone Park, and in its tame state when kept as a pet, it is difficult for one to conceive of this creature as ever being an alarmingly danger-

ous wild beast. On the contrary the black bear seems to be the acknowledged comedian and clown of the American forest.

How dangerous Bruin was before our ancestors brought their unwieldly arquebuses with them to this country is not easy to determine. The introduction of firearms to replace the bows and arrows of the Indians has unquestionably changed the habits of all creatures unfortunate enough to be classed under the head of game.

When Bruin saw the first white man with a gun, and saw how this stranger "did well and properly take a match out of the left hand with the thumb and second finger, holding the arquebus in due height, as well for ease as for safety," Bruin was no doubt deeply impressed, and when the bear saw how this white two-legged animal "did bring the match handsomely near his mouth and did blow off the match before he did put it upon the Cock and set the piece against his breast"—not against the shoulder—Bruin's curiosity must have been greatly excited; but when this hand cannon at last belched forth a stream of fire accompanied by a thunderous report, the poor bear was without doubt terrified, although probably uninjured.

Since that day there came the Daniel Boones with their long deadly "Kaintuck" rifles and they taught Bruin to dread the accuracy of firearms in the hands of men with whom powder and shot were scarce and consequently not wasted: men who shot to kill with each discharge of their long brass-

mounted guns. Nowadays every Tom, Dick and Harry is armed with a lead pumping machine which pours a succession of soft nosed bullets into the devoted carcass of any luckless wild creature that is unfortunate enough to cross the path of the butchers.

The terrible execution of these modern firearms in the hands of good shots is apparent whenever one of the real hunters brings in his trophies. Not long ago old Joe of Arizona drove into Globe with five grizzly bearskins and the pelts of fourteen black bear which were the results accomplished by Joe and his two sons in a two-day hunt in Gila County.

When two men can make such a score we can understand that the wild animals we know, may well be a very timid set of creatures compared to the ones which inhabited the forest-covered continent to which the Pilgrims emigrated. But the black bear has grown wise, and the fact that it still may be found almost anywhere in the United States, sufficiently proves that it has kept up with the times and developed an ability to accommodate itself to changed conditions of environment.

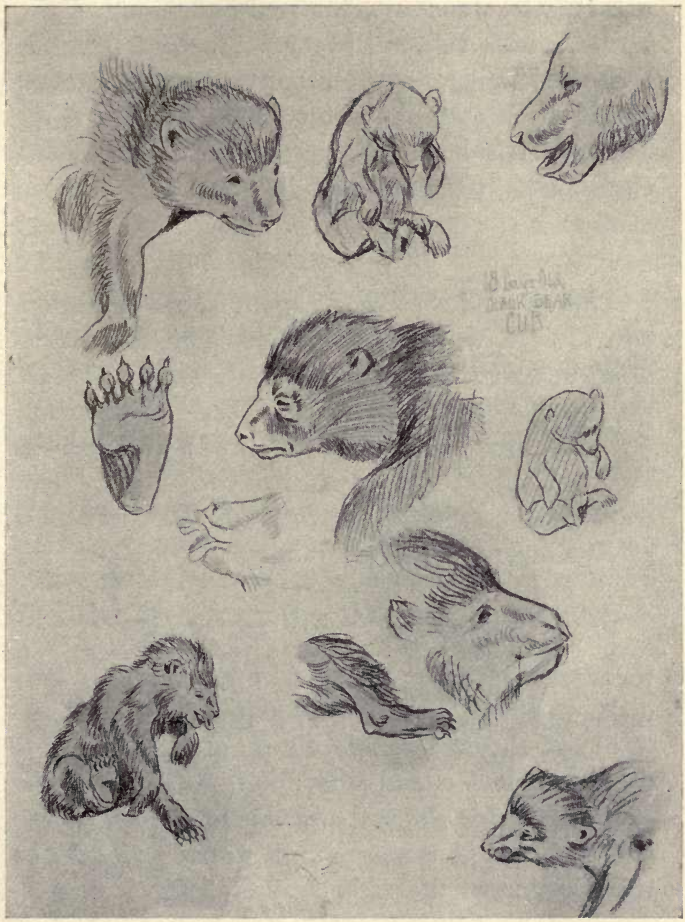
The locomotive of an Erie Railroad train killed a black bear last year, within a hundred and seventeen miles of the New York City postoffice, and I saw bear tracks this (1907) summer near my log house, where I am now writing, a day and a half drive from New York. Notwithstanding the advent of modern guns and a price on his

head, Bruin still manages to exist and is even reported to be increasing in numbers in some sections of the country. Bear pelts and meat are deemed so valuable in the Province of Quebec that the animals are protected during the mating season. Only last June (1907) I counted thirteen black bear skulls at one camp on the River Croche in the Province of Quebec. Beautiful big silver tipped black bear are reported to live far North near one of the Hudson Bay Posts on the Labrador coast, but I have never seen a pelt or met a man who has examined either the skin or the bear itself.

In the Northwest, bear can be hunted from canoes; I have seen them come down to feed among the refuse of the lake shores, and passengers aboard the up-to-date modern steamers on Kootenay, Arrow and Slocum Lakes, are often treated to the sight of real wild bears walking along the shore and paying not the slightest attention to the big steamboat loaded with people. In 1901, I saw a number on the shores of these lakes.

GRIZZLIES WHEN FEEDING

seem to wish for no company outside of their own circle, and if a person wishes to see them at their feasts he must usually seek the shelter of a rock, a choke-cherry, bull-berry, or sage-bush, from which to make his observations. A number of years ago while camping on the southern border of the Yellowstone Park where the animals were still wild, the wind suddenly shifted and blew di-



BLACK BEAR CUBS, EIGHTEEN DAYS OLD. SKETCHED FROM LIFE

rect from my hiding place towards an old female grizzly who was busily engaged in helping a light, almost white, cub and its dust-colored mate clean up some camp refuse. Instantly the grey cub detected my presence; rearing on its hind legs, the baby Bruin sniffed the tainted air a moment and then said: "I smell a man."

OUGH—OO—OO.

This startled the other cub which also stood up, and after a whiff of the breeze had entered its sensitive nostrils, replied: "Wee—ee—e" (We are watched). "Oo—wee—ee" (Yes, its a man). Now Mother Bruin arose to her feet and she was very tall and closely resembled an old dry tree trunk in the twilight, she was also as motionless as a stump until she too caught

THE HATED TAINT ON THE BREEZE,

then she made some low-toned remarks to her children which sounded like "Oughed—oue—wee—oo!" and they all silently disappeared. Of course the reader understands that the translations of the bears' language are my own, but if the words are not literal, the meaning is, for no one could doubt the meaning of the actions of the bears.

IT WAS VERY, VERY INTERESTING,

but to my dismay the bears hit the same trail that I must needs follow to reach my tent where my

good little wife was awaiting my return. The trail was a lonely one, abounding in tall grey stumps and the shades of night were approaching. Lingering around to give the bears a good fair start I met a big rough Western barkeeper and a packer for a lot of pack horses. Both of these men belonged in a camp up beyond mine on the same trail so I evolved a brilliant idea. I would let them go first. With this plan fixed I engaged in a game of mumbly-peg with a soldier from another camp. But bless my soul, the packer and the barkeeper became so deeply interested in our game that I suspected that they saw through mine. At any rate it was soon evident that all three men were each waiting for one or the other to lead, so shutting up my pocket-knife, with which I had been playing mumbly-peg, with a snap and shutting my teeth together in the same way, I started down the now dark trail with the packer following me and the big barkeeper following the packer.

Each grey stump which loomed up in the gloaming caused me to stop to let the packer lead, but he did not take advantage of the opportunity and neither did the barkeeper.

That night I was awakened by some large animals sniffing the hem of our canvass house; as I was only armed with a five-ounce trout rod,

I LET THEM SNIFF.

In the morning I was not surprised to find the big human-like footprints of a mother bear

mingled with the smaller ones of her cubs in the dust around the tent; but the only harm done was the stampeding of the camp cow which was not found for several days. I carefully kicked the dust over Bruin's footprints, for Mrs. Beard is only afraid of bears and snakes. Of course I said nothing to her about the incident, although I was sorely tempted to boast of my own bravery.

A BLACK BEAR WHO WAS STOPPING AT THE SAME HOTEL

with me became quite friendly and whenever I returned from business, at noon or in the evening, Bruin would be waiting for me in the hotel yard. The front fence was a high board one and faced the main street; Bruin's chain allowed him to reach the fence, but it was too short for him to climb over to the street, so he would sit on a packing case and swing one arm on the outside of the fence and watch for me. As soon as I hove in sight he would exhibit the greatest pleasure by expression and action and greet me with an idiotic grin that was very amusing. The bear knew that in my pocket there was a pint of chestnuts and he dearly loved chestnuts.

One noon I was feeding him as usual and he was dexterously removing the shells and devouring the white kernels with relish, but not without losing some crumbs; this fact was observed by a big young rooster which slyly approached us in order to pick up

UNIQUE PHOTOGRAPH OF THE GENTLE "MR. DOOLEY"
WHEN SHE WAS FREE IN THE WOODS

THE CRUMBS WHICH FELL FROM BRUIN'S MOUTH as he chewed the chestnuts. Bruin had not occupied the same position while feeding, and consequently the crumbs were strewn over a yard or more of the ground.

Slyly the cock approached, picking greedily at the crumbs but keeping his weather eye upon the bear. The bear did not appear to see the chicken but no sooner had the unfortunate fowl come within reach than the bear gave a left hook swing which sent the rooster through the air for about twenty feet where it struck with a "swat" against a shed and fell dead on the ground. It was a most skillful and terrific blow and taught me to respect a bear's ability as a boxer, but Bruin did not seem to think that he had done anything worthy of notice, and when I turned from the chicken to the bear, the latter was calmly holding out his powerful paw in a supplicating pose dumbly asking for more chestnuts.

MEETING A BIG BEAR IN THE SUBURBS OF CINCINNATI.

Once when surveying a section line on the Lower River Road in Cincinnati, I had my instrument planted on the top of the hill and had sent a flagman down to plant his red and white painted staff on a marked stone so that I might get the line. It was a long sight and I was following the flagman with the telescope of the instrument when I was surprised to see him give a jump, drop his

flag-staff and run, and was even more surprised to behold a big bear standing on its hind legs under a tree. In those days there were large country estates, farms and woods in what was known as the Southwestern Division, but I had never met any wild animal larger than a fox while at work on the topographical survey. Presently I saw a swarthy black-bearded man under the tree and saw that he was eating a loaf of black bread, and then I knew that the bear was a tame dancing bear. Turning the telescope full upon the animal and adjusting the focus I could plainly see the leather strap muzzle on the brute and the chain which confined it to the limits of the shade of the tree. It was some time, however, before I could induce the flagman to proceed with his work and I was hoarse from shouting when he at last picked up his staff and started again down the line.

MR. DOOLEY: HER STORY.

If one may say "The Liner, she's a lady" as Kipling does, and speaks of a man-of-war as a she as sailors do, there is no real reason why one should not say

"MR. DOOLEY, SHE IS A LADY,"

for if gentleness is a characteristic of ladies, Mr. Dooley is certainly entitled to that title, but she was a vicious cub.

A few years ago, Mr. Walker, of the Yellowstone Park, while on horseback, ran down a sil-

ver-tip cub, and when I sketched it the cub was fastened to a tree.

The cub was named Mr. Dooley, but there was some mistake in this, as the young monster was not a mister, as it appears "he" was a she.

I placed my sketching stool just out of reach of the cub, and, while I worked with my pencil, Mr. Dooley spent *her* time scraping the dirt with *her* paws, making long canals in the loose earth as *she* backed away, but all the time keeping *her* wicked little pig eyes fastened on me.

Every once in a while *she* would make a sudden savage rush at me and end it with a half-strangled, gurgling growl.

When the season was over, the commander of the post stated that he intended to send Mr. Dooley to the Washington Zoo. This grieved Mr. Walker, until the late Major Bach innocently asked if Dooley never escaped, and the next morning it was discovered that Dooley *had* escaped.

In the following spring, when Mrs. Walker arrived with her husband at the cañon, to open the hotel, Dooley was waiting to greet them on the broad veranda.

Time rolled on, and Dooley became a favorite visitor at the camps, and it was not an unusual sight to see a great, hulking, silver-tip bear wrestling with the guides and enjoying the fun as much as the astonished spectators.

Dooley, although a very, very bad little cub, broadened both in mind and body as she grew

GRIZZLY CUB "DOOLEY" IN YELLOWSTONE PARK

older, and adopted the Golden Rule as her moral code; but this was a sad mistake on the bear's part. There perhaps never was a more gentle, better-hearted bear than Mr. Dooley, the great grizzly of Yellowstone Park. Far better would it have been for the lady bear with a gentleman's name if she had adhered closely to the traditions of her race and developed into a surly, gruff, dangerous old girl, in place of the gentle, sweet-tempered creature she really made of herself. True, she would not have been petted and fed with prunes and sweetmeats, but she would have been much happier than she now is, poor thing!

The trouble with Mr. Dooley is that she made the mistake of applying the Golden Rule to human beings, and the human beings did not appreciate the generous nature of the bear.

Human beings are all right when they preach and when they write, but their brothers in fur will do well not to trust to the sincerity of the two-legged creatures' sentiments.

Because the gentle grizzly of Yellowstone Park was guileless and unsuspicious, she (Mr. Dooley) was led into captivity, and is now imprisoned in a narrow iron-barred cell in the Washington Zoo.

And when the readers visit Washington, and see a big grizzly with its tongue lolling out of its mouth, and a far-away look in its eyes, they may know that it is the lady bear, known as Mr. Dooley, of Yellowstone Park, and that the poor girl is dreaming of her free life in the mountains,

ENJOYING A "SLIPPERY"

or her real friends, the guides and cooks of the camps, and Mr. and Mrs. Walker of the Cañon Hotel.

It is hoped that the visitors will take with them some little green thing—turnips, apples, or any vegetable which will gladden the heart of the lady bear who trusted man to her sorrow.

THE BEAR I DID NOT KILL.

George and I were fishing in the mouth of a glacier stream in the Rocky Mountains, and as we

drifted amid the swirling eddies a dark object on the distant shore caught my attention. It was a bear and we were short of meat at camp, and George insisted that I must get that bear; so with some reluctance I shot at it with my Winchester, and it gave utterance to several vigorous "Oughs!" and vanished.

When we landed, my friend stopped and picked up a bunch of brown hair between his fingers. "You burnt him all right with tha' first shot," he said. "The bullet went right along his backbone through his hair, and here 'tis in this log."

I was disappointed, although I did hate to shoot the bear, disappointed because I made a bad shot, but after examining some tell-tale marks on the shore I felt better.

"George," I said to my campmate, "I wouldn't have shot that bear for $100. It would have been as bad as shooting a child."

George looked at the marks, too, and laughed. "Gosh all hemlocks!" he cried. "He squatted thar' an' kivered up his legs with the pesky sand jist like a child do, an' made sand pies, too, same as I uster do onct; an' see wha' he's tobogganed down the mud into the slough an' made a regular 'slippery'! jis like I uster on the banks of the Big Muddy when I war a cub of a boy."

"Say, tha' cub must have a consarned, low-down opinion of us two. Here he wuz taking a day off on the lake shore, playing hookey, most likely, from b'ar school, an' having a bully good time,

when along comes two onery cusses and pumps lead at him. 'Pears all wrong, this sort of thing we call sport."

"But, say," said George, patting me on the back, "that was a James Dandy shot of yours, from a bobbing canoe seven hundred yards away."

CHAPTER XXI.

A BEAR I NEVER MET AND A BEAR I NEVER WANT TO MEET

UNCLE JEFF'S WONDERFUL BEAR STORY—A CURE FOR FRECKLES UNCLE JEFF WAS KWASS—THE FURTHER HE DUG THE MADDER HE GOT—GRIZZLIES DON'T TAKE BACK TALK—HYAS KWASS—OLD BALD FACE WANTED—HE WAS A DEAD BEAR—A TRUE STORY OF A CINCINNATI BEAR—MARKET DAY—A NEGRO ON A SAFETY VALVE—A LONG LANK BUCKSKIN CLAD FIGURE—NO BENT OR RUSTY PINS WERE ACCEPTED—HE WOULD ROLL HIMSELF IN A BALL AND SLEEP OFF HIS INDISPOSITION—THE BEAR WOULD GO TO THE FRONT PARLOR WINDOWS—THE BEAR AND THE MILKMAN'S BELL—CUFFEY WAS DECEIVED BY A CAT—BLOOD TRICKLED FROM CUFFEY'S LACERATED MOUTH—A PUBLIC MENACE—DEATH OF CUFFEY

"I'm the gol durndest coward in the Rocky Mountains!" exclaimed old Uncle Jeff, scout, trapper, and hero of many thrilling adventures, and he glared at the circle of faces illuminated by the camp fire to see who would dare to contradict his assertion.

"Wull, ye know," he continued, "afore I met thet Asulkan grizzly I uster be as spotted as the belly of a lynx. I was thet freckled, one would think my mother was a guinea hen, but old baldface threw such a scare into me that

I WAS KWASS

(frightened), and I turned so white that all the freckles faded out, and I hain't had one since, no sir-ree, not a polka dot left of 'em!"

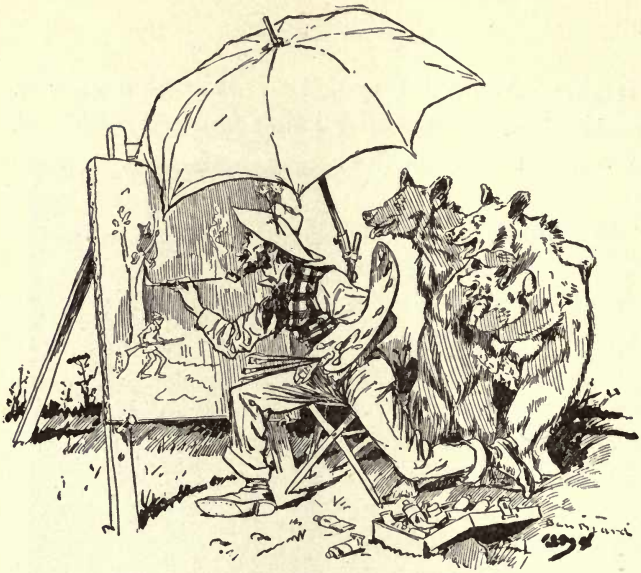
Everybody from the Kootenay lakes to Selish, and from Moosejaw to the Fraser Canyon, knows that a more courageous man never wore buckskin, baited a trap or chewed tobacco than old Uncle Jeff; he is as absolutely fearless as it is possible for a man to be and still retain enough discretion for self-preservation.

So when he filled his little black pipe with a mixture of tobacco and the inner bark of "red willow" (dogwood), we fixed ourselves in comfortable positions to listen to the story we knew was coming.

Uncle Jeff can spin a good yarn; but he is on some occasions

A TERRIBLE NATURE FAKIR;

and for the sake of making sport of the ignorance of the average tenderfoot on topics of natural his-



SOME OF THE BEARS I HAVE NEVER MET

tory, the old trapper will sometimes attribute traits and physical characteristics to animals altogether foreign to the creatures in question.

"Tha' war bear sign pleanty around my claim up in the Selkirk Mountains. I hed a right smart of a hole dug in the rock, an found pleanty of color, but it was all rock quartz; I hed no ore crusher in my pack, fer I carried all my traps on my back, so ye can judge quartz gold warn't much use.

THE FURTHER I DUG THE MADDER I GOT.

"My pan warn't no use at all. I picked up a piece of quartz with veins of the yellow stuff in

it, which looked mighty purty, but 'twould take a mule train to carry enough for a grub stake.

"I was just looking around to see at what I cud throw the tarnel thing, when I seed the biggest grizzly I ever sot eyes on, walking along toward my shack. Grub was getting low and I knowed if old Ephraim once smelled my last strip of bacon he wud tear down the shack to get it. So I up and let drive at him with a piece of quartz.

"Gosh-all-Sassafras! I pasted old baldface in the side so hard that it sounded like a thump on an Injun tomtom.

"Now, ye know

GRIZZLIES DON'T TAKE NO BACK TALK FROM NOBODY.

"Wuz Baldy mad? Well, I-want-ter-know—Geewhilikans! he came at me like a bale of hay sliding down the Illecilleweat glacier! Skeered? Well, you can bet your Hi-yu-muck-a-muck that that is just what was the matter.

I WAS HYAS KWASS

(terribly frightened) for certain, an' I did some running that wud hev made a prong-horn stare, an' I jumped and clum them rocks like a Rocky Mountain goat.

"I was making for the timber belt. The devil's clubs scratched my hands an' tore my clothes an' the goblin's thistles turned their wry necks to see

me go by; but 'taint no use whatever to race with a baldface. They look clumsy, but it's all in their looks. They air race horses in fur overcoats, that's what grizzlies be!

"So I grabbed a branch of a lodge-pole-pine and swung myself up like a squirrel an' I clum to the slim end. But, shoo!

OLD BALDFACE NEVER WAITED

for a minute. He just cum after me like a miner up a ladder when there is a cave-in behind him."

"What, a grizzly climb a tree?" cried a young man in a stylish hunting suit. Uncle Jeff gave one look from under his shaggy brows and the young man wilted, shriveled up and was quiet.

"That air tree was almighty slim an' tapering up whar I wuz, an' it bent in a way I did not like, but that pesky b'ar just kept on cumen, and clum almost up to me, when I heard the wood a cracken.

" 'You blathering old idjit! Ye baldfaced fool! Stop, or we'll both be killed!' I yelled.

"BUT EPHRAIM WUZ MAD,

an' he didn't pay no attention to my remarks; so I clum to the tip-top an' drug up my legs as close to my body as I cud hold 'em, while I reached for the milky way, an' that's when I began to lose my freckles.

"Old baldy came right on, a-growling an' cussing to hisself, an' all the time the pine a-bending

an' cracking. I held my breath a minute till the crash came, then you bet I yelled.

"Say, that was a mighty quar accident! The old b'ar went down a clawing on to the big slivered end an' his weight made the top piece of the pine turn like a big arrow with me for the feathers!

"It went clean through the b'ar, pinning him to the ground.

"HE WAS A DEAD B'AR SHUR'NUFF,

an' I was a badly shuk up prospector; but it was a funny sight for the bluejays and magpies to see me on top of a pole yelling bloody murder and the other end of the pole planted in the b'ar.

"If you don't believe me, you go up thar an' on the trail from Mount Bonny to Asulkan glacier yu'll see a lodge-pole-pine a-growing from the middle of a pile of b'ar bones; wull, that's the top of the tree what took root whar it wur planted by the fall."

A TRUE STORY OF A CINCINNATI BEAR.

Mandy Jane's hair was the rich, yellowish red of the old crockery pickle jars on the pantry shelf, and her oval countenance was so freckled that it seemed as if a cow had sneezed bran in her face. Mandy Jane's lips were ruby red, her teeth pearly and regular, her eyes deep turquoise blue and her lithe, girlish figure was as plump as a partridge.

No one knew her antecedents or whence the girl came. They only knew that she was a "bound girl" and worked for the family of a distinguished young artist, a man whose sugar-loafed, broad-brimmed cavalier hat, long, curly hair, ruffled shirt front and wide flowing collars were as well known as his pictures and his oft quoted bon mots.

IT WAS CUSTOMARY ON MARKET DAYS

for the farmers of the surrounding country to assemble in town before the break of day, and back their picturesque canvas-covered market wagons against the curb-stones of the brick sidewalk until the closely packed line of vehicles extended many squares.

With the first rays of the morning sun Mandy Jane usually appeared, walking demurely behind her mistress and toting a big willow basket through the crowds of marketers who thronged the sidewalks. Mandy spread despair in her wake, and mid heaps of country produce she left many an aching heart. But Mandy Jane saved all her caresses for

A BIG LOUT OF A LOW COMEDIAN,

a creature with small eyes, uncouth manners, awkward gait and dishonest ways. He was, besides all this, as black as your hat!

Mandy Jane's affections, in short, were centered on a big, fat black bear, and this is the story:

The young artist had been down the river on a commission to paint the portrait of Gen. Zachary Taylor, and while the steamer raced up the stream with

A NEGRO ON THE SAFETY VALVE

and the spiteful blue steam hissing menacingly at every rivet in the boilers, the reckless passengers sat unconcernedly at cards in the saloon or around the decks, and laughed merrily when the rival packet was left around the bend.

When a necessary stop was made at a lonely spot to take on wood and

A "BLACKLEG" WAS PUT-A-SHORE

for dealing a crooked hand in the cabin, the careless passengers laughed at the plight of the sharper. It was on one of these occasions that a long, lank, buck-skin clad figure emerged from a canebrake and added further amusement to the gentlemen and ladies on deck by offering for sale a wee little bear cub, which was promptly purchased by the artist.

WHEN THE BEAR BEGAN TO GROW

he waxed strong and lusty and developed a taste for rollicking fun which won his way to all the boys' hearts.

"Cuffey," the bear, and the artist's sons were at this period inseparable. If one of the children fell down stairs, Cuffey was with him; if there was a

raid on the cookey barrel Cuffey led the raid; he played tag and hide-and-seek as well as any boy, and was also a source of revenue to the lads.

FIVE PINS WAS THE PRICE CHARGED

to see the "real live bear from the Red River," and no bent or rusty pins were accepted by the trust owning the animal. Even such pins as were ingeniously straightened out by small feet revolving them back and forward on the red brick sidewalk were scornfully rejected, and yet every pincushion in the house soon glistened with its load of wealth.

IF THE BEAR WAS TIRED FROM PLAY

or had indigestion from swallowing marbles and pieces of wooden tops, he always went to Mandy Jane for comfort and kind words, after which he would roll himself into a ball and sleep off his indisposition in the kitchen wood-box.

As Cuffey became older he increased in size and strength and the children learned to fear the rough play of their four-footed friend. In time the bear grew to be so large that, for safety,

HE WAS CHAINED TO THE OLD PEACH TREE

in the yard. He would break loose occasionally and create considerable excitement by visiting the house.

His reception there was not now as cordial as it had been when he was a small cub. When the

Mandy Jane would not hesitate to leave her bread dough.

bedroom doors were slammed in his face the bear would go to the front parlor and seating himself by the window in the black horsehair covered rocker, proceed to rock violently back and forth, to the great astonishment of the people on the street.

On such occasions the sportsman uncle and the artist father were wont

TO PUT BOOT LEGS ON THEIR ARMS

before proceeding to drag the bear out of doors

by his ears and chain him, but Mandy Jane would not hesitate to leave her bread dough in the kitchen, and with her sleeves still rolled up above her elbows, proceed to capture him.

IT WAS A WINSOME SIGHT

to see the girl, with her dimpled white arms thrown fearlessly around the big brute's neck, talking affectionately to the bear as he walked without protest back to the tiresome peach tree and his shackles.

When chained, he would wearily trot half way around the tree,

TURN A SOMERSAULT

and trot back again, for hours at a time.

The farmers' sons, the milkman and the grocery boy envied the bear, and all of them would have consented gladly to be chained to any old tree, if Mandy would only have led them as she did Cuffey.

Each morning the harsh clang of the milkman's bell caused the bear to gnash his teeth with anger, and there can be little doubt that if he had succeeded in breaking loose at an opportune time, he would have

TORN THE MILKMAN TO SHREDS.

Cuffey had no great affection for the red-cheeked grocery clerk, and even when the bear was safely chained the grocery boy dared not open the gate,

although the lad often lingered outside of the palings in hopes of a chance smile or word from Mandy Jane.

THE BRAVE FARMERS'

sons did not even venture to lounge around outside of the lot, but with a frightened look at the peach tree and a wistful one at the vine-clad kitchen door, they hurried by, their cowhide boots resounding on the brick sidewalk.

Cuffey had been deceived once by a cat and he never forgot it. He had been idly swinging one arm back and forth wondering why the boys had ceased to play with him, when a beautiful big tomcat came cautiously up to examine the food trough. The bear delightedly caught the cat with his paws and began to bounce Tom up and down as he had seen people dandle babies.

THE LONG UNDER LIP OF THE BEAR

projected from his mouth, in an idiotic fashion whenever he was amused, and the cat amused him; but the cat was frantic with fear and reaching for anything in sight, caught the bear's tender lip with his hooked claws.

Blood trickled from Cuffey's lacerated mouth and gleamed in his little eyes, and he held the hapless cat to the ground with his paws and deliberately turned a somersault on the spitting and growling animal.

Cuffey was never scratched again, although scores of cats had their lives pressed from their bodies by the somersaults of the bear. After that, whenever,

ANOTHER CAT WAS ADDED TO THE LIST OF VICTIMS,

Cuffey expressed delight by doing all kinds of stunts around the peach tree, until the slack of his chain was wound in, and then reversing his acrobatic feats, he would again unwind the chain.

But neighbors now averred that the bear was a public menace, and they were in fear for the lives of themselves and their children, and so it was decided by the artist to give Cuffey away.

One day two rough showmen appeared driving an open express wagon. The men hitched their horse and went into the yard for Cuffey.

CUFFEY DID NOT LIKE THEIR LOOKS

and went for the men, who proved themselves to be skilled athletes by the celerity with which they vaulted over the high picket fence.

The men of the house now appeared with bootlegs on their arms, and attempted to lead the bear by the chain, but Cuffey, thinking it fine fun, put his toes in the ground and pulled the men to their knees.

Mandy Jane had shut herself in the kitchen and pulled down the blinds and for a time she could not be persuaded even to look out of the door at

the unfortunate Cuffey. However, she was coaxed at last into exerting her influence with her four-footed admirer.

THE EFFECT WAS WONDERFUL.

The bear ceased to romp, play, or show fight. He waddled up to Mandy, reared upon his hind legs and said: "Oue—oue—e—e!" Then he dropped to all fours and put his head against the girl for a moment and when she said something softly to the beast, he caught her dress playfully in its mouth and lifted her skirts until they displayed the trimmest pair of ankles in the city.

But Mandy Jane seemed unconscious of that fact and slowly led her pet to the wagon. The tears glistened on her eyelashes as she climbed into it,

FOLLOWED BY CUFFEY.

The showmen hastily fastened the bear's chain to the seat and as Mandy lightly jumped to the ground they cracked the whip, and the horse started at a gallop up the street.

The novel experience of being in a rapidly moving wagon so astonished Cuffey that he never moved until he saw that Mandy was sobbing bitterly. Then he sprang from the vehicle. Although the chain did not break, it did pull the seat from its fastening and tumbled the showmen over in their wagon and poor Cuffey was free forever.

There was a piercing shriek as Mandy Jane fell fainting, not on the sidewalk, but into the stalwart

THE FARMERS' SONS, THE MILKMAN AND THE GROCERYMAN, ALL ENVIED THE BEAR

arms of the grocery boy. The limp form of the broken-necked bear was hoisted into the wagon and the equally limp form of the broken-hearted "bound" girl was tenderly carried into the house.

THE SHOWMEN SWORE ROUNDLY

when they found that the bear was dead, and the milkman, market men and the neighboring cats openly rejoiced over the demise of Cuffey; but the red-cheeked grocery lad's eyes suffused with sincere tears when he was confronted with the deep grief of Mandy, and when he was rewarded by a grateful, though tearful smile, the lad solemnly declared that Cuffey was the best bear that ever lived. And so he was—to Mandy Jane!

CHAPTER XXII

A STRING OF DOG TALES

MONAD AND THE WHISTLE BALL—HOW MONAD FOOLED HIS MASTER—HE COULD ALWAYS FIND YOUR POCKETKNIFE—HE WAS A MONOMANIAC ON BALL PLAYING—SPENT HIS TIME KNOCKING ASHES FROM CIGARS—BLUFFING DOGS AND THEIR SLACK CHAINS—THREE GREAT DANES ATTACK THE AUTHOR—A GREAT DANE FRIGHTENED AT ITS OWN RELEASE—WHAT DO YOU MEAN ?—CHARGE, SIR!—STAND YOUR GROUND AND EXPLAIN YOUR POSITION—A FAMOUS POINTER—IT WAS ONLY A POOR LITTLE YELLOW DOG—FAMOUS MR. SPIN—HIS MASTER'S VOICE—THE IDENTITY OF MR. SPIN—WILD DOGS—AN ADVENTURE WITH WILD DOGS—DOGS IN A BESIEGED CITY—FEROCIOUS BEASTS—WILD DOGS ATTACK HORSES ATTACHED TO BUGGIES.

Monad, my little Pomeranian spaniel, was fond of playing with a rubber ball containing a whistle, the sound of which afforded him a great delight. He would rend other playthings to fragments, but he used the utmost care with his whistle ball, exerting only sufficient pressure to make a squeaking noise.

Impelled by a spirit of mischief, I once caused the ball to be filled with cigar smoke. Monad was disgusted with the mean trick, and showed his lack of confidence in me by never again taking the ball in his mouth without first striking it with his paws to see if any offensive vapor had been surreptitiously inserted into his favorite plaything.

THE DOG THAT MADE BELIEVE.

Monad hated flies, and would hunt them all over the house. Thinking to have some sport with him I made a noise with my lips imitating the buzzing of a fly, and then made believe to catch the insect. The dog, lifting his lips, went through all the motions of biting an imaginary fly to death. I thought that I had fooled him, but the joke was on me, for, after repeated trials, I discovered that Monad had entered into the spirit of the game and was also "making believe."

This, not only showed intelligence, but also a highly developed sense of humor, and everybody knows that while humor may be spontaneous it is never automatic.

JACK, THE JACK-KNIFE DOG.

Sauntering down to the post-office at Hancock, Michigan, I was surprised to see a mongrel dog leave the crowd that had collected for the mail, and make straight for me. Upon coming within reach, it behaved in the most peculiar manner, barking and alternately jumping at my trousers pockets and gazing intently at a grass-covered terrace across the street. At length a tall, lank miner from Red Jacket said: "Here's wot it wants yer ter do, stranger." He then drew a clasp knife from his pockets and threw it across the street into the long grass. With a yelp of delight, the dog darted

across the street and soon returned with the knife in its mouth. I then threw my small penknife, with the same results.

The dog went from one to another of the crowd begging them to give him the privilege of retrieving their pocket knives; he found the knives by beating a zig-zag course until his wonderful nose scented the object sought, and he never failed to find the little bit of hardware.

Jack knew the taste and smell of every piece of pocket cutlery in Hancock, but he would retrieve nothing else.

The grass in the lot was above the dog's back and knee-deep to a man, and each time a knife was thrown, the thrower, by false moves and feints, did all in his power to mislead the dog; when this is taken into consideration, one may realize what a wonderful nose the little mongrel possessed.

A LONE BALL GAME.

In Wisconsin a little fox terrier came trotting up to me with a ball in its mouth and by sundry signs tried to induce me to throw the ball, but I had no time to play. Seeing this the dog took the ball to the top of the slanting board sidewalk, allowed gravitation to roll it down to the gutter, and then ran after it in great glee.

It was no accident, for I saw him do the same thing half a dozen times before I left him still engaged in his "one ole cat" game of ball.

THE SMOKER'S COMPANION.

A dog sitting beside me in a frontier hotel insisted upon knocking the ash from my cigar. By continued experiments I discovered that the little creature had been trained to do this unique trick, and that it took great delight in the performance.

DOG ACTORS.

Many chained dogs apparently make frantic efforts to break loose to attack you. They rattle their chains, spring up and come down on their feet, coughing as if their fierce struggling had caused their collars to almost strangle them. But it is all a piece of clever acting—nothing but a big bluff. Close scrutiny will show you that the strain put on the chains would not break a piece of string. The chains are never even drawn taut.

I once entered a yard and passed a sleeping monster Dane without seeing the brute. The dog suddenly awoke and seeing a stranger in the yard, with a savage growl sprang at me. To my horror, the chain snapped like a thread and the dog was free.

But the brute did not expect this result and was so terrified at its unusual position that after an amazed look at the broken chain, it gave a startled yelp, clapped its tail between its powerful legs, cleared a high board fence with a single bound and vanished down the street.

THE EFFECT OF HABIT.

A general knowledge of dogs will often save one from serious mishaps. In Wheeling, West Virginia, a large Irish setter sprang unexpectedly at my throat and caught its teeth in my collar and necktie.

Of course I was frightened, but I had the presence of mind not to let the dog know it. I stood for a moment perfectly quiet, looking down into the beast's savage face. I saw what sort of a dog had me, and, as soon as I could trust my voice, coolly said:

"Down, sir! Charge! What do you mean? Charge!"

The dog hesitated and growled, but its habit of obedience was too strong. Down it came to a "charge" on the ground at my feet much to the amazement of the owner, who was hastening to my rescue.

The man had not heard what I said to the dog, and could only gasp out the words: "What did you do to him? He's a very dangerous dog—a very dangerous dog!"

In St. Louis I was

ATTACKED BY THREE GREAT DANES.

The brutes rushed out unexpectedly upon me leaving no chance for a retreat. As they came bounding towards me with their great mouths open, I knew that I was in a very serious position. To

run under such circumstances would mean to be overtaken and possibly torn to pieces. To stand and fight such brutes would mean serious injury on my part, with all the chances of victory on the side of the dogs. If they struck me and I fell there would be little chance even of my life. In fact it looked as if this account was never to be written, but I spread my legs wide apart, composed myself as well as I could, resolving neither to fight nor run away, but to hold my ground and at the same time to talk sharply and in a commanding voice to the savage beasts. Several times the dogs rushed at me, evidently expecting me to flee or strike at them. At one time two of the big animals had their fore feet upon my shoulders, but my stubborn attitude of command puzzled and embarrassed them, and prevented them from biting me; and by the time that help came the dogs had retired some distance, where they stood growling and talking the incident over among themselves in dog language.

DON'T EVER RUN AWAY FROM A DOG

unless you are *absolutely certain* that you can get out of its reach. Remember that even the most cowardly cur will attack a fleeing man. While it may be safe to kick a small dog which is barking and snapping around your heels, don't ever attempt to fight a big and savage dog, for the brute may happen to be a plucky one, in which case you

are certain to come out of the encounter with bleeding wounds and torn clothes. Whenever escape seems doubtful

STAND YOUR GROUND

and talk to the attacking animal. Use a severe tone of voice, telling him he is making a fool of himself, that he has made a mistake; tell him to lie down, "Charge, sir!" or anything else that happens to occur to you, but do not scream or yell for help. Watch dogs may be animal automatons, but they are not fools, and they can detect the slightest signs of fear, whether it is expressed by voice or manner, and when a person shows fear the dogs become very aggressive. But

DO NOT EXPERIMENT

just for the purpose of testing these directions, for although I have tried them over and over again successfully, there is always a possibility of unforeseen accidents under such circumstances, and a strange

DOG'S BITE IS ALWAYS SERIOUS.

But whenever you are caught unawares by a self-important and watchful dog, assume an air of confident command.

As a traveling surveyor and map maker for five years my work took me into the back yards of private residences, factories and breweries all over our country, and not a day passed without

AN ENCOUNTER WITH A DOG,

and yet there is not the mark of a dog's tooth on my body, and I never had them even tear my

A FEW OF THE DOGS

clothes; twice only have I used force and in self-defense killed two dogs, but both of these were fierce bull terriers, bred for dog fighting, and in both cases there was no opportunity to engage the savage creatures' attention. One dog I killed with a back thrust of the painted steel-shod flag-pole used by surveyors, and the other with a large stone, the only weapon handy at the moment.

A FAMOUS POINTER.

But all dogs are not savage. Old Wallace was a gentleman even if he was also a pointer dog, and he had as wide a reputation for vigilance as his master's silver-mounted, muzzle-loading shotgun had for accuracy.

When Wallace made a point on a covey of quail he "froze" as soon as his nose caught the scent. But if, after a reasonable time, no one appeared, Wallace would look cautiously around to see why the gunner failed to follow up the scent.

If the hunter was inattentive, the wise old dog would leave his point, tiptoe to the man and gain his attention by a suppressed "hough!" Then he would tiptoe back, find the game, and again resolve himself into a rigid statue of a dog.

Wallace, the silver-mounted gun known as "Old Baldface," and their owner, were known from New Orleans to Lake Erie. The dog and hunter have joined the great majority, but the old-fashioned gun hangs in my library.

THE TOPER'S DOG.

The train stood in front of the row of false-fronted frame houses which sprawled along the narrow unpaved street of the town. To add to the general appearance of discomfort, a drizzling rain was falling.

The train was making one of those long, silent, unexplained stops to which Southern trains are addicted. No one got off and no one got on the cars, which were apparently only resting their wheels.

Suddenly a small animal appeared on the scene, and the sight of it was eagerly welcomed by the many passengers. Some cried, "It's a fox;" others said that it was a 'coon, and yet others declared it to be a 'possum, but these wild guesses only showed a lamentable ignorance of natural history.

It was only a poor little wet, bedraggled dog, evidently in search of something and thoroughly knowing its business.

Almost every other house was a barroom, and the steps, latches or knobs of the doors to these places received the dog's most careful inspection. But a little chapel was passed without notice, and so was the one-story printing office. The dog paused, however, at the drug store long enough to rear up on its short hind legs and sniff the door-knob in a casual manner before it went on its way. It gave a perfunctory sniff at the thumb-latch of the grocery store, critically inspected the doorway to the post-office, threw up its nose to catch the scent of the upper currents of air as it passed the general

merchandise store, but did not deign to give the Sons of Temperance headquarters a passing glance.

The interested passengers had by this time thrown up the sashes of the Pullman and were shouting suggestions to the little dog, to which it paid as little heed as it did to the Sons of Temperance.

When the animal reached the "Blind Tiger" barroom the train was awakening from its trance; squeaking noises issued from the wheels and hissings from the air brakes. The dog's tail was drooping between its legs and its body was bespattered with rain, but the moment its wet nose touched the knob of this saloon door a wonderful change took place.

The creature was transfigured. Its tail wagged energetically and the animal leaped into the air, frisked about and emitted barks of delight. It acted as if it was greeting the real presence of some person. After its first transports of joy had passed it sought shelter from the rain under a wooden bench.

As the train pulled out the dog could be seen comfortably curled up, its nose resting between its front paws, its intelligent eyes fastened expectantly upon the closed door, and its tail slowly and contentedly thumping the board-walk.

THE STORY WITHOUT WORDS WAS TOLD.

The faithful yellow dog had located its master, and we all knew that the man was not a member of the Sons of Temperance.

Not long since an old friend of mine by the name of Spin joined the Great Majority—crossed the Divide where all the pony tracks point one way. Like many other celebrated persons my friend's fame only came after he was dead and buried. Although Spin's portrait is today published in almost every magazine, painted in oil, and prized by a wealthy corporation, exhibited in show windows and emblazoned in gigantic size on bill boards, poor Spin's bones rest in an unmarked grave in Pike County, Pennsylvania, the location of which is known to only a few, a very few of his old friends.

Even his greatest admirers do not know the name of this famous person and only two or three persons know that he is dead.

SUCH IS FAME!

yet every library in this country and in every other country possesses dozens of portraits of my old friend Spin and his bright, intelligent countenance is as familiar to the readers of this book as that of George Washington. Wherever printed papers and magazines go there is to be found the portrait of the

FAMOUS MR. SPIN.

When I first met him, the hero of this story was in the prime of life, but, of course, I only remem-

ber him as he appeared when I last saw the old fellow—a fat, poddy body, gouty legs and a wheezing voice. But the pictures of him show the great Spin in the prime of life, with a handsome face and well proportioned youthful figure. As I have already intimated you all know the celebrity's face, but you cannot recall his name.

WHO THEN WAS SPIN?

It was away back in 1887 that I conceived the idea of building for myself a log house on a deer run-way in the wilds of Pennsylvania. Shortly after my house was finished a very charming and interesting lady came to the woods, and selecting a piece of land adjoining mine had it cleared, and on it erected a large house which she called "Lodge Bohemia." After her came her husband and with him came Mr. Spin, and that was the first I saw this celebrity. As I have before said, Spin's fame came later and it all came about by chance or accident. When I met Mr. Spin I was not struck with the fact that I was facing one that was to become famous, but as our acquaintance ripened into intimacy, I learned to respect the quiet dignity, well-bred manners and also the high order of intelligence displayed by Mr. Spin. If, however, my memory is correct, Mr. Spin, like the Yellowstone bear "Mr. Dooley" was a miss, at any rate he was only

A FOX TERRIER,

but Spin was a traveled dog, who had visited almost every city on the globe big enough to boast of a play-house, and Spin always traveled first-class in company with his master and mistress, and although the dog never had a pass, his master never paid for Spin's passage.

As most of my readers know, dogs are not allowed to travel on railroad trains except in the baggage cars or express cars, but Spin knew several tricks by which the rules of the heartless corporations could be set at naught. Upon approaching a train the sly dog would slip under his mistress's skirts and trot along in concealment, hidden from the sharp eyes of the guards and conductors.

This wise and widely traveled dog would also seek the same hiding place whenever a uniformed trainman hove in sight, and in this manner, in spite of rules and regulations, Spin managed to travel over Europe, Asia, Australia, and New Zealand in first-class coaches without a ticket or a pass. While Spin was in the prime of life the phonograph began to become popular and one day the dog's master talked into one of the receivers and sent the wax cylinder with the record thus made to his wife, who at that time happened to be visiting in another city. When the record was put into a phonograph, and the familiar voice sounded from the instrument, Spin knew it at once and ran frisking to listen to

HIS MASTER'S VOICE.

A friend of the lady photographed Spin as he or she was in the act of listening, and that photograph by some chance fell into the hands of the phonograph people who were immediately struck with the novelty and attractiveness of the picture and its value as an advertisement for their product.

It is very doubtful if the phonograph people know

THE IDENTITY OF THE DOG.

Spin's mistress was the late Mrs. Willis P. Sweatnam and her master was Willis P. Sweatnam himself, the Sweatnam who in the play of the "County Chairman" delighted the audiences night after night with his quaint humor and masterly interpretation of the character of Sassafras Livingston.

There has been and always will be, interesting discussion regarding the origin of our domestic dogs. Most people conceive that the dog's ancestor was in all probability the wolf, and we know in the Far North of our own continent the dogs belonging to the Esquimaux, Indians and white people are constantly in-breeding with the wolves. But whether the dog proceeded from the wolf or not, when allowed to run wild, they soon revert to an animal closely resembling a wolf in looks and character. There have been reports of

PACKS OF WILD DOGS

and their ravages coming from all parts of the Far West ever since that country began to be invaded by the white settlers. Ten years ago there was a detailed account of a pack of wild dogs in Montana which ranged the country as far North as the Kootenay Lake, the account traced the pack back to some neglected ranch dogs.

PACKS OF WILD DOGS.

Wild dogs have been reported from Georgia and various parts of the South. The only difference between the character of the wild dogs and the native wolf seems to be that the wild dog is bolder and fiercer than his aboriginal brother.

Personally the only experience I ever had with a wild dog occurred when I was a boy in Kentucky. It was a big black dog with a white sheep-like face, and it lived on the banks of the Licking River. The dog was never seen in the day time, but people who lived upon the streets adjoining the river bank, frequently saw the white-faced dog at night. No one was ever able to approach the animal and it could not be tempted by offers of food to approach the house. It was as large as a Newfoundland dog. One day

I TRACKED IT TO ITS DEN,

which was under some drift-logs which had been piled upon the shore. I lay prone upon the ground

and wormed my way under the wood-pile far enough to see the dog in its hiding place, then I hurried to a boy friend and told him of my great discovery. We decided that we could capture the wild dog and do it as Putnam did the wolf. All boys who are familiar with the old legend of Gen. Putnam and the wolf know that Gen. Putnam crawled down the wolf's den and caught the animal by its ears, then the General's friends pulled the hero out by his heels. The question between us boys was, who should be Putnam and who the friend. After a long and heated dispute it was decided by lot, that my chum should be General Putnam. Without any further delay he crept under the heap of logs and I followed him. There was a snap and a snarl and a yelp, then he cried:

"PULL, DOGON YE, PULL!"

I grasped him by the feet and pulled him out, and with him came the white-faced dog, but we no sooner got the dog from under the heap of sodden logs than it gave a spring at me, knocked over my companion in doing so, and hit me on the chest with its fore-feet so that we both fell in a heap, and the dog disappeared in the woods, which at that time thickly covered the bank of the river just above the suspension bridge. What became of the white-faced dog, I never knew. It was a powerful brute, but as timid as a hare. From many accounts that I have read of the wild dogs in the West, however, I am ready to believe that

they are exceedingly fierce animals. This belief is substantiated by a very interesting account of the wild dogs of Atlanta, Georgia, after the siege of that city during the Civil War. Of these animals the Atlanta *Constitution* says:

"OUR DOGS HAD A HARD FIGHT

during the siege. There were thousands of them in those days, and when the season of short rations set in they were the first to feel it. In many instances they were abandoned by their refugee owners and had to literally forage for a living.

"The thunder of the big guns, the unearthly shrieks of the shells, the noise of falling buildings, the rattle of musketry, and the heavy tramp of marching soldiers, all struck terror to the canine contingent. Toward the close of the siege nearly every dog in the city was half rabid or in the last stage of nervous prostration. The wretched brutes sought shelter under houses and in bombproofs. Majestic mastiffs and surly bull-dogs curled their tails between their legs and yelped mournfully at every unusual sound. Hundreds of the bolder ones made a frantic break over the breastworks and ditches, and made their way through the lines of both armies, never stopping until they reached the woods.

"It was even worse after Sherman's army entered the place. The citizens were driven out in such a hurry that they had no time to think of their pets, and no means of transportation for them. Later, the destruction of the city by fire, and the general

pandemonium that ensued, scattered the few remaining dogs.

"These innocent victims of the ravages of war had a terrible experience during the rigorous Winter of 1864-5. Their misery drove them to form strange partnerships, and it was a common sight to see them roving in bands of a dozen or more. 'Banish the dog from his kennel and you have a wolf,' was illustrated in this case. In the course of five or six months the country people for fifty miles around were spinning marvelous yarns about 'them wild dogs from Atlanta.' "

The dog belongs to the genus which produces the wolf, the jackal and the fox. Tame dogs, of course, lose many of the characteristics of these animals; but when persecution and misery cause them to relapse into their wild state they take the appearance, the habits, and the tastes of wolves and jackals. Such was notoriously the fact with the Atlanta dogs. They lost every trace of domesticity. They grew to enormous size, with savage eyes and cruel-looking fangs.

Occasionally a gang of these ferocious beasts would swoop down on a farmyard, devouring chickens and pigs, and attacking men when they stood in their way. It took the liveliest kind of shooting to drive them off. Sometimes they would surround a lonely cabin and wait for the inmates to come out. They even made raids into little villages, forcing the inhabitants to shut themselves up in their houses. The disappearance of many a

negro in those perilous times was fully accounted for when his skeleton was found with every particle of flesh gnawed off, and with the ground around showing evidences of a desperate struggle.

Early in 1865, when a few refugees began returning to Atlanta, they had to struggle with these wild dogs for the possession of the ruins. Bloody encounters occurred among the ash heaps and piles of débris. Every cellar and hole in the ground held these ravenous brutes, and they leaped upon men, women and children without the slightest provocation. At that time it was dangerous to ride or drive out in the country. On the main road between Atlanta and Decatur, in broad daylight, dogs were known to attack horses attached

SNAP SHOT OF TREE-CLIMBING BULL TERRIER, TAKEN ON FLUSHING INSTITUTE GROUNDS.

to buggies, forcing their drivers to open a hostile fusilade with their revolvers.

After getting this taste of a wild life the Atlanta dogs went to the bad altogether. A relentless warfare was waged upon them from Stone Mountain to Kenesaw, and one by one they bit the dust until they were all wiped out.

A TREE CLIMBING DOG.

Mr. Guild, formerly of Flushing, L. I., owned a bull terrier which could run up a tree trunk 13 or 14 feet. I measured one run of over 13 feet. While Mr. Guild held the dog one of the company would mount a ladder and hang a handkerchief to the tree; when freed the dog would make a dash, run up the trunk and secure the handkerchief.

CHAPTER XXIII

OPOSSUMS AND OTHER SMALL ANIMALS

MYSTERIES AND FABLES SURROUNDING THE BIRTH OF THIS ANIMAL—OPOSSUM HUNTING AND OPOSSUM EATING—A WEASEL INSPECTS WILD LANDS—THE WEASEL AND A CROW'S NEST—WEASEL BOXES WITH A MASTIFF—AN ANIMATED PHONOGRAPH FROM PENNSYLVANIA—WHO TELLS A WEASEL'S STORY—A FOUR FOOT BLACK BASS—A SEA SERPENT—WE SEE WHAT WE THINK WE SEE—SOME GENUINE NATURE FAKING—THE WONDERFUL KILL-A-LOO BIRD—STORY IN PICTURES OF TREE BARKERS.

BORN BLIND AND DEAF.

Australia seems to be a spot set aside by nature for experiments in curious forms of animal life. By some means, in the far distant past, a representative of that singular order, the marsupials, reached North America, where it is still to be found in abundance, a source of wonder to the ignorant and a puzzle to men of science. It was not until 1848 that the mysteries and fables shrouding the birth of this animal were swept away by Bachman and some of his friends, who, by diligent work and patient experiment, set aside forever the wild theories of such men as Valentine, Marcgrave, Piso, Beverly, Pennant and others, who held that the young of this creature grew upon

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the mother's breast as the fruit does upon the stalk.

The common opossum is described by scientists as follows: "Head long and conical, muzzle pointed, ears large and membraneous, rounded, and almost naked, tongue aculeated, internal toe of hind foot opposable to fingers," etc. Equally good and far less technical is the description given by a small street Arab as he gazed at one of these animals in the writer's possession: "Oh, looky, Billy," said he, "see that big rat; hit's got a pig's head, a 'coon's body, monkey's feet, and a rat's tail." The accuracy of the last description may be tested by reference to the engraving on page 318 showing the parts in detail.

According to "Wood," fifteen days elapse, and the young opossum comes into this world, a diminutive, helpless babe, weighing not more than three or four grains, blind, naked and deaf. It cannot even open its mouth, its jaws being sealed together, a small orifice only left at the muzzle, through which it receives its nourishment. One would think it was ill adapted to buffet with the rough world, but Nature, ever kind to her creatures, has ready prepared a soft cradle for its reception, where it is placed by its mother. The opossum,

LIKE ITS COUSIN, THE KANGAROO,

is a pouched animal; within the pouch are the mammae; to one of these the young opossum fastens itself almost immediately after being placed

in the pouch. The growth of this babe is surprisingly rapid, increasing from three and three-quarter grains to thirty grains in a week. In four weeks' time its funny head may be seen peering cautiously out at the great wide world: and at the end of the fifth week the little fellow is able to leave its snug quarters and venture out of doors. Not being over-confident of its ability to take care of itself it grasps with its prehensile tail, the tail of its mother.

You have but to spend a short time upon some Southern plantation to learn

THE CHARMS OF A 'POSSUM HUNT,

UNFINISHED WORK OF A BEAVER UPON A LARGE TREE
Photographed by the Author

and if you can overcome your scruples enough to taste the meat after it is prepared by one of the sable huntsmen, you will pronounce it good.

Though this marsupial sometimes makes raids upon hens' nests and occasionally upon the hens themselves, the good it accomplishes in exterminating other more mischievous animals doubly repays for a few stolen eggs and an occasional chicken. One that Bachman kept in a stable chased or devoured every rat upon the place.

I once secured a large female opossum from Charleston, S. C. When caught she had three young ones in her pouch, but when the Charleston steamer arrived at this port I was disappointed to find the young ones missing. It is said that these animals are readily domesticated, soon becoming very tame and gentle, which is probably true. But the one I had, possibly through disappointment at the loss of her family, had a very ugly temper. She occupied the house formerly the home of the pygmy musk deer, an illustration and description of which you will find in this book. Whenever I approached the house she retreated to the furthermost corner and there, with distended jaws, defied further molestation.

The opossum to me is most interesting because it is

AN ANIMAL OF NOVEL CONSTRUCTION

and habits, not because it shows any great degree of intelligence, but it makes a good pet. I have eaten

opossums and can say that when they are properly cooked, they are not only a good, but a delicious, article of food. The fat is very fine and oily and is so mild to the taste that one is in great danger of eating too much before becoming aware of its exceeding richness. I made this mistake myself with my first roasted opossum, and ate so heartily of the rich food that it was a long time before I could bear the thought of trying it again. Of late years the opossum seems to be migrating north. When I first came to Long Island, in 1878, the opossum was unknown to the hunters and farmers on the Island, and the one I received from Charleston was looked upon as a great curiosity in Flushing, but since then they have invaded not only the farms, but also the villages, and I have seen them captured in the street in the Borough of Queens, New York City. When I first went to Pike County, Pennsylvania, the natives there

HAD NEVER SEEN ONE,

but this summer, 1907, I heard of several having been captured in that township. According to the Savannah *News,* a Mr. Thomas Chancey has awakened to the possibilities of the opossum as a food animal, and gone into the business of opossum raising on an extensive scale. His opossum ranch is enclosed with a wire fence, to keep out the 'possum hunters. This novel farm is said to be located about a mile from Hawkinsville. Accord-

ing to the statement in the same paper, the products of the 'possum ranch would bring from forty

THE OPOSSUM WITH DETAILS OF PARTS

cents to eighty cents apiece, and have a ready sale in the Southern market.

One rainy day while I was sitting in front of the blazing fire in my camp,

I SAW A WEASEL

appear in front of my window. From my vantage ground I could watch it with no danger of disturbing the little animal. It ran around to the kitchen door, looked into every can and dish, examined the door-sill and inspected the closed door, then climbed up on the slanting cellar door and sitting up on its hind legs looked long and attentively into the kitchen window. The contents of the kitchen seemed to interest it so much, that it must have sat there at least ten minutes before it slowly turned around and made its way to the wood-shed, making a more complete inspection of that building than a Japanese spy would of a Russian fort. From there it went to the woodpile outside of the shed and disappeared underneath. The interesting part about all this was the very careful manner in which the little animal made its tour of inspection. Weasels are often to be found

MR. LANGDON GIBSON EXAMINING A CROW'S NEST

IN VERY UNEXPECTED PLACES.

One time when Langdon Gibson, Charles Dana Gibson and I were out in the woods we induced Langdon to climb to the top of a tall tree and examine a crow's nest. An exclamation of surprise and amusement was heard from Langdon as soon as his face reached the level of the nest. Then he cried, "Guess what it is," and threw something down to the ground. My little dog "Monad" was with me at the time and the Gibson boys had a big mastiff dog with them. Monad made a grab for the object the moment it struck the ground, but the big mastiff pushed him one side, and then stopped as if in doubt at what next to do. For there in front of him stood a small animal bolt upright, and it was most comical to

SEE A WEASEL JUMP AND BOX

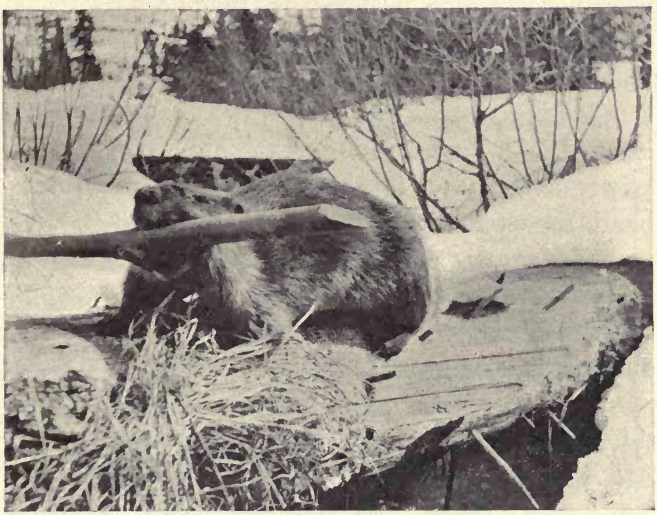
the big dog with its front feet whenever the dog's nose approached it. Apparently the mastiff at length became ashamed of being held at bay by so small a creature, and so he made a rush at the weasel. It was now the mastiff's turn to box its own face for the weasel had fastened its teeth

TO THE END OF THE DOG'S NOSE,

and it hung on in spite of all efforts to dislodge it. If I remember aright, it was not until Charles Dana took a hand in the fight that the weasel was at last vanquished. I almost forgot to say

that the weasel was the sole occupant of the crow's nest.

One summer I was traveling on board the "Katydid," a small steamer which formerly ran



THIS BEAVER HAS ALL THE APPEARANCES OF A DEAD ANIMAL POSED FOR THE CAMERA

on the Ohio River during low water, and has since blown up. The craft was a queer, crazy little affair, with

A VIOLENT-TEMPERED, PUFFING ENGINE,

and a jolly crew. If the boat was queer the passengers were also peculiar. There was one man from Pennsylvania with light-colored chin whiskers and long, light-colored hair combed back behind his ears and a very large turned-up nose.

HE WAS AN ANIMATED PHONOGRAPH.

By this I do not mean to imply that his remarks were not original, he probably made his own records and then ground them out. At any rate he talked a blue streak in a monotonous tone. He was talking when I got aboard the boat at Wheeling, W. Va., and I left him talking when I went ashore at Ironton, Ohio. If I had been a shorthand reporter I would have had quaint stories enough to have filled a book of several volumes, and in my note-book of that day I find an attempt to report some of his talk in longhand. I will quote only that part that refers to the weasel.

"Well, sir, when I use ter live in Union, Pennsylvania, I was tortling through the woods one day when my little dog started somein' from under a stun. I seed it was a weasel, an' I always calcaleted they were the usefulest animals we could have on a farm, so I called off my purp jest as he had chased the stoat to the woodpile. We had been pestered with rats round the house: they stole th' hen's eggs an'

KILLED THE YOUNG CHICKENS AND DUCKS.

I saw one drag a good-sized pullet into its hole under th' barn, so I jest thought that the

PHOTOGRAPH OF A FISHER PROBABLY FAST IN A TRAP.

woodpile wus a good place fer that weasel. Out o' the middle of the woodpile there wus an' old apple tree growing which had a few little dried up apples and no leaves worth mentioning on it. The tree wus about dead and the branches came up to my winder. When I got up th' next mornin' about four o'clock it wus rainin' pitchforks, but I noticed ther' wus somein' a matter with th' old apple tree. It had fruited durin' th' night, but when I went to examine that 'ere fruit, by gum, it turned out ter be rats. Yes, sir-ee. As sure as I am here the tree wus filled with great big rats. I counted twenty-five of 'em on one branch. Traps! Why, sir, one weasel will beat all the cats, dogs and traps yer can git. I did set some traps one night an' kivered thim up with leaves. In th' mornin' I found six mink in th' traps, but nary a rat! I caught twenty polecats in the traps. Smell bad? No, sir. I jest hung 'em up in a tree fer a day or two and then skun 'em. But say, after I skunned those polecats, I went out to the woodpile ter git some wood, and that ther' weasel came out, took one look at me an' pretty near sneezed his head off rubbed his nose with both paws and tuk ter th'

woods. But weasels are awful partic'lar animals about smells."

It is easy to see that this man started out with the intention of telling the truth. The incident of the little dog and the weasel, the fact of its starting the creature from under a stone, sounds too natural to be fictitious: the weasel taking refuge in the woodpile is just what a weasel would do under those circumstances, and I have little doubt that when the weasel got in the woodpile the rats left it.

Now just here there are possibilities which would appeal to

ANY MAN WITH A VIVID IMAGINATION

so strongly that only a person of firm character could resist the temptation, and it is here that our friend from Union, Pennsylvania, began to depart from the lines of truth.

In reading nature stories one must use the same judgment that one does in any other sort of narrative upon any other subject. It is not necessary to believe in

ALL THE FAIRY STORIES;

well-meaning but untrained observers tell of things that (they think) they see or experiences (they think) they have had. Neither is it necessary to condemn these people as intentional falsifiers. We all of us smile indulgently at the fisherman when he tells of the fish of gigantic proportions which "got away," and only the other day a truth-

ful man on Big Tink Pond hooked onto a large bass, probably four or five pounds weight; of course the bass jumped up above the water, and as the man was no angler the fish got away on the first plunge.

There were several witnesses to this little episode, all of them native farmers, and when the fisherman told of the

FOUR-FOOT BASS

none of them even smiled; they all really believed the fish was four feet long, and I had not the heart to protest, although the largest small-mouth black bass ever caught in those waters weighed but five and three-quarter pounds.

To satisfy my curiosity I have for years saved the newspaper accounts of wonderful nature stories, and wherever it was possible made personal investigations regarding them, the result being that I am convinced that seventy-five per cent. of these stories are genuine;

BUT

the untrained observers who write them up make the stories unbelievable by attributing wrong motives to the simple acts of animals, or a guess at dimensions so as to make a four-foot rattlesnake seven and even eight feet long.

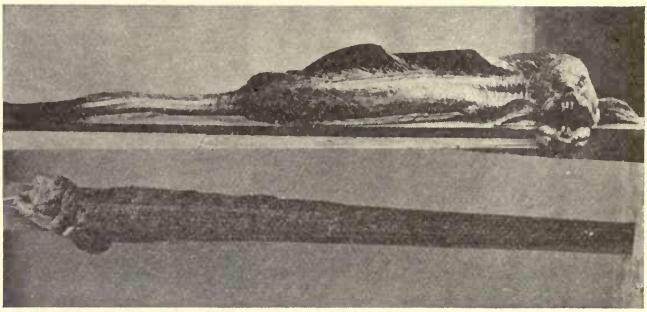
I have written for and secured photographs of many

SEA MONSTERS,

and they were all genuine and to be found in any natural history.

A SEA SERPENT

from the North Pacific Coast proved to be a fish and not a snake. A "horrible sea devil" from the



THIS IS A PHOTOGRAPH OF A FISH, THAT THE NEWSPAPERS ANNOUNCED AS A SEA-SERPENT

Long Island Sound was the angler fish, common to naturalists but seldom seen by inland newspaper reporters.

A FAKIR

is one who intentionally deceives, but an ignorant person or one whose poetic and romantic nature causes him to see everything surrounded by an atmosphere of fancy, although he is an inaccurate observer, cannot justly be accused of

NATURE FAKING.

Philosophers tell us that human thought creates that which it imagines. That is a tough proposition, but we know it to be true in dreams and delirium and can believe that even when we are wide awake and in good health, to a certain degree, we see just what we are educated to believe exists. In other words

WE SEE WHAT WE THINK WE SEE.

In olden times almost any sort of improbable, impossible story would be accepted as truth, especially if it were told in regard to Nature and her children, and in every old book of Natural History we see the results.

The old illustrators' eyes were as good as ours, their minds were as keen and their brains weighed as much as that of the modern illustrator, but when they drew a picture of the narwhal, for instance, because of its one tusk, they gave it

THE HEAD OF A UNICORN,

and because it lived in the water, the scales of a fish!

When they made a picture of a sea-cow, they gave it the trunk and head of a woman with the tail of a fish and called it a mermaid. These things had no existence outside of the brains of the people and yet even

COLUMBUS SAW MERMAIDS

in the ocean.

A man who would see mermaids today would be put in the alcoholic ward of a hospital or a so-called sanitarium for "nervous patients"; in plain language a lunatic asylum.

Although skillful photographers can make the camera tell some terrible and over-powering falsehoods,

THE CAMERA ITSELF IS HONEST

and straightforward. Had Columbus and his predecessors taken snap-shots of the mermaids and the old illustrator done the same with the narwhal, the unicorn fish and the mermaid would have found no place in our books.

There was a truthful, matter-of-fact old lady up the Hudson River who

SAW A HOOP-SNAKE

roll down hill beside her; of course there is no such thing as a hoop-snake, but that makes no difference; the old lady had been taught from childhood to believe in this fabulous reptile and when a blue racer or some other snake swiftly glided out of her path, her imagination immediately converted it into a hoop-snake and

SO SHE SAW ONE

with its tail in its mouth roll down the hill.

All of us have our own preconceived notions

with which to contend when we make observations. When Mr. John Burroughs describes a bird it is a Burroughs bird; when Mr. Seton describes a wolf, it is the kind of wolf Seton would be if he was transformed into one of these animals. When Mr. Roosevelt describes an animal, it is a Teddy animal, and Dr. Long's bird mends its broken leg as the doctor thinks he himself would do if he was a broken-legged bird. None of us can escape our own individuality, surroundings and training.

It may be that it was my training which made me guilty upon one occasion of

SOME REAL NATURE FAKING.

When the hunting season opens and the sportsmen flock to the woods the temperature at Wild Lands becomes very cool in the daytime and chilly at night. Roaring big log fires somewhat modify the cold air inside the house, and the dogs eagerly crowd around the hearth in front of us and our guests. Then it is that we put big stones in the fire and when we retire at night all of us carry them with us to keep our feet warm. One night when we all retired as usual and were sleeping soundly we were aroused by the late arrival of guests. A very charming girl who was visiting us at the time and who is known to many of my readers by her contributions to the current magazines is a very great admirer of Browning; in fact, during her stay at Wild Lands her time was divided between

HER GUN AND HER BOOK,

and she was seldom without one or both in her hands. Upon this particular night she had taken her volume of Browning to bed with her. Being awakened by the commotion caused by the arrival of the visitors she sat up in bed until her feet were cold, then she replaced the stone at her feet and suffered no more with the cold but slept peacefully until morning—only to find upon arising that the stone was on the floor and her feet had been warmed all night by the fervid poetry of Browning.

She told of this at breakfast, and we all had a good laugh, especially did the new arrivals enjoy the joke, and they said many things about mind cure for cold feet and the power of imagination; but their turn came next, although they did not tell the story upon themselves.

A Pike County farmer had presented to us a number of large turnips; they were of monstrous growth, and I really do not know what our friend expected us to do with them; they were as fit for food as pine knots soaked in water might be. When the two sportsmen guests, with a native driver, had gone for their baggage we took the turnips and with some wooden toothpicks, we fastened the skins of ruffed grouse over the vegetables, and when there were no tail feathers on the grouse skin we used rabbits' tails pegged to the proper place as substitutes. For heads we took some fish heads which had been cut from the largest

pickerel which we had been saving to show to our guests when they should ask how the fish were biting. The heads had been hung on trees to dry, and their mouths we propped open with sticks to give greater effect to the trophies; a bunch of wild ducks supplied their legs for the nondescript birds. We made a half-dozen of these absurd birds and set them up on stumps and stones all around, outside the cabin, and they were

THE MOST OUTRAGEOUS, BLAMEDEST LOOKING THINGS EVER SEEN.

The pickerel heads were astonishingly bird-like, yet bore no relationship to any living fowl. In fact there was such an air of possibility and reality about the creations that they would deceive almost anyone, and yet with their rabbit tails, or feather tails, neat brown feathered backs and wings, straddling duck legs, with gaping pickerel heads, they belonged more to Welsh rarebit dreams than to this prosaic world.

When the two sportsmen returned with their baggage and guns they hailed me as they drove up, asking, "What chance is there for shooting?" To which I replied with a dubious shake of the head: "I'm afraid it is a very poor place; there don't seem to be anything but kill-a-loo birds around this fall."

"KILL-A-LOO BIRDS?"

they shouted in chorus. "We never heard of one."

"Well," said I, "I think the kill-a-loos have driven all the game away."

"Can you show us one?" laughed one of the sportsmen.

"Maybe," I replied, "they generally come around about this time of day," and with that I looked about in every direction, as if in search of some of this new sort of game. "There! I think there is one over there," I cried in a loud whisper, pointing to a stump near at hand.

As the sportsmen and the driver looked at the stump

THEIR JAWS DROPPED

and their utter bewilderment was most laughable. The driver showed his emotion by pulling upon the reins and addressing remarks to the horse, notwithstanding that these beasts were standing quietly in the road. With his bulging eyes fixed upon the kill-a-loo birds the teamster began pulling on the reins, loudly crying: "Whoa! Whoa——a—a!" and muttering, "I'll be gol-durned if I'd ever seed one of them afore!" The sportsmen had started to reach for their gun-cases, but forgot to open them as they stared transfixed with silent wonder upon the strange bird.

"What is the matter?" I asked. "These are common birds here. There is another one, and yet another over there on that log; they are all around here. I told you this was the time of day they usually came." The rest of the house-

A TOTEM KILL-A-LOO BIRD TWELVE FEET HIGH, BUILT BY STEWARD EDWARD WHITE FROM PLANS BY THE AUTHOR.

hold who had been interested spectators could restrain their merriment no longer, and the shout of laughter they gave was the first thing which caused the three men in the wagon to suspect something wrong, but it was not until they took the birds in their hands that they were really satisfied that they were fakes.

When the vacation was over, the kill-a-loos were carefully packed away in the sportsmen's trunks and taken home for exhibition as samples of the sort of game found on the shores of Big Tink Pond.

CHAPTER XXIV

SPORTING TERMS AND BIG CATS

SPORTSMEN AND FALCONRY—THE SCREAM OF A PANTHER—PANTHER ONE-HALF DAY'S JOURNEY FROM MANHATTAN—PANTHER SIGN—YELLOWSTONE KELLY AND A PANTHER—GRANDFATHER'S ADVENTURE—FOOTSTEPS BEHIND HIM—MY HAIR STOOD ON END—BITTEN BY A GRIZZLY—McLEOD'S MOUNTAIN LION—STANLEY WITH A MOUNTAIN LION ON HIS BACK—WILD ANIMAL STORES AND WILD ANIMAL SHIPS—SCUFFLE WITH A BLUE-FACED BABOON.

In the olden time when all sport was the recreation of kings and nobles, there was as much formality connected with it as with any other court function. Of course you all know that "the four-hundred" of mediæval times was wont to

HUNT WITH FALCONS,

that is with trained hawks; but it must not be supposed that the king would hunt with the same sort of bird as a squire. No, no, that would have been a terrible social error, an inexcusable one even for a king to make. Soon after the Norman conquest the laws of the land named the sort of birds that the members of each grade of society might use. There was

ONE SORT OF BIRD RESERVED FOR KINGS,

another for princes of the blood, still another for dukes and great lords. Fifteen grades in all from the king to the knave, from the Peregrine down to the little sparrow-hawk. But only the female peregrine was entitled to the name of

THE FALCON.

On account of her superior strength, great size and courage the falcon was flown at ducks and herons. In another place in this book will be found the record of a blue heron putting an old bald-headed eagle to flight after the latter had made an unprovoked attack upon the heron; from this incident we may be led to believe that it really does require a bird of strength and courage to attack a heron.

The male peregrine was formerly called

TERCEL, TIERCEL, OR TIERCELET,

and was flown at partridges and magpies, and so all of these birds were divided up not only in their use in the field, but also as to who could fly them.

In spite of all this tomfoolery of royalty, however, and its childlike regulation of the names and uses of hawks, there is a glamor of romance about those times and about falconry which appeals to us all. We all love to read of the people "In days of old when knights were bold, and barons held their

sway," when a genial iron-monger like Mr. Carnegie, for instance, would have furnished sheet iron suits of clothes for his fellow-citizens in place of libraries. Those were great old days (for the knights and royalty).

A knight always paid his court to his fair one by

HIS MARKED ATTENTION TO HER FALCONS,

using the greatest judgment in flying the bird at the proper moment, never losing sight of it, encouraging it by calls, following it and securing the prey from the death-dealing talons: then, with a caress for reward for the lucky or skillful work, the knight would

SLIP THE HOOD OVER THE BIRD'S HEAD

and with all the grace he could assume place the falcon on the slender wrist of the bird's mistress.

What are the proper terms to use for congregations of animals of different kinds is a question frequently asked, and for the benefit of those interested in speaking "according to Hoyle," the correct names have been collected for the reader. It may be well to say that Hoyle in this instance is the ancient custom.

Today we commonly use the

COWBOY'S TERM "BUNCH"

for everything alive or dead. It is customary now

to speak of a bunch of cattle, but we frequently hear of a covey of quail: if, however, we go back to the original use of this word, covey is only applied to partridges. In some parts of the United States the bob-white is called a partridge and in other parts a quail, and I suppose that in those parts of the country where it is called a partridge it would be perfectly proper to speak of a group of them as a covey, but, if we call the bob-white a quail, according to Hoyle, we must speak of

A GROUP OF THEM AS A BEVY.

Bevy is frequently now used for a group of young girls, but this is not an Americanism, for it was used in the same sense in mediæval times in England.

The old use of these words as laid down in the ancient books of hunting and falconry, is as follows: when beasts went together in companies a group of lions was called

A PRIDE OF LIONS.

It was also a *lepe of leopards.* Herd was proper for deer or elk of any sort, and generally used for all kinds of horned beasts, but if it is a group of does of which you are speaking,

CALL IT A BEVY.

They also formerly spoke of *a sloth of bears* and *a singular of boars* and *sounder of wild swine,* but

A CROWD OF DOMESTIC HOGS WAS CALLED A DRIFT.

We now speak of a pack of wolves, but the old hunters called it *a route of wolves.* It was *a harass of horses, a rag of colts* and *a stud of mares, a pace of asses,* and *a baren of mules: a flock of sheep* is the term formerly applied and still in common use, but it was

A TRIBE OF GOATS.

Very properly they spoke of *a skulk of foxes,* but the reason is less obvious for *a cete of badgers, a riches of martins, a fesymes of ferrets.* Now when you want to speak of a great congregation of jack-rabbits, call it a

HUSK OF JACK-RABBITS,

also *a down of hares, a nest of cottontail.* If you meet a group of wildcat remember to say, "I met *a clowder of cats":* but if you find they are young it is *a kennel of young.*

Should you be traveling in the tropics

YOU MAY MEET A SHREWDNESS OF APES

and on your lawn you may find *a labor of moles.*

Two greyhounds are called *a brace,* three *a leash:* but two spaniels or harriers are called *a couple.* A number of hounds is *a mute of hounds,* but when you speak of common curs, be sure to remember and call them

A COWARDESS OF CURS.

In olden times they applied these sporting terms in derision or fun to people and spoke of *a skulk of friars* and *a skulk of thieves, an observance of hermits, a lying of partners, a substitute of sergeants* and what might apply to some of our "400" *a multiplying of husbands,* also

A BLAST OF HUNTERS,

a draft of butlers, a poverty of pipers, etc. But it was really mean when they spoke of a "bunch" of wives as

A GAGGLE OF WOMEN,

gaggle being the term used for a group of geese.

Speaking of water-fowl reminds me that it was proper to call a group of herons *a sedge.* This also applied to bitterns, but when it came to swans it was *a herd:* it was also

A HERD OF CRANES AND OF CURLEWS,

and duck hunters may take notice that when a flock of shelldrakes appear they must by no means call it a flock, but a *dropping of shelldrakes,* also *a spring of teals, a cover of coots, a gaggle of geese,* and

A BADELING OF DUCKS.

That is, when there is a group of various or unknown ducks the term *badeling* is used, and when the mallards come, speak of them as *a sord* or

sute: but if you happen to be in India hunting peacocks and run across a flock, by no means speak of it as a flock, but call it

A MUSTER OF PEACOCKS

and *a nye of pheasant.* At home it is *a congregation of plover, a flight of doves, a flight of swallows, a dule of turtle-dove, a walk of snipe,* and *a fall of woodcock, a rookery of crows* and *a building of rooks, a murmuration of starlings;* but with domestic fowl it is *a brood of hens.* A flock of larks is poetically spoken of as

AN EXALTATION OF LARKS,

and the sparrows very properly as *a host of sparrows. A watch of nightingale,* is also significant in its meaning, and *a charm of gold finches* is charming.

I trust that the readers will no longer be confused in the terms they use for the different "bunches" of animals and game they meet; please do not speak of an afternoon tea as a gaggle of women, or a bunch of pretty girls as a badeling of ducks.

Few sportsmen of today are familiar with these old names, but everything new or old pertaining to sport is interesting because sportsmen themselves are interesting people and real sportsmen are fine fellows. It is true that sportsmen delight in shooting game be it big or little, but they also believe in preserving the game of the country, and

while all thinking people regret the wholesale slaughter of wild creatures by gunners, we must remember that the only intelligent efforts to preserve the wild life of this country are to be found in the game laws suggested and enforced by sportsmen. The city-bred men of the Eastern States are sometimes inclined to look upon the Western hunters as brutal fellows, but experienced explorers and travelers in the wilderness will tell you that in respect to bloodthirstiness and brutality in the game field the man of the wilds is

OUTCLASSED BY THE CITY GUNNER.

In truth the city man and the Indian equipped with modern firearms "see red" when in a good game country; and they never take the trouble to hunt down and kill the wounded and paunched animal. I know of a case where a city man refused to turn over two shells to a man who had paunched a mountain ram. In this case the animal could have been put out of pain easily, had the man who shot it had any ammunition, and when he asked for more he was refused for no reason except that the city man did not fancy returning to camp with an empty gun. Possibly he feared some fierce marmot or little chief-hare might attack him.

A REAL MOUNTAIN MAN,

one of those fellows the city people look upon as a bloody man, will often follow a wounded ani-

mal all day and this over the roughest of country, in the worst of weather, until the wounded creature is overtaken and put out of its misery. But the city sportsman and the childlike Indian would not think of fasting all day and out of compassion for a wounded beast sleeping away from camp without a blanket. The most charitable way to think is probably to consider both our city friend and the Indian as children with new toys in their hands.

Mentioning big game brings to mind the fact that big game may be found very near New York City. In the summer of 1906 as I was standing on the porch of my log house preparing to retire for the night, I was astonished to hear

GAME IN SIGHT
He heard footsteps behind him

THE SCREAM OF A PANTHER.

Remember that Wild Lands is only one hundred and seventeen miles from New York City, and although there are a few black bear, deer and wildcats in the woods surrounding the log house, I never expected to see or hear a panther, and doubted the accuracy of my hearing; but Mrs. Beard also heard the woman-like scream, and called to me, saying: "Someone has upset in the lake." The next day I quietly made some investigation, and discovered that a large animal had followed a young man one night through the woods from Wolf Lake almost to his own door; also that as one of the lumbermen was driving his best girl home from a dance he had heard

"A LOST WOMAN" SCREAMING

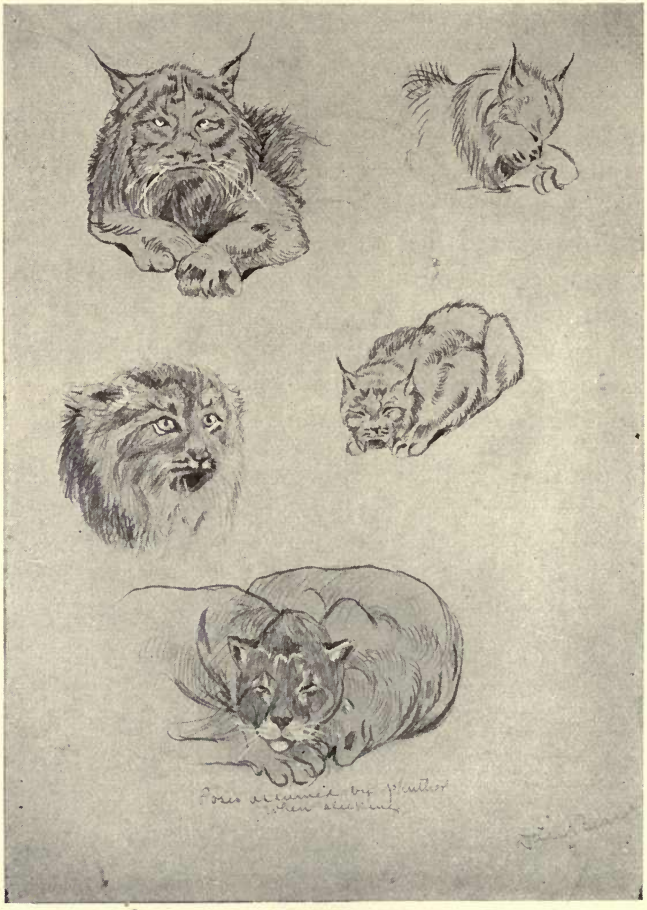
in the dark, and was about to go and search for the wanderer when a violent thunderstorm caused him to desist and take his lady-love home, also that our cook who had attended the country dance, had heard the "lost woman" upon several occasions. I further learned that a number of others had started out to succor the supposed woman whom they thought was lost in the woods while after blueberries.

Next I discovered that Mr. Elmer Gregor of the Forest Lake Club had seen

PANTHER SIGNS

on the road to Mast Hope. The panther had

been eating rabbits as was evident from their remains. It was then that I got up a party and with a good 'coon dog, we hunted the woods all night



LYNX AND PANTHER SKETCHED FROM NATURE

for the beast, but without results, and later the groceryman told me that while driving in the woods about dusk, twenty-five miles from Wild Lands, he had met a panther and, shortly afterwards, a man with a rifle hunting for the beast which

HAD BEEN PROWLING AROUND THE MAN'S CABIN.

Putting all this together and also the fact that I am not unfamiliar with the scream of the panther, there is little room for doubting that one of these creatures was roaming the woods in and around Wild Lands for several weeks before it wandered away.

The panther is very prone to follow a person at night or even in the daytime through the woods.

YELLOWSTONE KELLY

was followed by one when he was out stalking antelope, and his companion who was behind him shot the animal and scared away the antelope. When Kelly asked him why he fired, his friend pointed to the dead beast and replied:

"HE'S BEEN CREEPING AFTER YOU

for the last half hour and I thought that he was getting too darned near for safety," and so did Mr. Kelly when he saw the dead panther a few feet behind him.

A panther once followed my grandfather all night through the woods, and I used to make my mother tell me the tale over and over again. Grandfather's horse went "dead" lame and he had to leave it and walk. Night overtook him and as he was tramping through the dark forest

HE HEARD FOOTSTEPS BEHIND HIM.

In those days pelts or skins of animals were used for money and as this sort of currency was too big for a pocketbook, it was carried on the traveler's back. Grandfather had

A PACK OF FRESH SKINS ON HIS BACK,

and possibly the smell of them had something to do with the footsteps behind him. My! how

THE KILLING
Note the matter-of-fact manner of the big cat and the lack of resistance of the kid

MY HAIR USED TO STAND ON END

when we came to the part of the story where the footfalls would stop when the traveler paused, and begin again when the traveler began to walk, quicken with the quickened step of the traveler, and

RUN WHEN THE LONE MAN RAN.

At last, when grandfather fell down a gully, I thought the beast would be upon his shoulders, but no—it paused on the edge of the bank and he could see its

EYE-BALL GLEAM

in the moonlight which streamed through the opening in the woods made by the gully. At length the traveler came to a clearing and scaling the rail fence he hastened to a log cabin, but

IT WAS UNINHABITED!

Climbing to the roof he tore off some of the "shakes" and crawled in the opening; the inside was filled with flax, so burying himself in the flax he opened his clasp knife and awaited the enemy, but the animal feared to approach the cabin and only made known its presence by

A SCREAM.

The sound of the scream was a great comfort to the lone traveler; for grandfather was unarmed, and he feared it was a hostile Indian whose footsteps he had heard, but he knew panthers and preferred their company to that of Indians, so making himself comfortable he fell asleep and did not awaken until the sun was shining through the hole he had torn in the roof.

On the train between Slocan and Sandon I met Alex McLeod of Answorth, B. C., a prospector, and the hero of many adventures. His arms and neck bear

THE SCARS OF A GRIZZLY'S TEETH

received one day when he thought he could knock a grizzly out with a prospector's pick. It is needless to say that he failed in this attempt and only escaped death by playing 'possum.

DEAD MOUNTAIN LION.

He bought a new pick, but he now carries a gun on his trips and this has proved a friend in need. Not long since McLeod and his "pard," a man named Smith, went fishing at Coffee Creek. Smith was armed with a trout rod and was some

distance in advance of McLeod when the latter heard him shouting for help. Arriving in sight of Smith, McLeod was astonished to see him

FACING A BIG MOUNTAIN LION.

The cat crouched in the trail about fifteen feet from the fisherman. The great tail of the beast was slowly swishing from side to side as he watched with interest, but no alarm, the fisherman waving his switch-like rod; a small dog with its tail between its legs was barking dire threats at the lion, but keeping a safe distance from the latter's jaws and claws, when McLeod sent a bullet from his thirty-forty and

KILLED THE GREAT CAT.

It weighed 250 pounds and was a monster as may be seen from the accompanying photograph given to me by the prospector himself when I was up in his country. Mr. McLeod is a big man, fully six feet or more in height.

It is not probable that the big cat had any intention of attacking Smith, but an unarmed man does not enjoy facing such a beast and is always glad to have it shot. The little dog may have aroused the lion, and as these beasts

HAVE NO LOVE FOR DOGS

it was probably facing the barking canine, so as not to be attacked in the rear.

The late George Stanley, trapper, of McDonald Lake, was once sitting in a crouching pose, fishing through the ice on this lake; he was dressed in buckskin clothes and furs, and his arm was moving up and down to keep the baited hook bobbing; his six-shooter lay in front of him on the ice ready for any emergency, when suddenly

HE FELT A HEAVY ANIMAL POUNCE UPON HIS BACK.

Stanley did not know the sort of animal with which he had to deal, but he did know that it was no friend of his, so he grabbed his gun and placing the muzzle over his shoulder fired, sending

A BULLET CRASHING THROUGH THE SKULL

of a big mountain lion.

The animal was lean and hungry, but it is probable that it did not know that the fur-clad lump on the ice was a man: the cat only saw something out on the ice moving and so it crept up and leaped upon the thing as a domestic cat will do upon a smaller moving object.

THE PIKE COUNTY PANTHER

did not attack the fisherman on Wolf Lake, but followed him. The Mississippi panther only followed my grandfather and did not attack him; the

"DON'T INTERRUPT MY DINNER"

panther did not attack Yellowstone Kelly, but followed him; neither did the one in the photograph attack Smith.

All evidence seems to point to the fact that

PANTHERS HAVE A WHOLESOME FEAR OF MAN,

but I do not think that it would be safe to creep on one's hands and knees under a limb of a tree occupied by a panther. The beast under such circumstances might jump upon the moving object as it did upon Stanley, and after it was on one's back it would probably fight from fear and embarrassment.

In the days before Nature photographs filled all our magazines with beautiful half-tones of every living creature, and writers wrote of some that

never lived, in the days when the illustrators made their drawings upon boxwood for the wood engraver, I used to frequent the docks to watch for incoming ships from the tropics manned by piratical garbed foreign sailors and hearing strange freight

SHIPS WITH QUEER BIRDS AND ANIMALS IN THE RIGGINGS

and on the decks. The Fulton Market was also a favorite hunting ground for rare fish, and the "wild animal stores," on the lower East Side, for objects of interest. There was one of these shops on Park Row; it was an unobtrusive little store filled with cages of noisy birds—but the back door opened into a good-sized wareroom and within

IT WAS A MENAGERIE OF ALL SORTS OF ANIMALS

from an elephant down to a kangaroo rat.

As I passed the monkey cages, I shook my fist at a blue-cheeked specimen of a mandrill baboon and told him things of an highly insulting nature about his personal appearance. A baboon is as quick to resent an insult as is any Southern colonel, and Bluecheeks flew at the bars in his cage,

AND SHOOK THEM WITH RAGE.

This was just what I expected, so in a spirit of mischief I stopped to make more uncomplimentary remarks.

My portfolio was under one arm: I had taken off my overcoat and thrown it over the other

arm. Mr. Bluecheeks grabbed the bars with his two hands, looked me straight in the eyes, showed his teeth, and jabbered at me, thus keeping my attention upon his face while

HE SLYLY REACHED OUT ONE LEG

and grasped my overcoat with his hand-like foot. The first I knew of his intentions was when my overcoat was unceremoniously pulled from my arm.

Back of me there was a dry goods box or packing case, the boards of which were all loose, and the nails partly or wholly shaken from the wood so that the sides would have fallen out had they not been held in place by a clothesline bound about and knotted over the box. It was a large packing case larger than a table, and realizing that if the baboon once drew my overcoat through the bars of its cage it would be of no further use to me, I threw my portfolio on the packing case, so that I might use both hands to rescue the coat from

MY FOUR-HANDED OPPONENT.

After a struggle of five or more minutes I was successful in not only gaining my coat but also in arousing to the highest degree of excitement all the other animals in the wareroom.

They had been interested spectators and, when the struggle for the possession of the coat was at its height, one and all in the room

SIGNIFIED THEIR DESIRE TO TAKE PART IN THE FIGHT.

I was alone in this room with the assembled jungle-folks and would have been dealt with severely by my four-footed relatives had their bars and chains allowed them to reach me. After fanning myself with my hat, wiping the perspiration from my face and neck, and smoothing the wrinkles from my coat, I approached the packing box to secure my portfolio, but as soon as I came near the box the top and sides

MOVED IN A MOST ASTONISHING MANNER

the whole box bounced up and down, and from the interior came the most

BLOOD-CURDLING GROWLS, SNARLS, AND YOWLS.

If this itself had not been enough to alarm me the sight of the hooked claws of some beast tearing splinters from the edge of the boards where the sides were parted would most assuredly have been sufficient cause for fright; but after my first alarm I decided that I must have my portfolio, and attempted to steal around to the other side of the box, walking on my toes so as not to make any noise and using every precaution to prevent attracting attention to myself. It was in vain, however, it seemed as if

THE THING INSIDE THE BOX

was all eyes and could see through the boards,

and no matter from what direction I approached its prison, the box would be vibrating before I could reach my portfolio and the thumping and yowling from the inside would begin over again. Growing desperate I made a bold rush, grabbed my property and retreated. Then as my time was short, I went over to where the baby hippopotami were enclosed in a rude pen. I finished my sketches and going through the store to the street, stopped at the desk to thank the proprietor for his courtesy in granting me the privileges of his shop.

"By the way," said I. "What have you got in that packing case back there?"

"Dot backing case? Vot backing case you mean?"

"The one with the rope on."

"Dot backing case! Py golly you must not oo near dot case. It may get loose once."

"What may get loose?"

"DOT LIVER PAD."

"Liver pad?" I exclaimed.

"Yes, dot liver pad vot vas in dot box tied mit dat rope. Dot vas a vild liver pad. He vas very dangerous, yes."

None the wiser for all my friend's remarks I bowed and hurried back to my studio. I knew that the thing was dangerous, and the box insecure, but in all my travels and in all my visits to museums, circuses and wild animal stores, I have never seen a

WILD LIVER PAD,

yet it was evident that the man was not joking, but quite serious in what he said.

Not until years afterwards when I heard a German prince describe an adventure that he had with a "liver pad" in Africa did it dawn upon me that this was the German way of pronouncing the English word leopard.

With my present mature experience, and ripened wisdom, if my portfolio should again be placed on a box of wild liver pads, I would either leave it there, or from some position of safety fish for it with hook and line.

CHAPTER XXV

FISH SKETCHES AND FISH STORIES

A FISH OF SIN-YALE-A-MIN LAKE—A SPOT UNCONTAMINATED BY MAN—CATCHING BIG FISH WITH A FLY—A FIERCE RUSH OF A BLACK SPECKLED TROUT—DOLLY VARDEN TROUT—STANLEY, THE MOUNTAIN MAN AND THE LITTLE MINISTER—CATCHING BULL TROUT IN MACDONALD RIVER—HE DIDN'T HOLD HIS MOUTH RIGHT—FISHING FOR A BIG FISH IN NEW YORK CITY—THE FISH CAUSED GREAT HILARITY—A POLL PARROT FISH BUT IT COULD NOT TALK.

BEAUTIFUL LONG-TAILED MAGPIES

with burnished iridescent and piebald plumage fly around our cayuse team; at Selish the birds are as tame as the dirty, noisy English sparrows of New York City. Selish is a little station on the Northern Pacific Railroad in the Flathead Indian Reservation; the station is close to the shore of the Jocko and backed up against a big butte of the color and texture of the army officers' khaki uniform. There is a stony road which winds around the steep sides of the butte until it finds a passage up the rugged course of a torrent-worn gully, to the dry, hot elevated prairie north of the station.

On the same elevated plain a few miles further north and close by the foot of Saddle Butte, about

THREE HUNDRED BUFFALO

then roamed free on their ancient pasture lands. The Flathead prairie is thirty odd miles long, by fifteen or twenty wide, and is bounded on the south by the drab-colored buttes, on the east by the Mission Range and on the west by the deep canyon through which the turquoise water of the Pen d' Oreille splashes and dashes, churning itself into suds, as it roars over the rapids and falls; fretting itself into foam-capped waves as it chafes against the rock-ribbed shore; whispering awesome threats as it glides into the deep, dark mysterious pools where the currents twist the floating suds into a decorative pattern of great whorls and spirals.

From their sources in the glacial lakes where they are cradled mid the mountain peaks, several trout streams of clear, cold water cross the Flathead prairie hurrying on to join the Pen d' Oreille; there are also occasionally muddy pools inhabited by

STUPID SPOTTED FROGS

and other ponds whose snow-white edges tell of alkali deposits and scab lands. Along the edges of the different waters

KILLDEAR, SPOTTED SAND PIPERS,

solitary sand pipers, yellow legs, greater yellow legs, long-billed

CURLEWS AND JACK-SNIPE

wade in happy security.

Scattered over the prairie are bunches of half

wild cattle and horses and in the vibrating heat over their backs sail the hawks, great and small; these birds seem to be omnipresent on all the Western plains where they have an inexhaustible supply of small mammals on which to prey. Now and then an old hen grouse with a brood of fuzzy little chicks gives a warning call and the young birds scatter and hide their dust-colored bodies on the dust-colored ground.

Occasionally the long, graceful form of

A HARMLESS SNAKE,

with its pretty yellow stripes, may be seen gliding out of our way, and myriads of

FAT GIANT CRICKETS,

as big as the brown wood frogs of New York, hop clumsily out of the horses' tracks, scolding as they go. Everything is novel and strange to a tenderfoot from the East; yet many things bear a recognizable relationship to objects at home.

THE MEADOW LARKS

look like ours and one hearing them for the first time would immediately pronounce the notes to be those of a meadow lark. Nevertheless the Western bird's voice is much rounder and more flute-like in tone.

THE SONG SPARROW'S DITTY

seems to be the same, even though the bird itself may differ from its Eastern brothers, but there is nothing familiar, to the tenderfoot fresh from the

FLATHEAD PRAIRIE CRICKET EATING CASTOFF CIGAR

effete civilization of the East, in the appearance of the quaint settlement at the Mission of St. Ignatius. Utterly oblivious to the fact that the creaking wagons contain white men, the bloody enemies of all living things,

PLOVER AND SNIPE

run under the noses of the horses as they splash through the cold shallow stream crossing the road at the Mission. Around the Indian graveyard, church, and schools, is a cluster of low, log houses interspersed with frame ones of more pretentious aspect; the latter are the homes of French traders. Rising abruptly from the prairie back of the little village the Mission Range rears its ragged snow-covered crest to an altitude of 10,000 feet.

Down the precipitous sides of the mountain, back of the little church, dash the waters from the fields of snow; in its wild plunge the crystal fluid is resolved into white foam and mist, making

an irregular streak which might easily be mistaken for a perpendicular band of snow, all of which make a most charming scene and one which appears more like a picture evolved from some dreamy artist's brain than a real landscape.

COWBOY "BREEDS"

in leather chaps ornamented with fringe and inserts or checkers of red cloth, walk awkwardly about, cowboy fashion, proud of their brilliant red handkerchiefs which are knotted about their swarthy necks and of the beautiful buckskin cuffs and hat bands incrusted with patterns of stained porcupine quills.

OLD INDIANS

with long iron-gray hair falling on their shoulders from beneath the broad brims of their drab quaker hats, talk together in guttural grunts. Prone on the ground, in the shade of the trading store, recline young Indian bucks in picturesque blanket leggings, blanket wraps and beaded moccasins, their glossy black hair hanging in braids in front of their shoulders and terminating in bunches of red flannel.

SIN-YALE-A-MIN

is 3,900 feet above the sea; it is a beautiful and romantic little lake which occupies a valley in the Mission Range and this was our destination; but

SIN-YALE-A-MIN
Biological Camp at extreme left

time is of little importance to the "butter-chinned priests," and "Breeds," traders, "Injuns," and squaw-men of the Mission, and it was late ere we got a start. Before we had reached the foot of the mountain the king-bolt in the light wagon broke and wrecked the vehicle so that the ladies were forced to alight and we harnessed their team as leaders ahead of the cayuses attached to the dunnage wagon. Most of the party preferred walking to hanging on top of the rolls of tents aboard the jolting baggage-wagon. It was almost dusk when we entered

THE MYSTERIOUS WOODS

at the foot of the mountains. The rude trail led up over corduroy bridges which were half washed away, under tall, ghostly dead trees whose lofty tops seemed to pierce the clouds. Climbing, ever climbing with the voices of the waters always within hearing, now gurgling, now babbling for all the world like the sound of the many voices of a gay picnic party in the woods.

When the glint of water through the trees announced the end of our journey it was 1 A. M., and although it was beginning to rain, we tarried not to pitch tents, but pumping up our air mattresses and unrolling our sleeping bags we crawled into the latter and fell asleep while the rain was pattering on the canvas flaps over our faces.

I was awakened the next morning by the long drawn out call of the cook of the biological camp on the lake shore

RO—LL—L—L—L—OUT! R—OLL—OUT!
ROLL OUT!

Young Kendricks, a boy of twelve, was still sleeping on a cowboy's bed-roll near me, his body uncovered and his drowsy young head resting on his arm; the rays of the morning sun were shining through his hair, making a halo around his youthful face and

ON HIS CHEST WAS PERCHED A MOUNTAIN WREN;

the little bird had its head cocked to one side and was saying things to itself in a pert wren-like manner, as it examined the sleeping child.

OUTLET OF KOOTENAY LAKE.

With the true hospitality of the West the biological people came into our camp with a pressing

invitation to breakfast with them, which we promptly accepted and did ample justice to our first meal on the shores of Sin-yale-a-min.

It was the search for real wild and woolly trout, trout which know not the price or names of the feathered lures in one's fly-book; it was the search for the aboriginal fish of the West, which landed us at Sin-yale-a-min, 3,900 feet above the sea; it is a lovely, romantic little lake that occupies a depression in the Mission Range.

It was

A TWO-MILE PULL

to the head of the greenish-blue-colored glacial Sin-yale-a-min Lake—two miles in the *Oregon* a clumsy, heavy skiff of

"INJUN" BUILD;

two miles with one long, roughly hewn oar and one short, bark-covered stick with a pine "shake" nailed to one end for an oar blade. But I bent cheerfully to my task, for the waters were virgin waters as far as fly-fishing was concerned. On all sides of the lake rise the mountains whose rounded forms show the grinding and smoothing effects of ice. Great swathes have been cut through the trees by terrific avalanches. A grand forest of white cedar (*arbor vitae*) trees of gigantic proportions covers the rocky shores of the Sin-yale-a-min Creek, rearing their stately heads to dizzy heights; the irregu-

larities of the ground cause the fallen trees to rest at all angles, and the density of the foliage overhead makes twilight at midday. This, with the dashing waters and the thick beds of moss, produces a weird effect in the wild gorge through which the creek flows.

At last we had found

A SPOT UNCONTAMINATED BY MAN,

and more beautiful than any of his clumsy attempts at landscape-gardening. About a half mile back from the lake, the stream is a succession of falls whose source is concealed by the thick foliage, producing a unique effect; it looks as if the water was pouring down from the sky itself. The lichens and moss grow with a luxuriance I never saw elsewhere. In the lake and at right angles to the mouth of this stream a dead and denuded arbor vitæ is lodged on the submerged delta, and although the water of the creek could flow under the log, for reasons of its own it deflects and flows parallel with the tree. Making the *Oregon* fast with a withe and a stone, I waded out to the log and cast my flies down the current to a point where the small end of the giant timber was sunk in the deep and blue waters of the lake.

AS SOON AS MY FLIES SETTLED,

I had a double strike, and landed a couple of ten or twelve-inch rainbow trout, but their size some-

what disappointed me. Although we had canned goods galore at the camp, I thought these cold-bodied, pink-fleshed fish would be a welcome addition to our menu, and so I made another and another cast, and soon had such a fine string of fish that I became more particular as to the length of the trout hooked.

Acting on this principle, the next time I found a ten-inch trout was hooked, I steered the fighting fish right into the swiftest waters to give it a chance to break loose, and save a lazy man the trouble of unhooking it.

THERE WAS A MIGHTY SPLASH

and my trout disappeared, while the line started directly out to sea. In my utter astonishment I allowed the line to run, and it was not until two hundred feet of braided oil silk had unwound from the clicking reel that there was a pause. It was the fiercest onslaught I had ever experienced in many years of angling. The rush of my trout had in it all of the impetuosity and savageness of a tiger springing upon its prey. This was the first time I had ever wet a line in the Rocky Mountains, and I had no idea what sort of fish now had my hook, but I did know that a ten-inch trout is a good-sized mouthful for even

A VERY LARGE FISH,

so I stood in that ice water unmindful of the deadly

numbness of my legs, and waited to give the creature time to gorge the bait. The fish was a primitive savage, and clinging manfully to the ten-inch trout, had run two hundred feet of line off a clicking reel without apparently noticing the snubbing resistance of the silk. It was very exciting, but I was cool enough to give the creature time after the rush. Presently, the line began to move slowly about, and I judged

THE MOMENT HAD ARRIVED

for me to strike, and carefully and slowly I reeled in the slack until I could "feel" the fish. Then, with a quick movement of the wrist, I struck the barbed hook into its mouth. It is no simple thing to strike a fish successfully with a light fly rod and two hundred feet of line deep down in the blue water, but there was no doubt of the success of my efforts, for the fish

"PUT UP" A WILD AND CRAZY FIGHT,

using neither the craft of a bass nor the judgment of a brook trout. But it had the impetuosity and fierceness of both combined, and soon ran out all but a round or two of my line, and I thought that I should lose him, for I doubted the power of my tackle to withstand the force of a direct pull. Luck was with me, however, for the next rush was toward the shore, giving me the hoped-for opportunity to reel in some line and also a chance to run

to the beach and pick up my landing-net, which I had not found necessary for the small trout.

UP AND DOWN, OUT AND IN,

my fish rushed, and then sulked in a most grievous manner. I reeled in slowly until I could see the dark back and slowly moving tail; carefully I steered the fish to the net, slipped the latter under it, and lifted a great black spotted trout from the water, the fish making a last, mighty struggle in the net.

It was not until the excitement was over that I realized that there was no more sensation in my legs than in a block of ice, and I scrambled out

BREAKING CAMP ON THE FLATHEAD PRAIRIE

of the frigid water and sat on the shore until a vigorous rubbing and the warm sun's rays had brought back life to my chilled limbs. Measuring

from the tips of my fingers to the wrinkles in my coat sleeve at the shoulder, my first black spotted

TROUT WAS THE LENGTH OF MY ARM,

though not a very large specimen of this kind of fish. Under favorable conditions, I am told that this kind of trout often reaches the weight of thirty pounds; but for exciting fun and fierce fighting qualities I recommend the smaller fish; the larger ones would no doubt smash your tackle, and your landing net would not hold the monsters.

Live bait at Sin-yale-a-min was apparently unattainable. There are no frogs in this high altitude, and minnow-nets were not part of the outfit, so it was known that I left camp with nothing but a book of artificial flies, and the rumor went abroad that my fish was caught with a fly, and the next arrival at camp greeted me with, "Hello! I congratulate you! Understand you are doing some great fly-fishing. What makes me think so? Heard them talking about it down at the Mission."

The following day I initiated the speaker into the secret art of hooking two fish on one fly, and we captured

A BIG DOLLY VARDEN TROUT,

known in Montana as bull trout. But it did not make as game a fight as its black-spotted relative, and after its first mad bull-like rush it threw up its hands, so to speak, and came to the net like a stick. In its first rush, this red spotted "bull" wound the line round and round a sunken bush,

but my companion unwound the line with skill and patience, during which process the great trout could be distinctly seen swimming slowly about unmindful of the hook in its jaw. Since then I have caught larger fish and had many an exhilarating fight with the speckled beauties of the Selkirk, Rocky, and Cascade Mountains, and the far Northern waters in the wilderness northwest of Lake St. John in Canada; but the memory of none of them affords such exquisite pleasure as the recollection of my first black spotted trout taken from the waters of Sin-yale-a-min in the snow-capped Mission Range.

HE DIDN'T HOLD HIS MOUTH RIGHT—A FISHING INCIDENT IN THE ROCKIES.

The "sky-pilot" stood, in a St. Lawrence rowboat, awkwardly balancing himself with one gyrating arm.

The parson's boat was anchored where the swiftly rushing waters of a mountain torrent made countless eddies and a miniature whirlpool as it forced its way into the greenish-blue waters of Lake McDonald.

"Good-morning, Mr. Stanley!" exclaimed the sky-pilot, addressing my guide. "Can you tell me, my good man, why these

AGGRAVATING JUMPING PHILISTINES

refuse my lures?"

"You don't hold your mouth right, sir," replied Stanley, in a mock-deferential tone.

"My mouth?" screamed the little dominie. "What in the name of—of—er—common sense has that to do with fishing?" But the backwoodsman deigned no reply.

It would be difficult for me to explain exactly what Stanley meant by his sarcastic remark; but it was plain to see that the buckskin man did not approve of the sky-pilot's "get up."

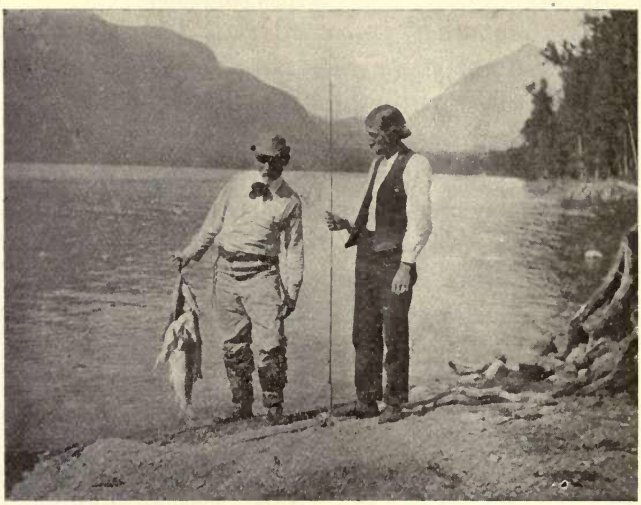
On a bunch of grass in the bottom of the canoe lay

A FEW TWELVE-INCH TROUT,

the result of some random casting during the progress of our journey up the lake to the river's mouth. Our catch was by no means great enough to permit of boasting on our part, and after Stanley's ungracious reply to the little minister I felt that we must sustain our assumed superiority at all hazards.

"SURE, IT'S UP AGIN' US

to show fish; but we'll get 'em all right, or my name is not George Stanley. Unhitch that leader and string o' flies, and drop 'em in the water in the bottom of the canoe to soak awhile," said the backwoodsman. "There, that's the ticket! Now I'll show you a trick that'll open that gospel-sharp's eyes," continued the mountain man as he produced a stiff piece of wire from some mysterious source, and using one of the boulders for an anvil and a



STANLEY, THE AUTHOR AND A STRING OF TROUT

small stone for a hammer, proceeded to make a couple of circular loops in its otherwise straight length.

In a surprisingly short time Stanley finished his contrivance and had one of our twelve-inch trout strung on the wire. The loops in the iron prevented the trout from sliding up to line or doubling up on the wire.

A GANG OF HOOKS

was attached to the end protruding from the mouth of the trout, and another gang to the end protruding from the tail of the fish. A swivel from a spoon-hook prevented the line twisting.

I have used all sort of artificial lures and flies,

have fished with angle-worms, grubs, helgramites, crawfish, frogs, and minnows, alive and dead, but never before did I use twelve-inch trout for bait.

Scarcely had my guide paddled our canoe into the rapids before I felt a mighty strain on my line. "Hold on a minute, Stanley; my hooks are fast to the bottom!" I cried.

"WULL, PULL THE BOTTOM ABOARD,

then," was the complacent reply I received. But now my line was crossing the stream at right angles, and my reel was singing like an August cicada in a phœbe-bird's mouth, and I knew that even the bottom of an eccentric Rocky Mountain stream could not yank a line around like that; my poor little fly-rod was bending like a rib of a seventy-five-cent umbrella in a gale.

"Don't paddle so blamed fast!" I shouted. But Stanley knew his business; the canoe was almost stationary, and it was only the swiftly flowing water which gave the appearance of speed to the craft, and deceived me into thinking that the canoe was rapidly traveling up-stream. To tell the truth, I had not had much confidence in my guide's plans, and the strike took me so completely by surprise that it is a wonder that

I HOOKED THE FISH.

But after the first shock of astonishment was over I entered the fight with my frame thrilling with the

delicious joy of that subdued excitement which all anglers know and appreciate, and for the sake of which they willingly undergo suffering, hardships, and peril.

In due time Stanley was dexterously sliding the landing-net under the exhausted fish as it floated alongside of the canoe.

"Good boy!

YER HELD YER MOUTH JIST RIGHT

that time!" cried the mountain man as he triumphantly held the big red-spotted Dolly Varden trout aloft, to gaze upon before consigning it to the bottom of the boat.

"Hold out your hand," commanded my guide, and when he observed that my fingers trembled, notwithstanding the most strenuous effort on my part to hold them steady, he smiled approvingly, and remarked, "I wouldn't fish with a man who could land a big un an' not have palsy when 'twas over; such a man don't appreciate sport."

IT WAS A NOBLE FISH,

two and a half feet in length from the tip of its quivering tail to the extremity of its gaping jaws. We had now drifted quite a distance down stream, but Stanley resumed his paddling, and guided our craft so that in its course up stream my line swung under the overhanging willows of the steep shore. Again my little rod was bent into a circle, and my reel sang sweet music in response to the fierce

bull-like rush of one of the spotted savages of the cold glacier waters.

THE UNUSUAL SIZE OF MY BAIT

and the swiftly plunging water were enough in themselves to try a sensitive rod, and you may imagine the effect of adding a big bull-trout to the strain the tackle already had to bear; it made lively times, and was an experience to cause the hair on the nape of a tenderfoot's neck to rise with excitement at the mere thought of it.

An hour or so later, as our little canoe was drifting down to where the sky-pilot could still be seen thrashing the water with his frayed-out flies, Stanley made me disengage the dead bait, remove the gangs of hooks, and cast the wired fish overboard. I was then directed to affix my leader with the flies attached, after which the mountain man selected a bull-trout of about two feet in length, which still showed signs of life, and hooking one of my flies in the lip of the captured fish, he gently dropped it into the water.

"IT WILL COME TO IN A FEW MINUTES,"

explained my guide, and it did. We were drifting among the eddies near the sky-pilot when I felt my fish tug at the line. Just then the dominie hailed us with the inquiry, "What luck, good friends?"

"Ah, only so so—not biting well today," replied Stanley, in a discouraged tone, but with a twinkle in his eyes. By this time I was beginning to have

fun with my resuscitated trout. This attracting my guide's attention, he, in simulation of wild excitement, began to shout such advice as this: "Gosh all hemlock, man! hold yer mouth right! Keep the tip up. Don't snub him! Look out now! Mind yer mouth!" and many similar directions. We made a fine show, and I played the half-dead fish in such a careful manner, taking advantage of every swirl of the current to let my reel run, that it might have deceived even a more expert angler than the little parson.

The sight of the two-foot fish brought forth an exclamation of delight from the sky-pilot which softened my heart and

MADE ME FEEL GUILTY.

We were now close to the St. Lawrence skiff, and when the dominie caught a glimpse of the string of great fish in the canoe bottom, he nearly collapsed, and as soon as he could find his voice he softly said to himself: "Dear me! Dear me! *and on a fly*

WOMEN ARE ALWAYS THE BEST FISHERMEN.

too!" Then, as a sudden thought seemed to strike him, he cried: "Good gracious, gentlemen! How *did you* hold *your* mouths?"

In the lower part of New York, where the Brooklyn Bridge crosses the narrow streets with its arches, there was formerly a number of taxidermists' shops, and there are still some left in that neighborhood. There was one store occupied by Mr. Wallace. It was

A DARK, MYSTERIOUS PLACE

filled with pungent odors and uncanny objects, as like as not one would find a heap of dead animals, trophies of the hunt, in the passage way. The gloom of the store took as many fanciful shapes as one's bedroom does when one has the nightmare. There were huge gorillas, great serpents, terrible nondescript animals. These things were, however, real, while those we see in the nightmare fade away when we open our eyes. When I say the queer things in Wallace's shop were real I do not mean that they were alive, I only wish to convey the idea that they were real, substantial objects and were specimens of

MR. WALLACE'S SKILL AS A TAXIDERMIST.

The giant gorilla skin was never worn by a live gorilla, but formerly clothed the back of some bears. In truth there was nothing in connection with this giant gorilla which came from a real animal of this kind. The teeth which gleamed in his ugly mouth formerly were the pride and power of

an African lion. But nevertheless it did have a realistic appearance and resembled a real gorilla; it is today probably being exhibited by some side-show and heralded as the genuine article. Mr. Wallace's principal business, however, was not making groups of strange animals for side-shows, but skillfully mounting real animals' skins in as good an imitation of nature as did any of the taxidermists of his time. If the shop was gloomy, mysterious, and uncanny, it did not in any particular partake of the nature of the proprietor, for Wallace himself was a long-bearded, genial old soul, a man of wide experience and a most interesting person with whom to talk. Whenever he received some new or strange creature it was his custom to send me word and I would journey down to his shop to make sketches and take notes. One day Wallace sent word that he had

A PARROT FISH DOWN AT HIS SHOP

which he thought might make an interesting sketch. I was very busy at the time on some rush work, and so I asked the wood engraver, in the office next to my studio, if he would not go and get the parrot fish for me at noon. He was a good fellow and readily agreed to accommodate me, but after he produced the fish it took a long time for me to convince him that I had no idea of the size of the fish and no intention of playing a practical joke when I asked him to get it, and it is doubtful if he ever was thoroughly convinced. I

thought the parrot fish was a small creature about the size of a shad, but as Mat, the engraver, said: "It was as long as a plumber's bill and as fat as a police captain," and he had toted that blamed thing on his shoulder from Ann Street along Broadway to Dey Street.

HE CAUSED GREAT HILARITY

and a brilliant flow of witticisms among the crowds that he passed, and when he reached my studio his face was red with anger and chagrin, which was increased by the burst of laughter with which I greeted him and his big parrot fish. It may be that before Mat died, he had forgiven me for the joke he thought I played upon him, or it may be before that time that the good fellow really believed that it was an accident and that I had no more idea of the size of the fish than he had. The incident, however, served to teach us both not only the size of a parrot fish but incidentally their habits and general appearance. Since then very much smaller live specimens have been exhibited at the New York Aquarium, but this one of Wallace's was a "sockdologer" and a real

AMERICAN PARROT FISH.

There is probably no more curious and beautiful fish in American waters than this great green fish, yet, after having spent nearly a day in a diligent search at the library, the writer was unable to find

any account of it beyond the bare mention of the fact that such a fish existed, but there were many careful drawings and accounts of the European scarus, a smaller and less elegant creature inhabiting the Mediterranean Sea, but since Mat went fishing on William Street, the United States Government has printed numerous beautifully illustrated books of our fishes.

The Wallace specimen came from Campeachy Bay, Mexico, and was, when this was written, owned by Mr. Blackford, of Fulton Market. It measured, from tip of its beak to tip of its tail, three feet one inch, and its greatest vertical width was thirteen inches. In form the fish is not unlike the common "sheepshead"; its dorsal and caudal fins terminate in long points, and the other fins have the same tendency. There was no way of ascertaining its weight, but when alive it could have weighed not less than forty or fifty pounds. The most striking peculiarity of this fish is its dental anatomy. Its odd-looking mouth or beak is composed of a bony structure of a bluish-green color, excepting the teeth upon the cutting edge, which are white and polished. These teeth, from the outside, have the appearance of being rather long shingle shafts set edge to edge. Upon the inside, however, their compound structure is at once detected; the cutting edge of each jaw is composed of about fourteen irregular scallops or undulations, each of which is composed of about eight well-defined teeth, with five or six very indistinct ones as

a base. The four teeth which form the rim are white; the four crowded below are tinted with green, making a pretty green and white mosaic work; the green gradually grows darker until it merges into the uniform color of the bony beak or jaw.

THE TEETH OF FISHES

offer a more striking series of varieties than that of any other animal. First, the sturgeon and the whole order to which it belongs is without teeth; the myxinoids have only a single tooth; and, lastly, are those fish whose mouths are filled with countless numbers of fangs or points as the pike. The dental organs are always an important and almost a sure key to the habits of an animal; for from the form, construction, and position of the teeth an accurate and definite conclusion can be reached as to the kind of food eaten. So in the curious arrangement of the mouth of the parrot fish we see that the teeth grow in crowds, new ones being always ready to take the place of the old ones that are worn away, from which fact it would be natural to infer that the teeth are much worn in masticating the food, and that the food must be hard. This reference is proved to be correct upon learning that their food is the corals that cover the bottom of the sea like a brilliant garden of many-colored flowers. The sensitive little creatures upon which these fish feed, retire when touched into their calcareous suits of armor, and

the fish must therefore be provided with suitable instruments for crushing their prey from their stony coverings.

Although we may laugh at the ignorance and superstition of the ancients when

THEY SAID THAT THE PARROT FISH COULD TALK,

and declared that it had the habit of sleeping at night and ruminating by day, we must acknowledge that there was some logic in their method of reasoning, for the parrot fish certainly browses upon the corals much after the manner of ruminating animals, and until a comparatively recent date corals themselves were believed to be vegetables and the little creatures that inhabit them to be the flowers.

Cuvier was of the opinion that the parrot fish of Adrovandus is the species celebrated by the ancients, by whom it was endowed with most wonderful qualities and intelligence. They asserted that he was a sort of good Samaritan,

GOING ABOUT DOING GOOD

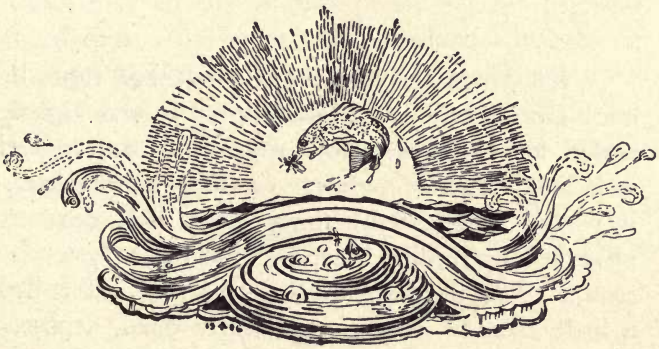
to his neighbor by releasing all unfortunate fish found entangled in the nets set for them by their enemy—man. It was also believed that this species alone among all fish slept at night and had the power of chewing its cud like cattle. The parrot fish was highly esteemed as a delicacy, the flesh was said to be tender and palatable. They were cooked like woodcock—without removing the intestines—

and are so cooked and served to the present day. Elipertius Optatus, commander of the Roman Fleet in the time of Claudius, sailed to Greece with the object of obtaining large supplies of these fish with which to stock the Italian Seas.

So "there is nothing new under the sun." Even Seth Green, our great and enthusiastic piscatorial culturist, but followed in the path trodden by the ancient fish culturists many hundred years removed.

I told all this to my obliging friend, Mat the engraver, but Mat said, "Cut it out! I'm through with parrot fish, even the newsboys in the street shouted as I passed:

'GET ON TER JONAH AND THE WHALE.' "



CHAPTER XXVI

LIZARDS, NEWTS AND SALAMANDERS

A HEADLESS SNAKE STRIKES THE AUTHOR—TEST OF THE FETISH—THE STORY OF BILLY WHO IS HAPPIEST WHEN HE IS BLUE—HOW HE CAME BY MAIL—WAS ASPHYXIATED—ATE MEAL WORMS—LITTLE RED "BILLIES," BIG RED "BILLIES," SPOTTED "BILLIES," AND SLIMY "BILLIES"—A WATER "BILLY"—A GREAT MYSTERY—THE DOUBLE LIFE OF THE VERMILION SPOTTED NEWT—HE EATS HIS OLD CLOTHES—ONLY COMES OUT AT NIGHT—EASY TO KEEP IN CONFINEMENT—THE CAROLINA ANOLIS—CAUGHT A BLACK ONE AND FOUND I HAD A GREEN ONE—COLOR CHANGES OF AN AMERICAN CHAMELEON—GREEN ITS FAVORITE COLOR—WONDERFUL ARRANGEMENT OF ITS FEET.

A few years ago there was a package came by mail from Natchez, Mississippi. It was tightly sealed, but had a suspicious appearance, and looked as if it contained some sort of natural history specimen, but whether the thing inside was dead or alive, fish or reptile, there was but one way to discover. The package was opened and out rolled a little lizard. It was apparently dead, asphyxiated from its long confinement without air, but when laid on the window-sill where the breeze blew over its little gray body, it soon began to show signs of life. A letter following the package told me that the thing was a pet and its name was Billy.

I do not know the common name for this lizard, but its long scientific name is Sceloporus undulaytus and Billy was a male specimen of this lizard as anyone could tell by the markings under his chin and upon the sides of his belly. When Billy felt good the spots under his chin turned blue; when he felt fine and was in buoyant spirits they were a brilliant sky blue; in other words, Billy just reversed the scheme of color we human beings have. When we're feeling fine we say we have a *red* hot time, and when we're feeling bad we say we're having the *blues*. Billy was happiest when he had the blues. I kept him for a year or more and he used to rattle around my studio among the papers, scamper over the wire screen in the windows, and catch flies on the window-pane, but his principal food consisted of meal worms which I bought for him at the bird fanciers. My little girl was a tiny baby when Billy arrived, and had just learned to talk when Billy died. The consequence of this is that now that she is five years old, every newt, salamander and lizard is called by her a Billy, and she distinguishes them only by the color. There are little

RED BILLIES AND BIG RED BILLIES,

and spotted Billies and slimy Billies, and these are the names commonly used by all the visitors to Wild Lands. The little red Billy is the vermilion-spotted newt or red eft; an exceedingly interest-

ing little creature and very common in the mountains of Pike County.

After a rain one may pick up hundreds of them on any mountain trail, path or wood road, and from the time little Barbara was able to creep she has taken great delight in gathering red Billies, and each year we bring home a lot with us to the city, where they live on some damp sphagnum moss in a fish globe in apparent contentment all winter. Down in the lake among the lily pads there is a

WATER "BILLY,"

in other words an aquatic vermilion-spotted newt. Surrounding these two newts and their life history there is a great mystery. It is claimed by Professor Simon Henry Gage of Cornell University who has written an exceedingly interesting paper on the subject, that the vermilion-spotted newt deposits its eggs upon water plants and stones in the water. The eggs are sticky and adhere to the plants and stones until they are hatched. The young live in the water for a while and then leave it and take to the land. When they take to the land they are known as the vermilion-spotted newts, and by the country people as the

LITTLE RED "LIZARDS."

I have kept the vermilion-spotted newts all winter and they did change their color and assume the yellowish brown of the aquatic specimens, but I

could not induce them to live in the water. However, they may not have been ready for that change of environment, and my experiment proves nothing, but anyone interested in solving this problem can easily do so by keeping a lot of vermilion-spotted newts in a box, the bottom of which is covered with moss which must be kept damp. By introducing fresh moss you will introduce new food

SKETCHES OF NEWT SKINNING ITSELF

supply for the little creatures, for the moss will be full of all the little worms and insects which make their home in the damp carpet of the woods.

I have kept the aquatic newts in aquariums for a year or more, but never had one show an inclination or indication of changing its former

habits to that of a land animal. But I did succeed in making some interesting sketches of one of these creatures in the act of removing its skin, which are here reproduced. The sketches were very rapidly drawn, but are perfectly accurate as far as the pose and action of the creature is concerned. Fig. 1 shows a newt with

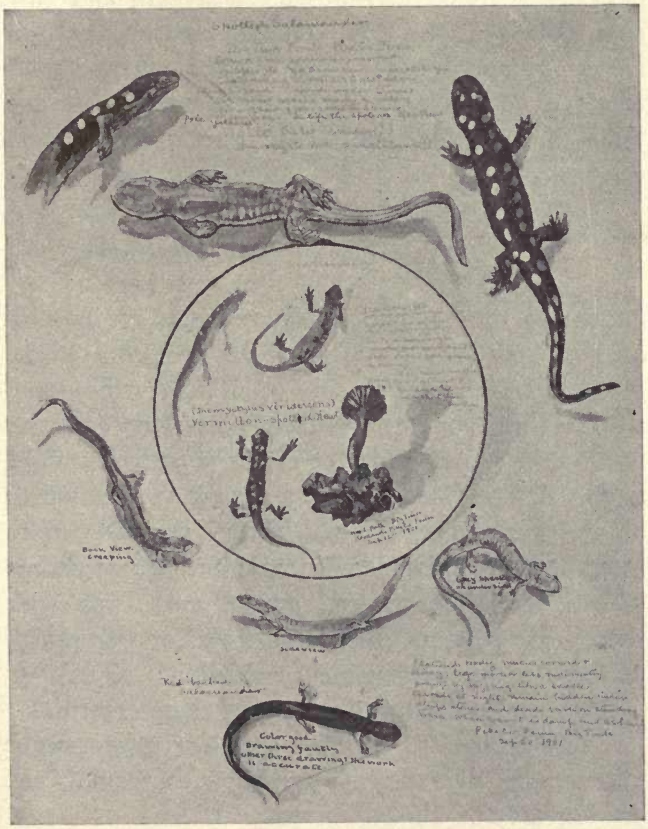
THE SKIN ROLLED BACK FROM ITS HEAD

over its arms pinioning them to its side. This was as I first discovered it; by a series of wriggling motions the creature squirmed out of its skin until the arms were free, and the fold of skin bound its waist like a tight belt, as shown in Fig. 2.

STILL SQUIRMING

and writhing the slippery little body worked its way out of its tight-fitting clothes until it had rolled its shirt, so to speak, back over its legs as may be seen as shown by Fig. 3. The hardest part of the work was now over; it seemed an easy matter for it to work its skin down to its tail, and then a funny thing happened; the little animal bent itself in a circle, as shown by Fig. 4, took the old skin in its mouth and pulled it off from the end of its tail, wrong side outwards, of course, just as you would pull the finger of a kid glove from your own finger, Fig. 5. I was interested to know what it was going to do with its old suit of clothes; whether it would donate them to some aquatic

orphan asylum, send them to the missionaries or sell them to some subaqueous ragman; but little Red Spot had a better way of disposing of its cast-off garments and that was by simply swallowing them, as shown in Fig. 6.



THE SPOTTED SALAMANDER

is much larger than the vermilion-spotted newt,

and specimens which I have measured, ran from five and one-half to six inches long.

THE SPOTTED SALAMANDER

delights in living in the muck and mud and only comes out at night. The one which I kept in captivity for about a year fed on angle worms. It was not very lively, and if it was guilty of any interesting performances they were done while I was asleep.

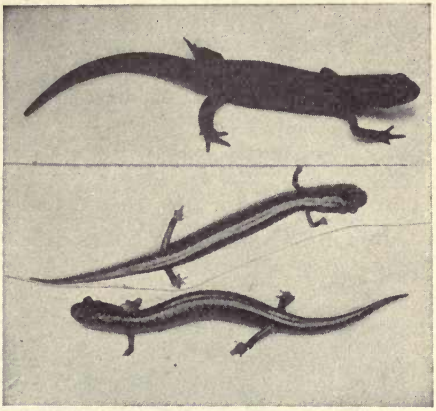
THE LITTLE BROWN SALAMANDER

known as the red-backed salamander, on account of a reddish brown streak extending from its nose along its back to the tip end of its tail, is very plentiful in the woods of Pennsylvania. It lives under sticks and stones and wet rags, in rotten stumps, under damp fallen leaves, or any place which affords moisture. Its life history is unknown to me, but it makes a good companion in a collection of the vermilion-spotted newts, and lives with these little creatures, if not on terms of friendship, at least as an inoffensive companion.

To supplement my drawing of these creatures I have introduced some most excellent photographs taken from live specimens, and with them is the photograph of the

RED SALAMANDER.

This must not be confused with the vermilion-spotted newt, as it differs from it in both size, habits and appearance. It is of a brilliant vermilion color, disagreeable to handle because it is very slimy whereas the little red efts are not at all unpleasant to handle and not in the least slimy. The red salamander shown here was about six inches long, covered with black spots and extremely lively. It also is nocturnal in its habits, but the one we kept in confinement would come out of its concealment much more frequently than did its dark-colored, spotted companion. The drawings reproduced here in half-tone were made in colors, but to reproduce in colors all the numerous illustrations in this book would add so much to the expense as practically to put it out of the reach of boys and young people for whom it was written.



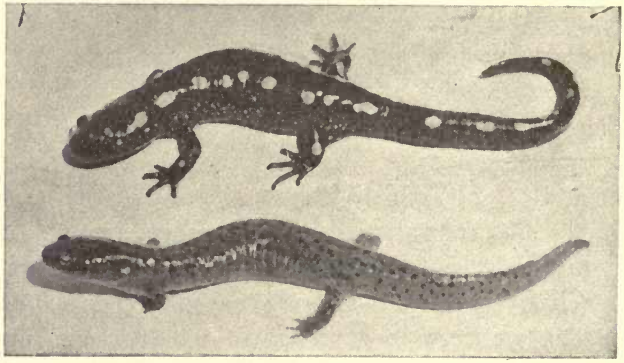
Upper Picture.—RED EFT OR VERMILION-SPOTTED NEWT.
Lower Picture.—RED BACKED SALAMANDER.

I have already said that I knew very little about the

LIFE HISTORY OF THE COMMON SALAMANDERS,

newts and lizards, and from my experience in re-

ferring to technical books on the subject I think there is a great deal yet to be learned. Labor follows the line of the least resistance in the study of Nature as well as in all other fields of work; consequently the majority of Nature students choose birds. Birds are popular, easily seen. You can lie on the grass under the shade of a tree to watch them and take notes of their habits, but you cannot



1. THE SPOTTED SALAMANDER.
2. THE RED SALAMANDER.

BURY YOURSELF IN THE MUD

and muck of the swamp to study the habits and life history of the spotted salamander. Neither can you bury yourself in the cold ground around the spring hole and live under the sphagnum moss while you make notes of the red salamander; but you can very easily keep all these creatures in confinement, and here is an opportunity for any

AMBITIOUS BOY NATURALIST

to make careful and accurate observations and notes of these creatures which will not only be interesting for himself, but his discoveries will be of importance enough to give him a reputation and standing even among the grave old scientists.

Everybody, however, is familiar with the appearance of

THE AMERICAN CHAMELEON

or the green Carolina anolis.

Perhaps the first creature that attracts the eye of the Northern naturalist upon landing at Florida is a small, slender lizard, which appears omnipresent, to be seen running up and down the walls of the old fort at St. Augustine, peering in at the windows of the hotel at Palatka, scampering over the logs of the swamp at Tocoi, or scrambling along the garden fences at Jacksonville. It may also be seen exhibited for sale along with young

ALLIGATORS, WILDCATS, BLACK BEARS,

and many other queer objects to be found in the jewelry stores at Jacksonville.

The specimen from which my illustrations are made I captured at Tocoi. When first taken it was of a sooty black, five minutes afterwards, when I opened the handkerchief in which I was carrying it to show my prize to a friend, I was amazed to find, in the place of the dark, dingy

little creature I had wrapped up, a beautiful emerald green lizard. It was only then that I discovered my specimen to be the so-called American chameleon. I was somewhat ashamed of my ignorance until I met a certain collector from Michigan, who had gathered quite a number of what he took to be distinct species of lizards, and had carefully preserved them in spirits, only to find upon inspection, that they were all exactly alike in form and color, all having assumed a yellowish-brown tint after immersion in alcohol. Those that I kept in captivity proved very gentle pets, and would run over my hands waiting eagerly for me to catch flies for them. Although quick in their movements, and able by the help of their tail to spring quite a distance, these little animals never could capture the flies for themselves unless I first crippled the insect by removing a wing. They loved the sunshine and fresh air, the latter they would swallow occasionally in great gulps, expanding a sort of pouch under their neck by the process.

THOUGH GENTLE WHEN TREATED WITH KINDNESS,

when tormented they would fight, opening their mouths in a ludicrous manner. After trying in vain to bite a lead pencil, with which I had been stroking its back and otherwise plaguing it, one of them deliberately

SHOOK OFF ITS TAIL,

and scampered away, leaving three-fifths of its length wriggling upon the floor, where it continued to twist for some time. A drop or two of blood moistened the stump where the tail had been, but though the loss of the latter appeared to cause no physical pain the little cripple seemed

ASHAMED OF ITS ODD APPEARANCE

and hid itself in corners. It remained in my room for a month longer, but I seldom caught sight of the disfigured little thing.

It is

THE COLOR CHANGES

of this little creature that attract and interest all observers.

The negroes and even intelligent white inhabitants of the district frequented by the anolis, tell many fabulous stories of its wonderful powers in this respect. Experiments with specimens which were in my possession at different times seemed to demonstrate that pea-green, gray, and sooty black and reddish-yellow were the limits of its powers. When frightened or pleased

IT TURNED GREEN;

if agitated for some time, in apparent indecision, the color would fade and return in blotches. Under an ordinary magnifying glass it could be seen that the hollow around the eyes changed first. Then the hexagonal plates upon

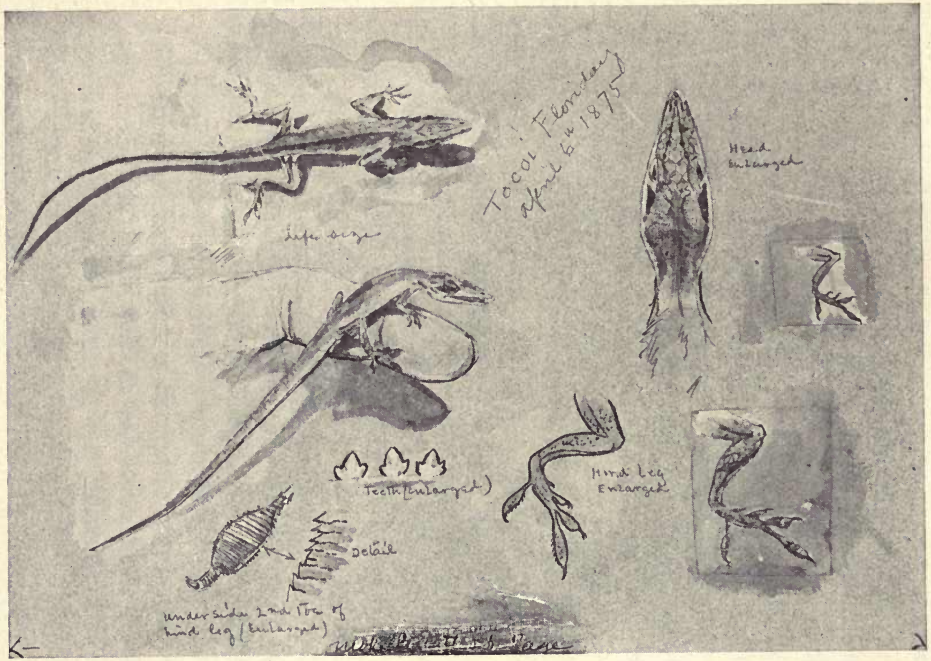
THE HEAD SHOWED THE COLOR,

commencing at the edges and gradually spreading over each plate, the centers being the last points to turn. If a number of these animals are placed in alcohol they will be found to assume a dirty yellow or brown tinge. This is probably the natural hue of the skin with the coloring matter removed. The pigments appear to be contained in a network of vessels beneath the skin, and to be somewhat, though not altogether,

UNDER CONTROL OF THE ANIMAL.

One, placed upon a bright crimson cloth, did assume a reddish-yellow color, and though it did not approach the brightness of the cloth, a casual observer would hardly have noticed the lizard motionless upon it, but I doubt that the color of the cloth affected the color of the anolis.

Green is its favorite color, and black I never saw but in one instance. When hiding in the Spanish moss or upon a tree trunk it is often gray in color, but this may be accidental; yellowish-red it assumes with apparent effort. It sometimes was very near the color of a cigar box. From tip of nose to tip of tail it measures from five to six inches, the tail being three-fifths of its total length. The head is rather large, triangular in shape, apex at the nose, and covered with small hexagonal plates from the nose to just behind the eyes. The rest



SKETCHES OF LIZARDS

of the body is covered with small papillous points; the nostrils are near the apex of the nose; the animal has no apparent external ears; it has bright, intelligent, almond-shaped eyes; large mouth, ten well defined teeth upon each side of the upper jaw, four well defined teeth in the lower jaw, the intermediate space being filled with minute points; and four well developed legs, five toes upon each, each toe swelling out into a soft pad, terminating in a hooked claw. The pad or middle of the toe,

UNDER THE MAGNIFYING GLASS,

shows an odd arrangement of folds or flounces in the skin, each flounce, tuck, or fold being armed upon its edge with minute points, one-half of them pointing up and the other half down, as shown in the illustration. This explains the creature's ability to run up or down the side of a house with equal facility.

In the illustration I have shown the lizard upon my finger, with mouth open; the dark color representing its favorite green hue. At the bottom in the moss is the same animal in its gray coat. In the same place appears a magnificent view of the teeth, the second toe of the hind foot much enlarged, showing the peculiar arrangement of the folds of the skin upon the under side, and an enlarged view of the hind leg, and the head as it appeared under the glass while changing its color. But in making the half-tone cut for this book almost all the drawings were reduced.

CHAPTER XXVII

SNAKES AND SNAKE STORIES

LOOPING THE LOOP, OR HANDCUFFED BY A BLACK SNAKE—BITTEN BY A RATTLER—WATER SNAKE PULLS ITS OWN TAIL OFF—SNAKE EGGS WHICH HATCH INSIDE THE MOTHER—RING SNAKES, GREEN SNAKES AND RED BELLIED SNAKES—SQUIRREL TORMENTS A BLACK SNAKE—LEGEND OF EVE'S WEDDING RING—SLUG-EATING SNAKES—A TURTLE, A MOLE AND A ROBIN UNABLE TO EAT A SLUG—SENSELESS HORROR—GREAT JUMPING JERUSALEM, OR THE POLICEMAN AND THE PYTHON.

I owned a little pocket image of the Sacred Ape. It was sent to me from India by a missionary friend of mine, who jokingly said, that it was a very powerful fetish and if properly treated could perform magical feats. We had been fishing, my friend and I, we had been very lucky with bass, pickerel and trout; each time before we cast a line I took the sacred monkey from my pocket and mumbling a string of meaningless words over its head I implored it to give us luck. My friend became very enthusiastic over the monk, as he called it. This being his last day at Wild Lands, he solemnly asked me to get him a rattlesnake. At that time, although I had occupied Wild Lands for a number of years, I had never seen or heard a rattlesnake in the neighborhood, or any other

part of the country around; so fearing for the reputation of my sacred monkey, I began to explain that it wasn't a good season for rattlesnakes; that we had had bad forest fires in the spring, and so on. We were trudging along a dusty road and my guest insisted upon sitting right down there in the dust, going through an incantation, and asking the ape to produce a rattlesnake. I reluctantly consented, telling my friend at the same time that this was a very severe test, for I did not believe there was a rattlesnake in the township. We both sat down, however, in the dusty road and I drew a magic circle with my finger, and put the poor old ape from Hindoostan in the center, and as solemn as any priest of the ancient gods, went through the mummeries. Now here is where luck favored me. We had not gone a quarter of a mile when we heard a locust singing in a huckleberry bush. When you hear a locust in a huckleberry bush, it isn't a locust you hear at all, but a rattlesnake. By locust I mean the cicada, or harvest fly, which is commonly known as a locust. I looked around at my friend and he was stepping as high as if the snow was three feet deep. His eyes were as big as saucers. I told him the snake wasn't in the road where he could see it, it was in the huckleberry bush; I then cut him a switch so that he might kill the snake without injuring its skin. Bless your soul! He did not hear a word I said to him, but when I pointed out the snake to him in the huckleberry bush he snatched a big club and would have

beaten it to a jelly had I not restrained him. The snake was killed and I cut off its head. It is customary in Pike County, Pennsylvania, always to cut off the head of a dead rattler and put it under a stone where no harm can come from foolish people or children meddling with the poisoned fangs. I then reached for the snake for the purpose of skinning it, but no sooner did my fingers touch the body than it instantly assumed a striking pose; although I instinctively jumped away

THE SNAKE STRUCK ME

on the wrist with the bloody stump of its neck. It almost seemed as if the headless body not only possessed nerves, but also sight. However, I'll leave this act to be explained by men who make a study of these things.

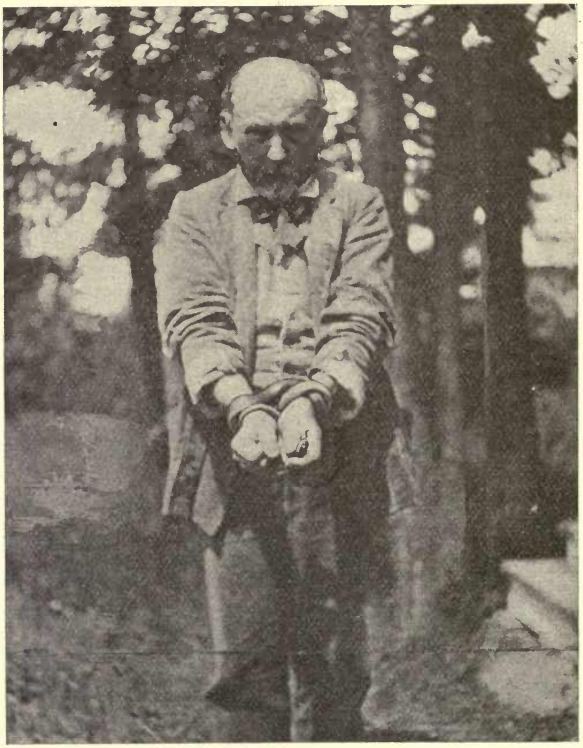
LOOPING THE LOOP.

While out in the woods during the early summer I became much interested in the tree-climbing snakes, and while making some colored sketches of live specimens I was surprised at the facility and rapidity with which these snakes could tie a knot with their bodies, and also the strength they exhibited. In a recent issue of *Recreation* there was a note telling how a young man of Bohemia, Pike County, Pennsylvania, was

BITTEN ON THE HAND BY A RATTLER.

What interests me in connection with this subject

is not the fact of Jim's being bitten by this venomous reptile, if he was really bitten, but that when the snake wrapped around his arm and he grasped



HANDCUFFED BY A SNAKE

it by the neck it had sufficient strength to pull itself loose from his hand, which fact caused the accident. I know Jim, and he is a powerful young backwoodsman, with muscles of iron, and even

though his hold might not have been the best, it must have required phenomenal strength on the part of the snake to pull loose from his grasp. I would have been more surprised at this and inclined to doubt it were it not for the fact that last summer I grasped a water snake, which was creeping under a rock, by the tail and attempted to hold it until some one should remove the stone; but the snake pulled so hard that it left the tail in my grasp and itself disappeared under the stone. I have never heard that the water snake has been noted for its strength, but I have since discovered that this snake can squeeze with more power than any snake of its size which I have handled. When coiled around one's wrist the common, banded water snake "Moccasin," by which I mean the Tropidonotus fasciatus sipedon, the common water snake of the Northeast, can coil so tightly and use such muscular force as to be very uncomfortable. It can also make an ugly bite, although I have been careful not to have any personal experience in this line. They are not poisonous, but I do not enjoy being bitten just for the fun of the thing even by non-poisonous serpents. In the colored plate accompanying this chapter the reader will see drawings of the young water snake which was alive when taken from the egg, also a colored picture of the eggs, as they appeared when taken from the body of the snake, like a string of big amber beads, and a separate drawing of one egg

showing the young snake coiled within. There is no picture of the parent snake for the reason that she was mashed to a jelly by a large stone from the hand of a heroic (?) man. I baited a fish-hook with one of the young snakes and made a cast from the pier on which the snake was killed. The bait no sooner sank in the water than it was devoured by a large sun-fish which I landed and then threw back. Had there been a bass or a

TOP VIEW OF SELF-TYING KNOT

pickerel there at that moment, it would probably have taken the bait as readily as did the sun-fish. The interesting point about the accompanying sketches is that the drawing of the young snake shows two heart-shaped appendages, which have

all the appearance of rudimentary paddles, corresponding to the hind limbs of a reptile.

When fishing on Big Tink Pond these water snakes will steal one's minnows if they can gain access to the pail. I once set a patent minnow trap for bait and the next day found no minnows but

THREE VERY PORTLY WATER SNAKES

inside the trap.

It is the habit of the native fishermen when fishing for catfish at night to cut off the heads of the captured fish, skin the bodies and throw the head and skin into the water. Any one acquainted with the flat, broad-mouthed catfish knows how wide the head is in proportion to the body of the fish. One day I discovered one of these water snakes in the act of swallowing a large catfish head. I carefully retreated, and secured my camera to photograph the reptile, but a little snake-killing dog named Jip discovered the water snake before I had the instrument focused, and pouncing upon it he shook it literally to pieces.

When making these sketches of the little green snake which I attempted to hold with one hand while I sketched with the other, it

WOULD SWING ITS TAIL

around until it struck my pencil or some other object, and then, with a motion quicker than that of the most expert Jack Tar, it would throw a hitch around that object, or a knot, which could not

be pulled loose without endangering the parting of the snake's body.

In Pike County, Pennsylvania, in the neighborhood of Wild Lands, there are two kinds of green snakes. One species of the snake is the keeled, and the other is the smooth or the grass snake. Any boy can distinguish

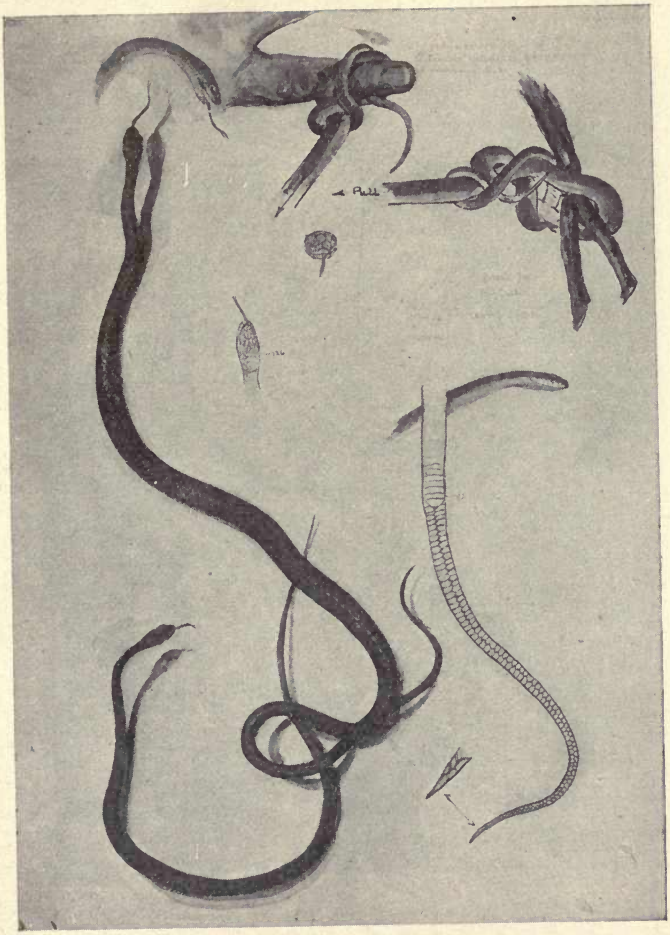
THE DIFFERENCE BETWEEN THESE TWO SNAKES

as soon as he takes them in his hand. They are perfectly harmless, and seldom attempt to bite one. The only time I ever had one attempt to bite me happened while I was trying to sketch one shown in the accompanying illustration. Some ladies from the Forest Lake Club, stopping to make a call at my camp, interrupted my work, and while I was talking to them one of them gave a scream and exclaimed: "Mr. Beard, that snake is biting your thumb!"

The snake was trying to escape from my hand, and I unconsciously squeezed it too hard for its comfort, and the poor little thing tried to free itself by biting my thumb, but, as may be imagined, the bite that I could not feel was not a very serious bite. Let us, however, return to the difference between these two snakes.

THE KEELED GREEN SNAKE

has a little ridge on each scale, like the keel of a boat, and the smooth green snake or grass snake has none.



THE HARMLESS GREEN SNAKES

In the "Serpents of Pennsylvania," by Prof. H. Surface, the keeled green snake is only reported from Lancaster and Dauphin counties. In the magnificent Reptile Book by Raymond L. Ditmar, the author says of the keeled green snake:

"Although widely distributed this reptile does not range so far north as the other green snake. Its habitat is from Southern New Jersey southward through Florida and westward to the Mississippi in the northern portion of its range. In the South, it extends westward to California. It occurs in Northern Mexico." From which it appears that they have not before been reported as far north as Wild Lands. Unfortunately, my specimens of both kinds were carelessly allowed to escape before the drawings were finished. The truth is that I was more interested at the time in their

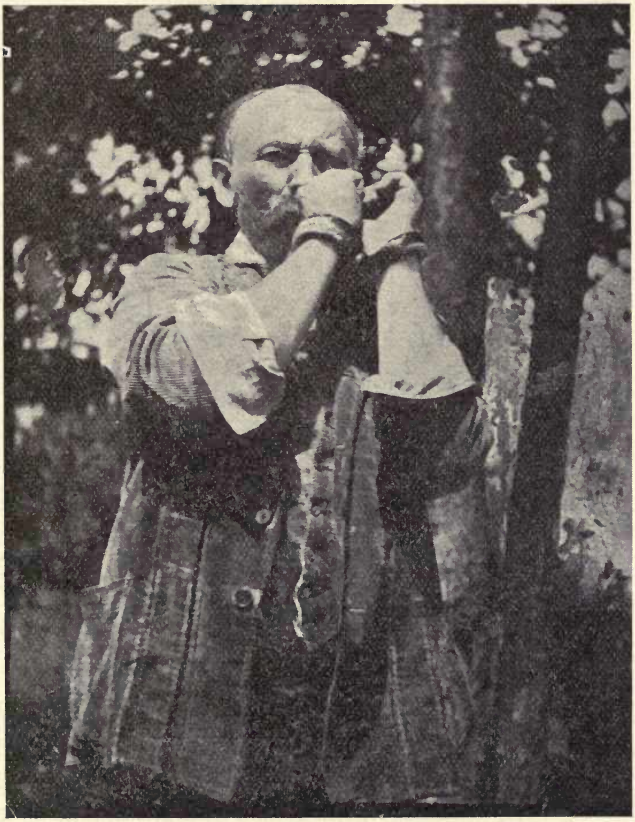
ABILITY TO TIE KNOTS WITH THEIR TAILS

than in making a record of the range of the different species, but I can positively state that I picked up a specimen of the keeled green snake, which I found sunning itself in the middle of the road leading from Forest Lake Club to Wild Lands.

While engaged in this work my nephew captured

A LUSTY MOUNTAIN BLACK SNAKE,

and I got my camera ready, focused it and put it in the hands of one of the party, and then tried



VIEW OF UNDER SIDE OF KNOT PULLED TIGHT BY THE SNAKE ITSELF

the experiment to see what the black snake would do with my two hands when his tail touched them. The result is depicted in the accompanying photographs.

IT HANDCUFFED ME

in less time than it takes to tell how it did it. In fact, its movements were too quick for me to accurately tell just how they were made, but by taking a series of photographs of different views I succeeded in getting some pictures which will explain the operation better than I can by words.

The first photograph shows my nephew

HOLDING THE SNAKE BY THE HEAD

the moment after its tail had touched my arm, and, as may be seen, my hands are securely tied together. (on p. 404.)

The second photograph shows an upper view of the snake in my hands.

The third photograph shows an under view. In each of these two photographs I forcibly kept my hands apart so as to show the manner in which the knot was tied. In the last photograph you can see how completely I was handcuffed, after

THE SNAKE HAD DRAWN THE KNOT TAUT,

by this living manacle. Of course, I do not want the reader or anyone else to think that I was

unable to free myself, because I have strength enough, and any ordinary man has, simply to pull his hands apart and tear the body of the little reptile asunder; but had its body been made of metal instead of flesh no handcuff invented by man could have held me more securely.

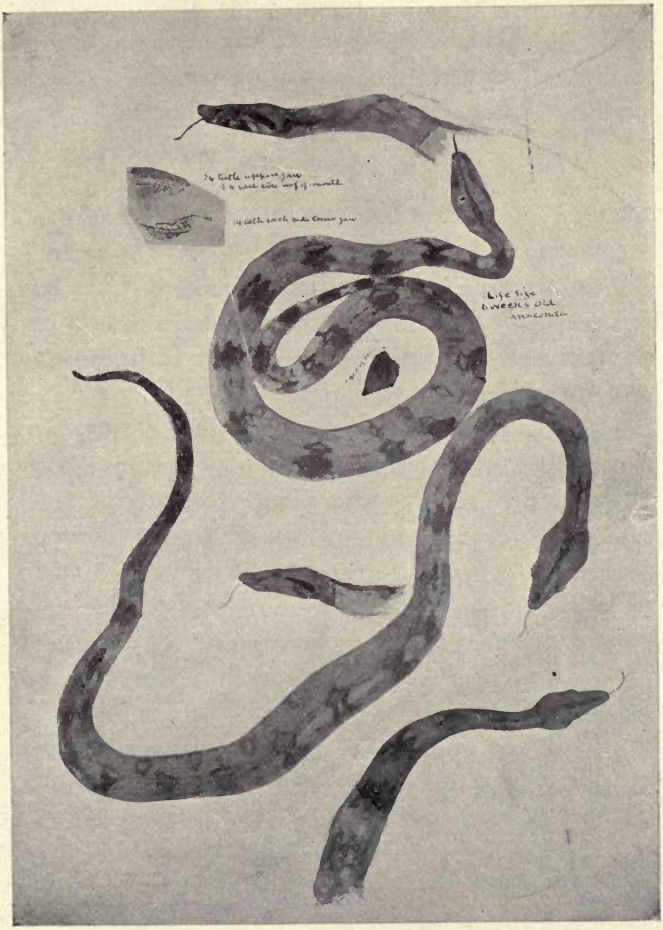
TO KEEP THIS SNAKE FOR FUTURE OBSERVATIONS

I threw him in a large receiving cage, which was made of a piece of wire netting, bent into the form of a cylinder, and covered top and bottom, and in which I put any small live things which I captured and needed for observation. It was what in olden days the showman used to call a "happy family" that occupied this cage, but the happy part represents only the showman's way of putting things. There was a flying squirrel in this cage, and he took a malicious delight in tormenting the black snake. The serpent was a cautious hunter. He would move around so slowly that the motion was scarcely perceptible, in his attempt to gain a vantage ground from which to strike and capture his tormentor, and his care and woodcraft deserved success, but the quarry was shy and wise with the wisdom of the wood folks, and if the black snake could strike quickly the squirrel could jump even more swiftly than the snake could strike. Time and time again the squirrel crept chattering down the sides of the cage until he had tempted the black snake to spring at him—if you can use such

THE SNAKE WAS FORCED TO OPEN UP KNOT AND SHOW BETTER ITS CONSTRUCTION

(Note the knot on forearm)

THE SNAKE WHIPS ITS TAIL AROUND MY WRIST



A BABY SNAKE FROM SOUTH AMERICA

an expression to designate the motion, which was simply a sudden straightening out of a loop made in the shiny black neck—and, although the snake's motion when attacking was apparently as rapid as that of the shutter of a camera,

HIS POOR NOSE

would come with a bang against the hard, unyielding wires, and the squirrel would be in the top of the cage ready to repeat the manoeuver. At last, in sheer pity for the snake's wounded nose, I took the reptile by the tail and pulled him from the cage and tossed him down on the damp ground under the ferns, where he might find life, liberty and the pursuit of happiness without the company of flying squirrels. He was a fine specimen of black snake. Every motion of his glistening body betokened strength and grace, and I was very anxious to make a careful study of him, for I have none among my sketches, but, because of the unceasing persecution of the flying squirrel, I liberated my model and allowed it to escape.

I will not vouch for the absolute truthfulness of the following story, and I fail to recollect seeing anywhere an account of a jewelry shop in the Garden of Eden, although all accounts mention

ADAM AND EVE AND THE SERPENT.

But this is a new version of the serpent incident. It seems that after Adam and Eve had lived

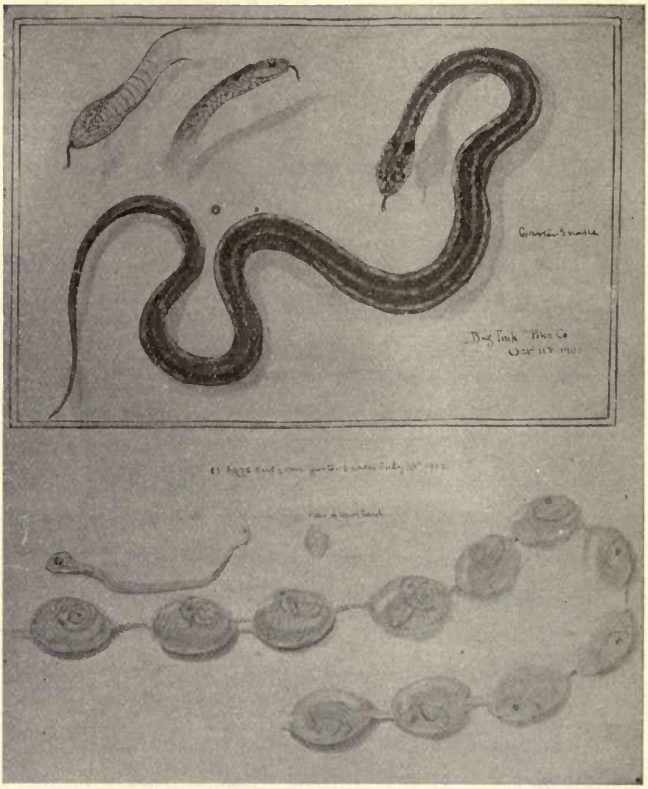
happily for some time together Eve had a yearning for an affinity, or possibly her life was too monotonous, and things ran too smoothly in the Garden of Eden; the life there lacked excitement and was absolutely devoid of gossip. At any rate, so the story goes

EVE MET THE SERPENT

one day when Adam was not with her. Of course if Adam had been a man of pluck and had been present he would have taken a stick and killed the snake as his descendants have been doing ever since, but according to the legend Adam was mooning about somewhere else in the garden when he should have been at home with his wife. The serpent, taking advantage of Adam's absence, twisted himself up in such beautiful spirals and made such pretty compliments that he completely won the good lady's heart. Then it was that he boldly asked her for her wedding ring. "But you have no hands," exclaimed Eve, coquettishly, "and having no hands you have no ring finger. What shall I do? Shall I slip it over your tail?"

"No, no," replied the serpent. "It would be in the way there. Slip it over my head and I will wear it as a necklace."

Eve did as she was bid and to this day you can find Madam Eve's wedding ring of shining gold



GARTER SNAKE AND ELEVEN EGGS CUT FROM IT

ON EVERY RING-NECKED SNAKE.

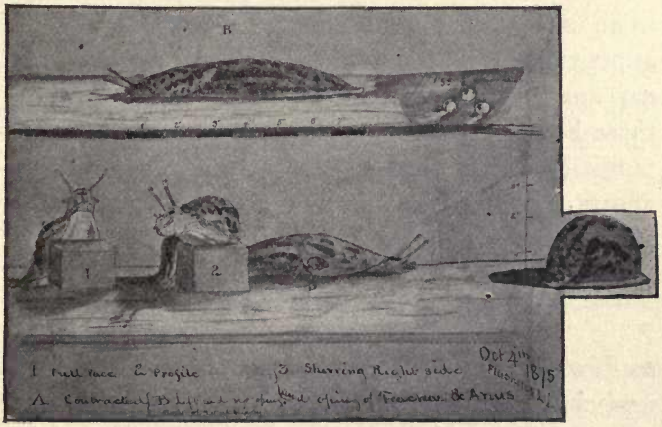
On the same colored page with the water snake and the eggs, you will find some drawings of the ring-necked snake and its eggs. This is a gentle, inoffensive little reptile and like the green snake it may be handled with perfect safety. While clear-

ing a piece of ground near Wild Lands for the purpose of erecting a cabin I was picking up the stones and casting them in a heap we used for a foundation. In a space fifty by fifty feet I found over a dozen of these little snakes. If they are as plentiful as this all over the country a little calculation will show you what immense numbers of these little insect-eating creatures inhabit the unimproved land.

Snakes are very much more plentiful than the majority of people imagine, and some varieties are

TO BE FOUND EVEN IN OUR CITY STREETS.

The little brown snake known as De Kay's snake, from which the drawing on page 422 is made, I picked up on the sidewalk on Amity Street, in Flushing, Borough of Queens, New York City. I



FOOD OF THE LITTLE BROWN SNAKE

have often found these snakes in my cellar and the flower-beds of our yard. It was not until Ditmar's book was written that people knew that there were snakes living wild even in Manhattan itself. The De Kay snake eats slugs. Now this interests me very deeply because I have made

SOME EXPERIMENTS WITH SLUGS

as an article of food. I tempted a pet robin to try one, but the slime from the slug entangled the bill and legs of the little bird, like a strong spider web, in such a manner that the bird would have perished had I not personally and with some difficulty freed it from its bonds. I next

GAVE A SLUG TO A PET TURTLE.

It was a small turtle, a little smaller than the saucer to an after-dinner coffee cup, but it had a voracious appetite, and a firm conviction that it was able to eat any live thing that wiggled. After two or three bites at the slug its head was completely entangled with the slime. The turtle made desperate efforts with its front feet to free itself, the only effect being that of entangling its feet in

THE SAME STRINGY MUCOUS WEB,

so I was compelled to take the turtle out of the aquarium, and carefully remove the slug slime. It was a sadder and a wiser turtle that I returned to

the aquarium. I next caught a garden mole. As I had always been taught that moles fed upon angle-worms and grubs, I reasoned that it might like slugs. The mole did make an attempt to eat the one I offered it, but I never freed the mole from the slime, the reason being that the stuff seemed to drive the animal crazy, and it escaped.

With its funny nose held high in air the animal tried to run across the lawn, making no attempt to burrow in the ground, but uttering a series of rat-like squeaks, it disappeared under some bushes in the corner of the fence, where I was unable for some time to find it. Although uninjured by me the mole only lived a short time after it was rescued.

Slugs will eat the vegetables in your garden and I imagine do considerable

DAMAGE TO THE FLOWER GARDENS,

for in New Orleans I noticed upon various occasions people engaged in killing slugs which they found among their flowering plants. It is the only creature of which I know that can be

CAUGHT BY PUTTING SALT ON ITS TAIL,

and that seems to be the regular method of killing them in the South.

The reason for this digression from the subject of snakes is the fact that if any of these little snakes eat slugs it would appear that it might be

cheaper to cultivate snakes in your garden than waste your salt upon the slugs. The little

RED-BELLIED BROWN SNAKE

shown on the colored plate is a pretty little creature very nearly akin to the De Kay snake; is absolutely harmless and also makes a valuable addition to your flower garden.

THE SENSELESS HORROR

which so many people have of all snakes is almost as foolish as the habit that some others have of frightening nervous people with these creatures. Little children and even nervous grown people have been made seriously ill, sometimes with fatal results, caused by unthinking boys running after them with snakes in their hands or

THROWING THE REPTILES AT THEM,

which reminds me of an amusing incident which occurred to myself. A friend of mine brought me from South America

A BABY CONSTRICTOR,

which I kept for some weeks in my studio, but each man who visited the studio seemed to delight in tormenting the poor snake, so one cold winter day when I started for home I put the

SNAKE IN MY OVERCOAT POCKET

and put my fur glove on top of it to keep it warm and then promptly forgot all about it. At James' Slip I bought an evening paper, went aboard the ferryboat, entered the cabin and took my seat about in the center of the long bench against the cabin wall. Under this bench there were a number of steam pipes used for heating the cabin and they often made the seats uncomfortably warm to sit upon. We had gone about half way on our journey from James' Slip to Hunter's Point, as the landing at Long Island City was then called, and the man on my left looked at me with the most peculiar expression on his face, then quickly got up, crossed the cabin and sat down upon the opposite side. I would have thought nothing of this had not the man upon my right behaved in the same manner; then a big, fat woman who was next to him hurriedly left her seat to take one upon the opposite side of the cabin. There was a full head of steam on in the heating pipes, and I at first thought that the bench was

GETTING TOO HOT FOR THESE PEOPLE,

but that fact did not explain the look of indignant horror with which each one greeted me as they left their seats. I was not responsible for the steam pipes nor the excessive heat. When at last I was left alone on my side of the cabin, and found all the passengers upon the opposite side staring

at me, I felt embarrassed. I tried to read my paper, but I could feel all those eyes boring through the paper. I twisted my mustache, wiped off my chin, pulled down my vest, and went through all the motions a man does when he is embarrassed, but derived no relief from it. At last I stood up to rearrange my clothes, and in spreading my coat-tails preparatory to seating myself

MY HAND STRUCK SOMETHING COLD.

Looking down at my pocket I saw about a half-yard of snake sticking out and swinging backward and forward with vibrating tongue, fascinating my fellow-passengers. I hastily thrust the snake back in my pocket, put the other fur glove on top of it, regained my composure and proceeded to read my paper. Over in the starboard corner of the cabin I noticed a friend of mine, a frequent visitor to my studio, he was convulsed with laughter, but I paid no attention to him. The next day as I was standing on the bow of the same boat with a group of gentlemen, all returning from their day's work, among them was the man I had seen in the corner of the cabin the night before, and he entertained the crowd by a very humorous account of the occurrence, ending up by saying: "I bet five dollars

HE'S GOT A SNAKE IN HIS POCKET

now." With that he thrust his hand in my overcoat pocket and

INSTANTLY UTTERED A YELL

which could be heard across the East River. He had not won his bet; there was no snake in my pocket, but on my way to the ferry I had passed through Fulton Market and Eugene Blackford, the fish merchant, had called me into his office to show me some extraordinarily large crawfish. As I left he presented me with one, and having no better place to carry it I put it in the pocket of my coat.

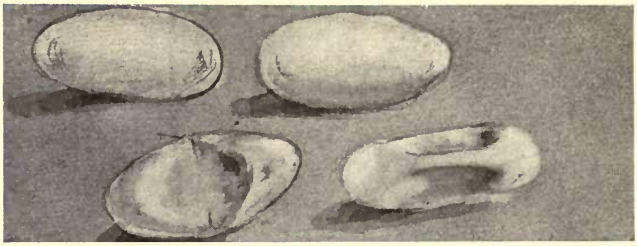
THE CRAWFISH

was as large as a young lobster, and its claws were as strong. With its sharp, muscular pincer fastened on my friend's finger, it brought the blood, made a painful wound, and taught him to keep his hands in his own pocket. As the gentleman was a Wall Street man, this lesson did not seem very inappropriate.

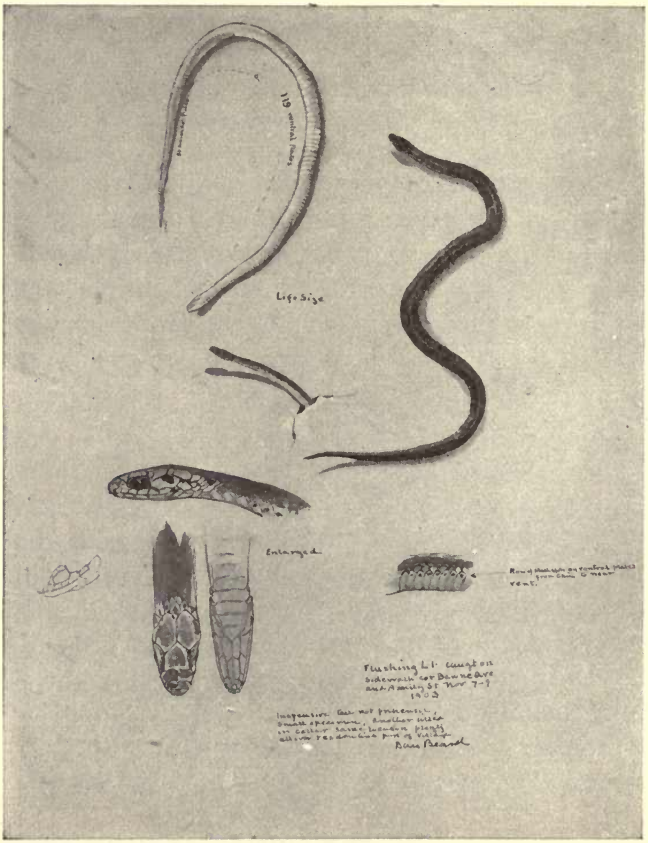
In all the foregoing illustrations of

SNAKES' EGGS,

all but one of those represented hatch inside the mother snake, the young being born alive; but in the last illustration are shown four eggs of the milk snake. These eggs are laid like a hen's egg and hatch like turtle's eggs. On the 16th of July, the milk snake which we had, laid six oblong white eggs with leather-like shells, which, as they became dry, sunk in at the sides as shown by the



THE MILK SNAKE LAID SIX OBLONG MILK-WHITE EGGS WITH LEATHER-LIKE SHELL



LITTLE BROWN SNAKE WITH DETAIL OF PARTS

lower two in the drawing. The upper two show the eggs the exact shape and size they were when laid.

While speaking of the exact size, it may be well to call the attention of the reader to the fact that all the original drawings of small creatures in this book are made exactly life size, but have been reduced in photo engravings to suit the size of the book. The original drawings are all made on sheets of paper ten inches wide by fourteen inches long. These proportions will help you to get the correct size of the objects shown.

THE RED-BELLIED SNAKE

shown in the illustration was caught in July and contained seven eggs. In one of the water snakes there were thirty-three eggs and in the one killed on August 19, from which the drawings on the colored plate were made there were only eighteen eggs.

Pike County has the reputation of having more snakes in it than any place in the United States, especially rattlesnakes, but in twenty summers spent roaming around the woods, swamps and quarries, I have never met but five live rattlesnakes. Once I was on my way with my field glasses in hand to the shore of Big Tink Pond. I had heard the old eagle across the lake whistling. All of us "Pikers" have learned to know this bird by the name of Uncle Sam. When he's up to some mischief, this

old eagle always gives some preparatory whistles before he can decide upon action, so when I heard him, I grabbed my glasses and started for the shore of the pond. As I was hurrying along I was conscious of

SOMETHING MOVING ALONGSIDE OF THE PATH,

and as is my habit under such circumstances I immediately stood perfectly still, then turned my head very slowly and carefully to search for the object. As I looked around I saw within a few inches of my foot a beautifully spotted

YELLOW AND BROWN SNAKE

which I at first glance mistook for a milk snake, then I noticed the snake's head and it was that of a rattlesnake. More careful inspection disclosed the fact that

THE SNAKE'S TAIL WAS VIBRATING

in an alarming manner. There was not the least doubt of it. The snake within a few inches of my feet was a rattlesnake, which had just shed its skin. We had had incessant rains for more than a week and although the snake moved its tail as rapidly as possible the rattle would not rattle; and no noise that I could hear proceeded from it. I have often heard that rattlesnakes during continued wet weather

CAN MAKE NO NOISE WITH THEIR RATTLE,

but this is the first instance of that fact coming under my observation. This snake made no attempt to strike me, although I stood perfectly still within a few inches of its nose, but I was less fortunate in my next encounter. I had been over to Forest Lake Club and was walking back through the short-cut trail when I saw a yellow-billed cuckoo in the path, and walking sideways to get a better view I suddenly heard

THE DRY BUZZING NOISE OF A RATTLESNAKE;

turning around to locate the sound, I was just in time to see the pinkish white mouth of the villain as he struck viciously at my legs. I gave an involuntary grunt and jumped backwards. The snake's nose struck my trousers with considerable force, but strange to say its fangs did not catch in the cloth.

Immediately after the attack the snake fled into the underbrush; I followed, but when I stopped to pick up a stone, the reptile had disappeared and I lost it.

"DON'T TREAD ON ME."

It is the only time that I ever felt like killing even a snake; but it was not the snake's fault, for had it not attacked me it would have been trampled upon the next step I took. It only defended itself.

One day I was hurrying down to catch the James' Slip Ferry; passing through Roosevelt Street I approached the wild animal store which used to be there, and was astonished to see a big policeman with a sudden leap dash into the store.

Anticipating an adventure, I followed close upon his heels, but when I reached the interior the animals all seemed quiet in their cages and the proprietor was seated on a low, flat box in the middle of the floor. No one was excited but the guardian of the peace. The big policeman's eyes were as large as those of a giant squid; turning to me he said: "Did you see that?"

"What?" I asked.

"Great jumping Jerusalem! Didn't youse see it?"

"No," I replied. "I'm afraid that I was too late; what was it?"

"Why," said the excited policeman,

"THERE WAS A SARPENT LOOSE

there wid a body as thick through as me own, and as long as a fire engine hose."

I looked warily around the shop to see if the "sarpent" was not hid in some dark corner, but there was not a snake in sight. A belted peccary near the door was eating peanuts; a mangy monkey with a pathetic face was busy picking dust out of a crack in the floor in the rear of the store; the birds, raccoons, white mice, and guinea pigs,

were busy feeding or scratching themselves.

I turned to the policeman. "Officer," said I,

"WHERE IS THE SNAKE?"

"In that box," he replied, pointing to the one upon which the proprietor was seated.

"When I jumped into the door," said the officer, "the big sarpent was right over there. It was coiled up ready to strike and held its head six feet from the floor; it opened its mouth as wide as I can open my hand, and then sprung right at that man. What did he do? Why he just struck out and ketched the snake by the neck and with the same motion of his arm swung the thing around and brought it ker-slap into that box, then before the snake knowed what it was doing, he clapped the board on the box and sat on it."

"That's just where I came in the store; but honest, officer, how big was that snake?"

"HE'S A PRETTY BIG ONE,"

said the proprietor. "He's a python, a new one that has just come in. He made his escape from the box before I noticed it. But you can have a look at him," and with that the man got up, and began to lift the board from the box, but before he could do so the policeman and I both made a bolt for the door.

"Oh! hold on," said the man, "they're all quiet now, they will not hurt you;" and with that he

removed the lid from the box displaying to our astonished view not one, but half a dozen immense serpents. They were not as long as a fire engine hose nor had they the girth of the portly policeman, but they were as large as any that I had ever seen, fully large enough to excite my respect. I asked the storekeeper if they were not very heavy, and he invited me to take hold of one and test its weight. I started to do so, but the snakes began to move in the box and I suddenly remembered that

I MUST CATCH THE JAMES' SLIP FERRY!

On June 3rd. Mrs. Beard and I went after blue lupin with a pick-axe with which to dig, and an old pan tied to a string as a cart in which to haul the plants home. In front of our next-door neighbor, Willis P. Sweatnam, my wife screamed, "rattlesnake!" Looking quickly around, I saw a beautiful large black snake; the next moment I saw another one alongside of the road. We passed on and left them, but, on our way back we saw them again; one ran into Sweatnam's wall and another ran ahead of us down the road, and I took after it, and after a hot chase, caught the snake and discovered why my wife thought it was a rattlesnake. It had a way of vibrating its tail like a rattlesnake, and when it did this among dry leaves the sound was alarmingly similar to the dry rattle of the rattlesnake.

SAVE ALL LIVE HOOP-SNAKES.

I received a very interesting letter from a man in the State of Washington, who claims not only to have seen

TWO HOOP-SNAKES,

but to have killed one himself. Unfortunately he requested me not to publish his letter and I must hold such requests sacred. It can be said, however, without fear of contradiction, that there are probably many—very many people—who have seen, not only hoop-snakes, but have seen the hazel-rod turn in the hand of a diviner and point to the water beneath, though we are of the opinion that the water would have been found just the same without the mummery of the forked hazel twig and its appeal to the aid of the old god Thor. Hoop-snakes, hazel-rods, lucky stones, horseshoes, and the thread of red worsted which the old peasant woman still ties to her cow's tail before sending it out to pasture, all these are heirlooms from the faith of our superstitious ancestors, who lived in a world in which fairies and gnomes, hobgoblins, witches and mermaids,

THE UNICORN AND THE SEA SERPENT

played a very real part.

Under the fierce, cold electric light of this age of scientific investigation, these things in which our

ancestors believed so implicitly have no place except in books of folk-lore, or in children's books, where the hoop-snake may find a congenial companion with

MOTHER GOOSE'S COW,

that jumped over the moon.

Yet I freely acknowledge that I love Mother Goose, Baron Munchausen, and all their family and friends, and am in sympathy with the New York *Sun* when it says:

"It is a cheerful belief that it would be a pity to discard into the lumber room of the things that once held faith. The most appreciative account of the water finder's rod is in Dr. Herbert Mayo's work, 'Letters on Truth Contained in Popular Superstitions' (London, 1851). The work is most cordial in its tone towards these old beliefs of the lowly, and is a mine of curious information."

A very interesting and complete account of old superstitions probably more judicious than the former, is Folkard's "Plant-lore, Legends and Lyrics."

Since so much has been said about the hoop-snake it may be well to give a correct description of it so that if any of my readers have been drinking too much coffee or in any other manner have upset their nerves, so that they dream of snakes, they may be able to recognize the celebrated hoop-snake when it appears. The hoop-

snake according to the best authorities wears a horn on the end of its tail. No one has correctly described its color, markings, or teeth, but they have all been particular to describe the horns. Hoop-snakes frequent hilly countries; I don't know how it gets up a hill, and have never seen any description of this act. Somehow or other it is always at the top of a hill, and prefers one with a steep road. When it sees anyone approaching, it sticks its tail in its mouth, makes a hoop of itself and commences to roll down hill with a greater speed than a coasting bicycle. This is the time for you to wake up; if the snake reaches you, it will let go its tail, and

STRIKE YOU WITH THE POISONOUS HORN

with fatal results. Down South when a hoop-snake rolls down hill and is disappointed in not finding any victims, it will strike a tree with its horn, and the tree immediately withers and dies. You will find plenty of people to vouch for the truthfulness of this account, and many who would be willing to make affidavit that they have seen one of these snakes. Nevertheless the snake and the mermaid, and the devil's darning-needle that sews up your ears, the swallows that sleep in the mud all winter, the poisonous swifts and centaurs belong in the same nature books with the unicorns and fiery dragons. These are all exceedingly interesting creatures, but they must be understood as existing only in Nemo's Dreamland.

CHAPTER XXVIII

FROGS, TOADS AND SOME GRAY-HAIRED LIES

AMBROSE PARÉ'S TOAD YARN—WERE THERE NATURE FAKIRS IN THE GARDEN OF EDEN?—GEORGE WILSON WALLS UP A TOAD—LIVE FROG SIX HUNDRED FEET UNDER GROUND—THE TOAD'S EYES SHONE WITH UNUSUAL BRILLIANCY—WAS PLINY A NATURE FAKIR?—DR. BUCKLAND'S EXPERIMENTS—THE AUTHOR'S BULLFROG—FROGS DEVOUR OTHER FROGS, INSECTS AND ANYTHING THAT WIGGLES—FROGS WILL NOT WILLINGLY EAT DEAD ANIMALS—BATTLE BETWEEN FROG AND MOUSE—FROG ATTEMPTS TO EAT A GREAT HORNED OWL—GIGANTIC TOADS OF SWAN RIVER—A TOAD STONE OF MACDONALD RIVER—A TOAD WITH THREE FRONT LEGS AND A TOAD WITH THREE HIND LEGS—COWS WITH SIX LEGS—NEW ZEALAND FROG WITH SIX LEGS—TWO-HEADED TURTLE—FREAK FISHES—A DANIEL BOONE LAND TORTOISE—AN INTEMPERATE TOAD—PHOTOGRAPHING A TOAD IN THE ACT OF SINGING—TOAD CATCHES GOLD FISH—HOW LONG DOES A TOAD LIVE?

There have been so many nature fake stories told about frogs and toads, and these stories have been received with such faith by even intelligent people that it makes it dangerous for one to tell the truth. For a well established lie is much preferred by the multitude to an aggressive self-seeking truth, and the lies about frogs are many of them so old and venerable that we must treat them with deference and respect for fear of shocking the sensibili-

BIG TINK TOAD.

ties of our readers. As an example, there is an account of old Ambrose Paré, who should have been a scientific man because he held the position of chief surgeon to Henry III. of France, but Paré really belonged to the hoop-snake crowd of scientists. Paré said that while he was overlooking a quarry, he saw a man break an exceedingly hard and large stone, and discovered in the middle of it a very big and very lively toad. This is not the first time this lie has been told. Adam probably told it to Eve, and maybe the stone that David used had a toad in it. On the 21st of May, 1793, a man named George Wilson walled a toad up in some masonry upon which he was at work, and it is claimed that sixteen years afterwards the toad was found still to be alive. The truth is that an ordinary toad will not live in a dwelling house more than two or three days at the most; the toad needs moisture and will dry up if confined to an ordinary living room; this any of you can prove by experiment.

SOME INTERESTING FROGS

Early in 1862 a man claimed that six hundred feet under ground in a nine-inch bed of coal he found a live frog. The frog was probably there and got there the same way as did the man. In 1731 a toad was found in a heart of an oak tree near Natz. Some cheerful story tellers about forty years ago claimed that while working on the Hattlepool waterworks, they found a toad embedded in a solid block of limestone. "The toad's eyes shone with unusual brilliancy," as well they might. The creature continued for some time in the possession of Mr. Spence Horner, President of the Natural History Society, but I find no record of Mr. Spence Horner's vouching for this story.

Nevertheless, people will go on believing in these wonderful toad stories for hundreds of years to come. The great and learned Pliny was as credulous as is a small boy of today, and some of his nature fake stories have gone down through the centuries and are still accepted as truth by many people, yet any one can by experiment, prove the fallacy of these stories. Over a century ago members of the French Academy by experiments proved that neither frogs nor toads could live in air-tight enclosures. Miline Edwards, early in the nineteenth century enclosed some frogs in air-tight vessels. The frogs, of course, turned up their feet and died. A certain Dr. McCartney put a toad in a vessel and covered it with a piece of slate and buried it in the ground, but the slate admitted both air and moisture, and at the end of two weeks the

toad was discovered to be perfectly well. The same toad put in an air-tight vessel and buried for only a week's time was found to be so very dead that no one cared to make a minute examination of it. Dr. Buckland made some experiments in 1825 with the same results. The many experiments, however, have proved that frogs will live and thrive for a considerable length of time if kept moist and damp; even though they are buried at considerable depth, without any visible food supply and in complete darkness. I once kept a large bull-frog for several years. It was one sultry day in the summer of 1879 that I sent a boy down to a Fulton Street aquarium store, to secure me a model for a picture which I had received a commission to paint; the boy returned, bringing with him a most peculiar individual.

A pair of bright gem-like eyes and a blunt nose, together with a broad, tightly closed mouth, made up a countenance not to be easily forgotten; and his odd-shaped head rested closely upon his shoulders. Add to this a pair of short arms terminating in hands of four fingers each and disproportionately long legs, to which were attached very broad feet, and you have before you a picture of my model.

Although a musician by birth and occupation, he is known to the schoolboy as the bull-frog! The peculiar batrachian whose portrait adorns this book was quite a favorite, in spite of his previous bad character. Although a tyrant and cannibal, he

numbered among his personal friends many well-known artists and noted engravers, who gladly put aside their brush, pencil or graver for the pleasure of seeing the frog devour a crab, bug or bat that had been captured for him. An old fish globe was brought into requisition, and through its transparent wall the green prisoner stared at me as I wrote this account. The frog had fasted in this crystal prison for three weeks before it occurred to me that he might be hungry. To make amends for my neglect I spent almost half a day chasing blue bottle-flies around the room, but with indifferent suc-

OUTLINE OF RABBIT'S HEAD SHOWING COMPARATIVE SIZE OF TOAD

cess. However, I captured twenty-five of them, and one vicious hornet that had strayed in through the open window. All these were successfully swallowed by the frog in the most business-like manner. A pink, fleshy tongue would be visible and in an instant the insect would disappear. When he came to the hornet the frog appeared to think his food was rather highly seasoned, for he winked his eyes several times, if that term could be applied to the act of sinking his eyes down in his head and then popping them up again.

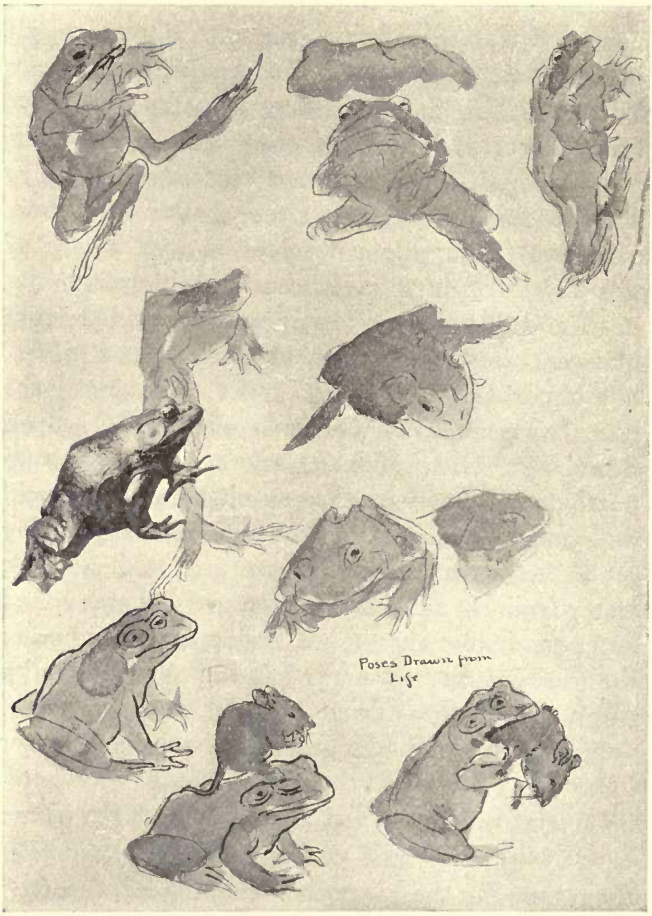
Next day he ate fifteen large flies, two big lively katy-dids, and two full-grown fiddler crabs. He had for dessert the same day a dragon fly and an ichneumon fly. I tried him with raw meat, but he could not be persuaded to touch it until a piece cut to resemble some insect with long legs was put upon a straw and dangled in front of his nose; this he instantly snapped up.

Insects, crustaceans, snails, and small animals, anything with life and not too large to be taken into the capacious mouth of this animal, are greedily devoured, even its own tadpoles and young frogs form a palatable viand for the parent.

Once I took a dead mouse and holding it in the globe, jumped it around to give it the appearance of life. Without hesitation it was seized and devoured by the frog before he discovered that he had been swindled by a corpse. He then opened his mouth and with his fore feet deliberately pulled

out the obnoxious mouse in a manner that set the spectators in a roar of laughter. Since then he has devoured many live mice with apparent relish, all of which he swallowed tail foremost, keeping up a lively kicking and scratching with fore and hind feet to prevent his prey from curling up and biting. Enough water is always kept in the globe to keep its inmate moist, but too shallow to drown a mouse. The wily batrachian is well aware of this fact, for it was not until nothing but the head and forefeet of the mouse protruded from between his jaws that he bent his head down, holding it and the mouse under water until the latter was suffocated before it was finally gulped down. Partly to make a more even fight and partly as an experiment to see what the frog would do under the circumstances, before putting in a large male mouse, we emptied all the water from the globe. Then ensued a chase; round and round went the mouse, trying in vain to scale the glassy walls, but never missing an opportunity to give the frog a savage nip with its sharp teeth. Round and round plunged the batrachian after him. Once he caught the mouse by the tail, whereupon the mouse turned and mounted the slimy back of his enemy and bit him severely; but quicker than thought the powerful hind leg of the frog swept the mouse from his back and dashed it viciously against the side of the globe.

The battle had commenced and lasted about five minutes, when by a lucky snap the frog got the



POSES ASSUMED BY MY MOUSE EATING FROG

mouse by the hind quarter, the little mammal burying his sharp teeth in the frog's nose. Then again did the milk-pond croaker exhibit an intelligence and activity which I had always been led to believe these creatures never possessed. He kicked with his hind legs and pawed with his fore legs with such vigor that that rodent had very few opportunities of biting. Once the mouse's teeth fastened upon the hind foot of the frog, causing him to turn two or three complete somersaults in his efforts to free himself. The mouse was so large that it was no easy task for the frog to swallow it. Slowly but surely, however, it disappeared, until nothing but the head was visible.

There being no water in the globe the frog could not drown it, so he did the next best thing—choked it to death by squeezing its neck until the poor rodent's bead-like eyes stuck out from its head, and life was extinct.

The globe in which the frog lived hung from an iron perch occupied by a great horned owl; one day I noticed that the frog was intently watching the owl above it. Presently the owl moved its foot and the frog straightened up its back in an attitude of interest and attention.

My esteemed friend, Mr. David Nicol, the well-known engraver, occupied a studio next door and I hastened in to tell him that

THE FROG WAS ABOUT TO EAT THE OWL

and that I wanted him as a witness, because no one would otherwise believe the story.

The old gentleman gravely accompanied me to my room and had no more than seated himself before the frog gave a leap and

GRABBED THE OWL'S FOOT

in its mouth. The astonished owl upset the perch, spilled the frog on the floor, broke the fish globe and several dollars' worth of plaster casts.

After quiet and order were restored the engraver got up to return to his studio, and as he did so he said:

"You had better not tell that story. You and I saw the frog make the attempt, but I don't believe it anyhow."

This is a splendid example of a so-called Nature fake, the frog *did* jump for the big bird, but the frog would jump at any small moving object and it had no idea that the thing it saw move above its head was in reality a part of a big owl. No frog would attempt to eat an owl, but any frog might make the same mistake mine did when it saw the foot move on the perch.

Mr. Nicol saw the frog's act and really believed it was trying to swallow the big bird, but he was afraid to vouch for the story, which he thought true, but it was *true only in appearance.*

While fishing for trout in the brook of the Flathead Reservation, Montana, and on the Swan River, I made the acquaintance of some of the largest toads that I have ever seen.

WILD LANDS PRODUCE TOADS

of generous proportions, but in the Rocky Mountain district the toads are gigantic, and their habits differ materially from our Eastern toads. The "hoptoads" of the East, as far as my observation goes, only frequent the waters at mating time in the spring or in the early summer, but

THESE WESTERN TOADS

seem to linger around the brooks and river banks all summer. They are great big gray fellows with a white stripe down the middle of their backs; they have not the least fear of rushing torrents, whirlpools and roaring waterfalls. During times of freshets, the wild Western streams sweep the trees from their shores, and so fierce are the currents that when the "whim" sticks are deposited in the form of driftwood along the shores of the receding water, they are completely denuded of their bark. Wherever a tangled lot of smooth, barkless driftwood is spread over the surface of a seething eddy there you are sure to find

INNUMERABLE TOADS.

I pushed some of them off into the rapid water of Swan River; that did not seem to alarm them, however, and not one was swept out into the stream, but every individual taking advantage of the eddies and back currents, succeeded in reaching the drift-

wood and climbing aboard again. What they were doing there I do not know, but from the abundance of Shad-flies, I supposed they were sharing these dainties with the trout. Once while in company with my camp mate, Mr. Frederick Vreeland, on the shores of McDonald River, we came upon a large gray boulder. It had a lumpy appearance like one of those conglomerate rocks known to the boys as

PUDDING STONES.

As we approached the object, a strange thing happened. It apparently began to fall to pieces before our eyes. Mr. Vreeland is a celebrated botanist and both of us have traveled and used our eyes while doing so, but neither of us are geologists. Nevertheless, we were both well acquainted with the ordinary characteristics of stones, and knew that it could not be the stone itself that was crumbling before our eyes. Closer inspection told us that this large stone had been completely

COVERED WITH YOUNG ROCKY MOUNTAIN TOADS,

which produced the odd effect by hopping away as we approached. We sat down and waited a considerable time in hopes the toads would return to their perch, so that we might photograph the stone with them on it, but they did not seem to trust us and at length we continued our way in the trail. Another peculiarity about these big toads I no-

ticed particularly in one which had taken its position under an electric light in front of a hotel on Lake Chelan. The light attracted

MANY LARGE BEETLES

and moths, which were gobbled up by the toad whenever they fell at his feet; but in approaching his quarry this toad walked around like a lizard, and did not hop, although the distance covered was often three or four feet at a stretch.

It often happens that frogs and snakes are born "queer," that is, they are fit subjects for museum freaks. I once owned a toad with

FIVE LEGS;

I charged a pin for each leg, that is, five pins, to see it, and did a big business; but here is the photograph of a frog with three hind legs that would have made my fortune. A frog is much more graceful than a toad and more difficult to capture, and all this gives him additional value as a drawing card for a show.

"FIVE PINS! FIVE PINS TO SEE!"

Five pins to see a five-legged toad! It was a genuine five-legged toad, that is, it had three fore

FIVE LEGGED FROG.

legs or arms, and two hind legs; one of its arms was rather thin but it was an arm, with all the bones and joints of the other arms, including a well defined hand.

All were satisfied with the show and went away conscious that they had had their money's worth; as for the showman, his blue roundabout fairly glistened, like a new paper of pins, with the wealth taken in at the door; over and over he explained to the audience that the slenderness of the third arm was on account of the lack of use because, the young showman confidently asserted, "Pa says that if I cut off one of the other arms then the toad will have to use the thin arm and it will grow big like the ones he uses now."

Then the showman would point out the elbow and hand and show how it corresponded not only with the toad's

TWO OTHER ARMS AND HANDS,

but also with the arms and hands of the showman himself and the spectators. "You see," he would continue, "you have a head, so has the toad; you

have arms and hands, so has the toad, only he has got three of each."

To feed

HIS COLLECTION OF TOADS

the young circus manager had gathered grasshoppers, but they hopped out as fast as he put them in the hole in front of the cellar window where he kept his collection of hoptoads; his mother would not allow him to destroy the sod by digging angleworms. Therefore he went to the grapevine in the back yard, which he called his pasture; there

HIS COWS

chewed the edges of the big, broad leaves all day long and at night spread their light wings and flew to other pastures to visit other cows. All his stock looked alike; they were of one color and one size, yellow cows, with black spots on their backs like two rows of buttons; wings were not the only things these cows possessed that made them differ from other cattle; these spotted animals each possessed

SIX LEGS!

The little lad loved his cows, but he could not let the toads starve, spiders were hard to catch and he did not like to touch them. In real circuses they feed the animals on meat and what's meat but cows cut up? So he gathered a handful of his little spotted cattle and dropped them just in front of his toads, and they were instantly swallowed.

While a gentleman of Schenectady, New York,

was in company with a detachment of British Engineers in New Zealand, he passed a marsh near Auckland, which was being drained. There was an interesting lot of aquatic creatures left by the receding water, among which the New York man discovered a

SIX-LEGGED NEW ZEALAND FROG,

which he captured and brought with him to Schenectady; the six-legged frog stood the journey without affecting its health and lived happily in a tub of water in Union Street, until some of the children in the spirit of mischief, or maybe with the desire to clean his frogship, or, possibly through thoughtlessness, threw some soap suds in the tub. Now a frog is a cleanly animal and much addicted to bathing, but he does not need soap to keep himself clean, and the consequence of bathing his six legs in soap suds was fatal; so Schenectady lost its six-legged frog, but the Smithsonian Institute at Washington, I hear, was enriched by the accident with a new and unique specimen from New Zealand.

TWO-HEADED TURTLES

and two-headed snakes are comparatively frequent occurrences; in a New York paper there was published a very good half-tone photograph from a live two-headed snake, said to be then living at the Bronx Zoological Park. I did not see the snake, but I have seen photographs of similar ones and have sketched from life many double-headed fishes and, on examination, a mass of the newly

hatched spawn will probably reveal to anyone several of these freaks, but unlike the turtles and snakes

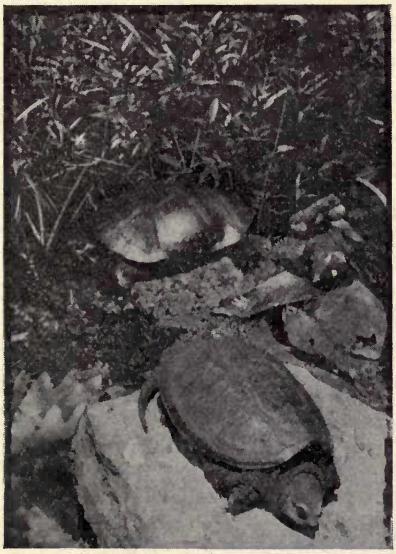
THE FREAK FISHES

do not live after the egg is absorbed, apparently they are unable to feed themselves and consequently as soon as the time comes when it is necessary for them to root, hog, or die, they die.

Not far from Tomkinsville, Kentucky, about fifty-five years ago, a gentleman, still living, discovered

A LAND TORTOISE

with the name of D. Boone and the date 1776 carved on its back. It is more than possible that this was carved by some one as a joke. Fifteen years ago, however, another man in the same neighborhood found the same old tortoise and five years ago some wood choppers picked up the same old land tortoise with the D. Boone, 1776, still plainly dis-



AT THE OUTLET OF BIG TINK.

cernible upon its shell. We all know that it is reported that Daniel Boone was much given to carving his name, and it is not improbable that the old hunter himself put the name and date on this tortoise. At any rate the old tortoise has been found so many times within a mile of the place where it was first discovered, that it is evident that the tortoise is not given to wandering, that it is not a very young specimen now, and that it bids fair to outlive the human inhabitants at the present time residing in its neighborhood.

The accompanying colored plate is a leaf from my sketch book and represents a Pike County toad.

It is a red toad, and Pliny says that a bone from the right side of a red toad administered to a person will make them hate you; but a bone taken from the left side will instil into the person to whom it is administered most ardent love. The reader, however, need not worry. I am not going to administer either of these bones to him, for I would not sacrifice the life of the toad to gain the reader's enmity and I will trust to luck to gain his affections.

This particular toad lives under the door-sill of the gallery to my log house. He is there yet, and has been there for a number of years. In the evening he comes out and hops around the kitchen door and catches the insects that are attracted by the crumbs swept from the kitchen floor.

HE IS A TEMPERATE TOAD,

of good habits and well behaved, but I am sorry

to say that, when these sketches were made he was in a disgraceful condition—a state deserving a punishment of ten dollars or ten days—. This, however, was not altogether the fault of the toad. You will observe several unfinished pencil drawings. These are unfinished because the toad hopped away before they could be colored up and the details put in. This happened a number of times, and as I was very anxious to get a careful drawing of the warty rascal and at the same time did not want to kill him to keep him quiet, at the suggestion of one of the woodsmen I administered to him a spoonful of milk flavored with alcohol. It was not a kind thing to do, but not so cruel as killing the creature, because he did get sober. The effect of the milk punch can be seen from the attitudes in this leaf of the sketch book; but, after rolling around in the most comical way he settled down and gave me all the time necessary to make a careful water-color portrait. Then he gradually sobered up and hopped away

A SADDER AND A WISER TOAD.

Since that time he has refrained, so far as I know, from indulging in intoxicants.

This last summer (1905), Mr. Vreeland photographed a toad while singing. The toad was sitting on a stone on the edge of Big Tink Pond and while he focused the camera I mimicked the note of the toad. Instantly the pond minstrel drew in two or three breaths, then his throat swelled

up into a ball much larger than his head, and he gave forth that half burr and half whistle note with which we are all familiar; but it is not always necessary to imitate the toad to make him sing, for the one under my kitchen would come hopping out in the evening and sit on the door-sill and every time my little baby daughter gurgled with infantile glee the toad would answer with a bur—r—r, greatly to the entertainment of my guests and the delight of the baby.

I have always understood that toads were great gluttons, and so I took a can of big, fat, Long Island angle-worms, and, one at a time, threw them in front of this toad that he might prove the capacity of his race for this sort of food; but after he had eaten a dozen or so, he blinked his eyes two or three times, turned his back on a nice, squirming worm as big as a Lamprey eel, and hopped away in a dignified manner to his retreat under the sill.

I have been very much interested in noticing how much a toad becomes attached to a certain locality. This Pike County toad has lived under the door-sill for a number of years, although it must go to a considerable distance to the lake every breeding season, while another toad in my back-yard in Flushing, lived several years in a discarded flower-pot, to enter which he had to make a perpendicular hop of about six inches and then creep into a hole which was made in the earth in the flower-pot.

There was one toad killed by accident when it was over thirty-six years old, but I do not know of any record being kept of the real length of life of a toad or frog. I have had a fish confined in an aquarium eleven years and it only met its death by the accidental breaking of the tank. I once kept a frog about three years, and he died from an accident. As far as I know, everything tends to the supposition that these creatures live indefinitely until some accident kills them.

REMINDED OF HIS TOAD.

After publishing some of these facts I received the following letter from Mr. F. S. Crofoot, of Detroit, Michigan.

"Your very interesting article, with its splendid illustrations on the toad, particularly appealed to me. In your drawings I could see the "counterfeit presentment" of a toad that has been my special pet for the past five years.

"Up to about a month ago my toad lived like a king in the back-yard, regaling himself, as was his wont, on the choice tid-bits of insect life that flourished among the plants. He grew into a ponderous fellow, and such was his confidence in his surroundings that he would see little danger in hopping sluggishly along at the very feet of his human acquaintance. Even our big, black dog was treated with supercilious indifference, much to that canine's sniffling disgust.

"Occasionally Mr. Toad would play an interesting part in a performance that afforded our visiting friends a great deal of amusement. Mr. Toad enjoyed having his back scratched. With a long stick I would slowly stroke the warty protuberances on his spinal column. He would flatten out like a fat pancake, never making a single move to

escape, and to all appearances having the time of his life.

"But one day, Toady got into disgrace. This is how it came about: I constructed a fountain in the rear yard last summer, in which were placed some goldfish. One moonlight night, happening to look into the water, lo and behold! There was Mr. Toad, his big, broad face and bulging eyes looking up at me the very picture of trouble. It was manifest that he was trying to get out of the water, but a high, steep and slippery wall made this impossible. On further examination I was quite taken aback to see in his mouth a little goldfish, wriggling and squirming to escape. Toady was looking directly at me and seemed to say, or I could imagine him saying,

'Please, Mr. Back-scratcher, help me out with this dainty morsel.'

"Now, instead of being amused I was filled with wrath, for in my warty friend I at once espied a harmful creature, that would soon deplete the animal life in the fountain. I made haste to catch him up with a net, and with firm set lips, conveyed the poaching rascal out into the alley, where I dumped him a block away. I hated to do it, but I realized it must be done or good-bye to the goldfish.

"How such a slow-moving fellow could capture a quick, swimming fish was a puzzle. No doubt, after climbing to the top of the fountain wall, he had seen the fish passing temptingly by. It was too much for Toady, and in he went, all bent on catching the fish, very much like human beings, who so frequently fall into temptation without figuring on after results."

July 15, 1908, I brought a common tree-toad into the house, and it has lived contentedly with us ever since, and is now, May 31, 1909, sitting at my elbow on the window-sill. A pot of damp sod is placed in the window where the tree-toad sleeps in the daytime. This keeps his toadship from drying up. The toad feeds from my hand, and at night wanders all over the walls of the room. On December 5th it went into winter quarters in a toad-hole in a flower pot; on February 7th it came out for a while, but again returned, remaining quiet until warm weather; now it sings merrily on the window-sill, eats flies, moths and small insects, furnishes amusement to my children, and appears perfectly happy in the house.

CHAPTER XXIX

BIRDS THAT PREY AND SOME THAT DO NOT

BILLY CROW AND HIS TWO-DOLLAR BILL—WHERE DID HE GET IT—THE LEGEND OF HERO JIM CROW—THE FIRST OWL I EVER SAW—THE YOUNG GOBBLINGS IN THE STEEPLE—SIX LONG-EARED OWLS IN NEW YORK CITY—ICE-BOUND EAGLES—UNCLE SAM ON A CHESTNUT TREE—AN EAGLE'S SINISTER SONG—UNCLE SAM WHIPPED BY A BLUE HERON—FISH HAWK PIPES LOUDLY FOR HELP—JIM CROW SWEARS AT THE EAGLE—YOU CAN TAME HAWKS AND EAGLES—FLUSHING FISH HAWK—THERE USED TO BE A WOOD PILE—HOME OF THE AMERICAN OSPREY—OF WHAT THE FISH HAWK'S NESTS ARE MADE—THE BLACKBIRD TENEMENT HOUSE—OSPREY'S NEST ON THE BEACH—BLACK-CRESTED NIGHT HERON THAT ATE PORK—YOUNG HERONS THAT LOOK LIKE FIENDS.

DID YOU EVER OWN A CROW?

If not you have missed more than a cartload of innocent fun. I have owned all sorts of pets in my life, from pet beetles to 'coons, dogs and deer, but none gave the all-round satisfaction of the crow.

It is hardy, full of the jolliest of tricks, is as affectionate and loyal as a dog, as comical as a clown, and almost as intelligent as a boy. A pet crow knows its friends and

enemies and will allow no liberties from a stranger. Of course, a crow's honesty is no better than a pack-rat, but my crow never stole from me, and somehow or other one finds it easy to forgive a thief who only steals from others.

When we dug up our flower-bed in the early spring there were no less than seven silver thimbles unearthed, and not one of the lot came from our house. One day "Billy" brought me a nice two-dollar greenback. In those days a two-dollar bill was a very, very large amount to me, and stood for an unheard of amount of butter-scotch and ginger bread.

Of course the money did not belong to me, but neither did it belong to the crow, and "Billy" would not tell where he got his wealth, so after a consultation with my parents and my teachers, and after waiting to see if any one claimed the bill, it was at length decided to be my property, and it was the first two dollars I ever had all in a heap.

But it was not always money the crow found; once he filled all the crevices in my mother's great four-posted bed with liver; this could not be seen and attracted no attention until the summer heat began to act upon it, then everybody in the house knew that something had happened. The old folks said a rat must have died in the partition, but the crow and I said nothing, we were chums and understood each other. So I busied myself with the model of a log house upon which I was at work and the crow was equally busy decorating the dog

with colored bits of cloth which he deftly tucked in its shaggy coat. I suspected the real cause of the disagreeable odor, and as soon as the coast was clear, discovered and removed the liver, and never until this day did I give the crow away.

THE HERO JIM CROW.

His head appeared very much too large for everything about him except his mouth and voice. The former feature was the first to engage one's attention, and the latter was as hoarse as the croup.

His complexion was what might be called a dark Payne's gray and the bluish black skin hung in wrinkles around his withered neck, but was tightly stretched over his rounded abdomen. He was as naked as the brass Diana on the top of Madison Square Garden, and as blind as love. His legs were too long and too weak to support his aldermanic body, but we must not blame Little Jim for these peculiarities; he was born with them; and he was only a little orphan baby crow.

The crib in which the baby reposed was a work basket, the mattress was dry grass, and the coverlet a rag of red flannel; however, the basket was more comfortable than the nest in which he was born and the flannel was as warm as an embroidered quilt. Jim was no bottle baby, but he was very fond of raw eggs which his foster father, Dick, knew how to crack so that the contents could slip slowly into the great, gaping mouth of the little crow.

After Dick had fed him Jim would nestle down in his soft bed and sleep until next egg time. Sometimes Dick's baby sister Deborah would creep to the crow's basket. Her first experiment was to try and put the bird into her own mouth. This proved a failure; but she was more successful in her next experiment, and she amused herself by picking up buttons and other small objects which came handy, and dropping them into the red mouth of Jim. Why these things did not cause the death of the crow is a mystery, possibly explained by the habit that the young bird had of flirting distasteful objects from its mouth with a quick twist of its head.

The real result of these attentions was the gradual growth of a feeling of affection between Debby and Jim, hardly surpassed by the bond of devotion which bound Dick and the crow together, making them almost inseparable companions. Long before it was the proper time for a young bird to leave its nest Jim would come sprawling and staggering from his basket to meet the baby girl, and, seizing the hem of her pinafore, would hang on and squawk, while Debby, screaming with delight, would scramble over the veranda floor on all fours as rapidly as her hands and knees could carry her.

Debby still was a baby and had but just learned to walk when Jim was a handsome, full-grown, glossy black crow. By this time Jim appointed himself private detective in plain clothes and per-

JIM CROW TO THE RESCUE

sonal body-guard to the little girl, and it was woe to the stray cat, dog or barnyard fowl who approached too near little Debby. The innocent little garter-snakes that timidly wiggled through the grass by the feet of Debby never failed to lose their heads and rest their bones inside of Jim Crow.

Dick would never harm the pretty little insect-eating snakes, or any other wild creature. He loved them all too well. He loved the grass, the trees, the sky and the air.

THE BIRDS WERE HIS PERSONAL FRIENDS.

Dick knew where all the people of Birdville lived, from the kingbirds in the tall buttonwood tree to the ground sparrow in the clover. Jim the crow also knew the inhabitants of Birdville; but it would not have troubled the conscience of the crow to eat the robins' eggs and the young catbirds at a meal and wantonly destroy their little nests. If he refrained from so doing, it was possibly because he always had enough to eat at home, or perhaps Jim thought that the inhabitants of Birdville belonged to his young master. Jim Crow might steal from everyone else, but he never was guilty of robbing Dick, and even such tempting objects as Dick's bright glass marbles were deemed sacred by the crow.

The other birds always looked with suspicion at Dick's black companion and although they learned to trust the boy, they never failed to scold, and often to attack, the crow.

The beautiful scarlet tanager would cry, "Chip jar; chip jar!" whenever he saw Jim, and the gorgeously colored oriole, as he flashed in the sunlight, singing as he flew, would suddenly become silent at the sight of the crow; but when the kingbird erected his war plume Jim would have business to attend to which necessitated his presence directly around his master's feet.

A fierce war eagle with great hooked bill and tremendous spread of wings, lived in the mysterious country on the far side of the little lake in front of Birdville.

One day Dick and Jim saw the great bird at Rock Cabin Cove on the opposite side of the lake waiting for an opportunity to rob the industrious fisherman osprey. Jim ruffled up all his feathers, drooped his head and began to walk around his master's feet, talking and laughing in low guttural tones as if something greatly amused him. A moment later the fish hawk fell with a great splash into the water, disappearing from view, only to reappear again with a big stupid carp in its hooked talons.

The Eagle launched himself, and sailing over the back of the frightened hawk, demanded the fruits of the latter's labor. The loud whistling protest of the hawk could be heard plainly appealing for help, and in a moment more Jim was flapping his black wings over the robber eagle's back.

By his loud, hoarse "caws" one could tell that

he was having fun with the eagle and teaching him how it feels to be the under one. Soon the eagle was glad to leave the osprey and seek the shelter of the dense wood on the other side of the lake from the abandoned quarry. Perched upon the boy's shoulder, Jim then told all about the affair.

"Caw," says Jim, "caw. Sam is nothing much. I saw Long Legs, the blue heron, at the leaning maple, whip him—Sam can't fight a little bit 'nless he has everything his way—caw, caw!"

Nobody but crows and Dick understand crow talk, but Dick understands all the woodfolks' languages.

All unknown to her parents and Dick, little Debby had toddled after her brother to Birdville. Wearied with the long walk, the baby girl now slept peacefully among the blue flowers of the lupine, near the sparrows' nest. The impertinent and noisy bluejay came chattering over to see why Debby was there, and incidentally to rob a nest or two by the way, but the king-bird raised the hue and cry and drove the gaudy bandit away, and as the jay disappeared down the tote road his mocking, high-keyed voice was heard to cry, "Got 'im, got 'im, I've got him!"

"Who? Who?" asked the barred owl, aroused from his day nap by the tumult.

"Phebe," mournfully replied a faint voice; and Dick said to Jim, "I hope not."

But the crow was not there to hear him. Just

then the boy heard his black friend using most unprintable language, betokening both rage and great excitement. Seizing a club and hastening to his friend's assistance, Dick was horrified when he saw a large eagle vainly trying to lift a white object from the ground, while Jim was making a frantic attack upon the eagle, aided by the king-bird and humming bird. With one bound the boy landed on the battle ground, and with a mightly swing of the cudgel he laid the bald-headed robber prone among the flowers. The next moment he had gathered his little baby sister in his sturdy young arms. Her white pinafore was torn to shreds, but she was unhurt.

"Poo Jim, him fight naughty big bird, poo Jim," lisped the little girl. Poor Jim indeed! There he lay, his beautiful black wings outstretched, moving with the tremor preceding death. Jim the Crow had been killed with the same blow that slew the eagle.

In vain did Dick use every means in his power to resuscitate his friend and comrade. The genial and brave bird was past help. A little mound amid the lupines marks the spot where the quaint and lovable soul was freed from the black body which is buried there. A shingle serves as a headstone and inscribed thereon is this legend:

HERE LYS JIM THE HEROE.
HEWUS MY BEST FRIEN' AN'
HE LICKED A EAGLE.

On the same block with my present studio, stands the Congregational Church. It is a plain, dignified building, with a tall, shingled steeple. It has been repainted and renovated. This is too bad, because there were formerly broken lights in the window-sashes of the small windows away up in the steeple, and the spire used to be inhabited by several families of pigeons and one family of barn-owls, all of which found their way into the steeple through the broken windows. When Langdon Gibson and his brother, Charles Dana, were boys they discovered the barn-owls in the steeple. For several years before that I was acquainted with the fact that the steeple was inhabited by these birds, but I had said nothing to any one about it, for the reason that if no one knew where the owls' nest was located, no one would disturb it, and up to that time there was not a record of the barn-owl breeding on Long Island. But one day Langdon Gibson came to my house in great glee with the most comical looking animal under his arm, which looked much more like a monkey than it did like a bird, but I recognized it at once as one of the young barn-owls. A young barn-owl is the most comical, weird bird that I have ever examined. I made two pages of drawings showing the different poses assumed by this young bird;

YOUNG BARN OWLS IN VARIOUS POSES

but really, it would be necessary to have a moving picture to convey a proper idea of its comical and absurd antics; and the noise it could make was astonishing. It would open its mouth and go "shish" so loudly that it would sound like escaping steam, then it would bow its head down until the top of its cranium touched the ground. All the time the puffy ball of yellowish down would be walking towards me. When it reached my feet it would commence

CLIMBING UP MY TROUSERS LEG,

still bobbing its head and emitting a steam-like noise. I suspect that the young barn-owls are the origin of all the ancient stories about haunted belfrys, castle turrets and church steeples, and that they are what Poe referred to when he exclaimed:

"And the people, ah, the people;
They that dwell up in the steeple."

For as the poet declares:

"They are neither man nor woman;
They are neither brute nor human"

They are owls!

But since the windows have been glazed in the Congregational steeple, the barn-owl has left for some more hospitable home. I counted

SIX LONG-EARED OWLS

last winter, however, roosting in one fir tree within a block and a half of my studio, and I know this

family of owls has been around here for a dozen or more of years.

OWLS SWALLOW THEIR FOOD WHOLE,

and afterwards spit out a pellet composed of the hair, feathers and bones of their victims. Underneath this owl roost, the ground was covered with pellets. After a hard shower of rain the pellets were all dissolved and washed together so that they made a blanket of felt from one-quarter of an inch to two inches thick. It was in a rude, rectangular form, three feet long, by over two and one-half feet wide; that means, there were six or more square feet of felt matting composed of mouse hair interspersed with the skulls and bones of the victims of these owls. I examined it very carefully and found it to be principally composed of the remains of mice, with a sprinkling of a few bones and skulls of the English sparrow. This means that the long-eared owl is a useful bird and should be cultivated and encouraged to live about one's place.

THE FIRST OWL I EVER SAW

was a small screech owl and it was sitting

on the head-board of the bed in my big brother's room. I do not know when this was nor how long ago it happened, but I recollect it as distinctly as if it were yesterday. The owl sat there blinking and from its mouth protruded the tail of a mouse; it was the tail of a live mouse which had been swallowed whole by the owl; this I knew because the tail was moving as I looked at it. Since that time I have owned a number of owls, big and little.

ONE GREAT HORNED OWL

which occupied a parrot's perch in our back-yard in Kentucky, was a very fierce creature, although it never harmed its own master. One day my aunt was walking near the owl perch when she saw a flower which struck her fancy. She stopped to pluck it and was knocked almost unconscious by a blow from the owl's wing.

The reader must understand that the owl saw the lady but indistinctly and when she stooped, it mistook the movement as one meaning battle; always being ready for an occurrence of this kind the owl struck the astonished lady over the eye with its wing, and my dear aunt nursed a black eye for a week or more thereafter.

One day the owl was loose, moping around the yard and some bad boys saw it and resolved to steal the bird; they did not know the nature of the

owl and that their actions were being watched by an interested company in the house; there were three lads in the gang and they had all dropped from the fence into the yard before "Booboo" the owl discovered them. I never saw three boys go over a fence more rapidly than these lads did when "Booboo" with wings spread and eyes glaring swooped down upon them. Once when "Booboo" was free, he thought he would escape from the confines of the yard; so away he went over the house-tops to the river bank. I followed on a dead run, and reached the rolling mill which stood on the banks of the river in time to hear a war-whoop and see a big brawny mill-hand hopping around on one foot and nursing the other in his two hands.

There was evidently something doing and I rightly conjected that "Booboo" must be mixed up in it. It seems that "Booboo" in flying towards the river struck some telegraph wires which his defective vision did not enable him to see; the force with which he struck the wires caused him to fall to the ground, seeing which the mill-hand rushed out to capture the bird and imprudently put his foot down upon him with the results already told.

Another great horned owl that I owned I kept in my studio on Broadway in New York City until

he did so much damage and injury to property and persons that I took him to the roof of the building and gave him his liberty.

One day we were all working quietly at our easels when my eldest brother, J. Carter Beard, suddenly pushed back his chair to reach for a crayon which he had dropped on the floor. The big owl was dozing on his perch on top the half-opened door to a closet and was startled by the sudden movement of my brother, which, owl-like, he interpreted to mean battle. Ever ready for a fight he sailed down from the door with such suddenness and vigor that when he struck my brother he upset both him and the chair. Another owl of the same kind which was owned by William H. Beard, my uncle, displayed none of the fierceness of the last two; on the contrary this owl of my artist uncle was full of quaint tricks and odd amusements; its particular plaything was an old bladeless pocket-knife which he never tired of pouncing upon when it was thrown out in the yard; he particularly delighted in extracting the knife from holes or crevices where it was placed to amuse him, but the oddest adventure with an owl was when the one in my studio was attacked by the pet bull-frog which lived in a glass globe hanging under the owl perch: this story, however, properly belongs with that of the bull-frog where the reader can find it.

Some time ago there was a lengthy discussion in some of the sportsmen's magazines about ice-

bound eagles and hawks, some people claiming that ice could not temporarily disable these birds. I have never seen an ice-bound eagle, but my uncle, William H. Beard, painter of animals, once brought home a large red-tailed hawk which he found after a freezing rain storm so coated with ice as to be unable to fly, or, in fact, to move about at all except by an awkward hop. I remember once a storm which occurred in Cincinnati during the spring migration of birds; very few of the birds were killed but hundreds of them were beaten to the ground and disabled so that all the small boys were collecting them and had cages full of the strange visitors, which were all scarlet tanagers. I was not well enough posted on birds in those days to identify the strangers, but I did know that the birds beaten down by that storm were not the ones common in that neighborhood.

In March, 1904, a wet

SNOW STORM KILLED MILLIONS OF LAPLAND LONG-SPURS,

an account of which may be found in the *Auk* of October, 1907.

During an ice storm in Flushing, Long Island, I saw a large flying squirrel limping painfully across our front lawn. I started out to rescue it, but it climbed up the trunk of a maple tree and crept into a large hole in the trunk where the wood had decayed; supposing that it would find comfort-

able quarters there, I returned to the house. After the storm was over, I found the squirrel dead at the foot of the maple tree; the hollow had not protected it from the storm, and the little animal was coated with ice. I have observed that none of these small rodents can stand the combined effect of wet and cold.

During the blizzard in March, of 1888, there was a great number of birds killed and others injured, and upon visiting my chicken-coop I found that an old tom cat, a game cock, and four English sparrows had all sought refuge on the same roost; the roost consisted of a pole about an inch in diameter; the tom cat occupied about the middle of the group, its back was humped up, its four feet bunched together, its tail hanging down one side of the perch, and its war-scarred face drooping down on its paws in front; snuggled up close to it was the old game cock on one side, two sparrows on the other and two sparrows up against the game cock. The cat seemed to be only interested in the art of sleeping without falling off the perch, and the birds in absorbing the heat in each others' bodies and that of the cat. It was a strange group, but not a very happy family.

UNCLE SAM, THE BALD-HEADED EAGLE,

sits on the chestnut tree at Rock Cabin Cove across the pond, and from this vantage ground his piercing eye immediately detects the presence of friend or foe. He is a wise eagle and has long since

ROUGH RIDER'S EAGLE—PHOTOGRAPHED IN CAMP

learned that the most relentless foe to all wild creatures is the two-legged animal who carries a gun.

If we could carefully examine the wary old bird's body, there is little doubt that we could find many scars which would help us to understand the very accurate knowledge Uncle Sam is known to possess of the effective range of the murderous, fire-belching thunder sticks his arch enemy uses on all the wood folks.

It is because this eagle knows these things that he is alive today and sitting on the old chestnut tree where he perched last year, and for an unrecorded number of years previous to that date.

Through the field-glass we can see the persecuted emblem of our country, with his proud head turned to one side as if there were something in that direction which interested him, as indeed there is, and the war bird is becoming restless; now we can hear him talking to himself in a series of rasping noises and whistling notes, but the harsh notes are all but lost in the distance they must travel to reach the log house, and we can only hear the more musical ones.

As Jimmy, the old backwoodsman, said: "Sammy is singing like a canary in a cage."

There is a sinister meaning

TO THE SONG OF AN EAGLE.

Unlike the canary, it is not the mere joy of living which calls forth his song, it is his method of working his courage up by telling himself that he, Uncle Sam, is the king of birds, a mighty warrior, and can whip anything that wears feathers in Pike County. What! he afraid, who dares say the word?

When the old fellow had worked himself up to the fighting point he launched his great body in the air and made for the leaning maple by the muskrat's last winter's home.

Unfortunately, the foliage of the forest at this point intercepts our view, and we could only see what seemed to be another eagle.

Uncle Sam made a rush at the stranger, which

the latter successfully repelled, as he also did two or three more swoops of Uncle Sam, who after the last unsuccessful attack ignominiously retreated, and hurriedly flew over the pine tops in the direction of "C'reely Pond."

We were not long left in doubt as to the nature of the foe which in fair fight vanquished the king of Pike County, and it was with mingled feelings of wonder and disappointment we noted the long legs of the stranger trailing out behind like a kite's tail as it left its perch and we recognized it to be a great blue heron. As the long-legged bird flopped its big wings over the pond, it turned its head once and cast a scornful glance in the direction that the fleeing eagle had taken. Seeing that its enemy had disappeared the heron gave voice to a contemptuous "quoke!" and flew down the pond to the outlet.

In common with the rest of the American people, our party at the log house have a great regard for the bald-headed eagle, and are so thoroughly imbued with the idea of its dignity and prowess that we all felt indignant that the lance-like point of a heron's beak should be too much for Uncle Sam. This feeling was aggravated by the fact that it was only recently we were watching Uncle Sam engage in his time-honored custom of bulldosing a fish-hawk for the purpose of inducing it by threats of violence to drop a large fish which the osprey clutched tightly in its hooked talons and which by its own skill and industry it had pro-

cured; but it was not the hold-up which bothered us, we Americans have grown accustomed to hold-ups.

THE HAWK PURSUED BY THE EAGLE

flew directly over our heads and not far above the roof of the log house; the hawk was piping loudly for help and apparently hoped for assistance from us, but we were all so anxious to see the eagle swoop down and catch the falling fish when the hawk in terror should abandon its prey, that it never occurred to us to interfere with the game. However, the osprey is not without friends in Pike County and his cry of distress reached old "Jim," the crow, who for years has nested in the hemlock down in the swail. Jim no sooner heard the call for help than he boldly took wing and unhesitatingly attacked Uncle Sam from above, and lightly floating on the summer's breeze a bunch of eagle feathers drifted over the tree tops.

Evidently one blow on the back from the mallet-like beak of the crow was all that Uncle Sam wanted, for he immediately fled across the pond to the shelter of the dense woods at the inlet.

But when the eagle was perched on a dead limb I noticed that the crow kept out of reach of the big bird; although the black rascal did occupy the same branch it did not dare to come within six feet of Uncle Sam, but contented itself with making slurring and uncomplimentary remarks presumably

about the eagle's general appearance and character. The crow's conversation sounded most profane. All the time that Jim Crow was swearing at his big neighbor he ruffled his sable feathers and dragged his somber wings along the limb of the tree as he strutted backward and forward outside of the danger limit. Uncle Sam has a mate and a nest somewhere over the mountain, but his mate seldom accompanies him to visit us at Big Tink.

The large birds of prey all make interesting additions to your back-yard zoo, and are none of them hard to tame, although many are not easy to capture.

There are possibly none of the hawks or eagles which cannot be taught to hunt as the falcons of old were taught, but this requires time and patience and the description of the method of training them would take up all the room allowed for this chapter.

There are possibly at least twenty kinds of hawks within reach of most of the readers of this article, and it may be more than that for some of them; then there are the owls, and the mighty eagle. There was an old fisherman a few years ago on Long Island Sound who always had a pet eagle supervising his work and incidentally devouring all the small fish his friend saw fit to allow him to eat.

The best time to capture any of the hooked-billed, sharp-clawed birds is when they are quite young and this can only be successfully ac-

complished by visiting their nests in the tree tops, access to which, as a rule, can be obtained by using climbers.

The owls often begin to lay even in our Northern States as early as February; as far north as Minnesota, the eggs of the great horned owl have been found as early as February 7, but we are not nest robbers of the kind who exterminate the birds by collecting eggs.

Both my dogs, "Tramp" and "Nipper," wanted a swim one morning and they took particular care to make known their want by putting their cold, wet noses in my hand, and, after attracting my attention, smelling around the wheel closet, then looking me in the face and barking.

I understand dog language and knew just what was expected of me, so I jumped on my wheel and with the dogs frisking on each side of me took the road to Kissena Lake.

After the dogs had plunged into the cool water and retrieved all the floating bits on the surface of the pond, I wheeled down to the other end, where an ancient mill stands. The mill has been transformed into an ice manufactory and my friend the engineer sat under the shade of an old willow tree just outside the engine-room. He was watching the corks attached to several fish lines he had set in front of the mill.

Alongside of him was a tub of ugly looking snapping turtles and on a rude perch sat a great bird which might at first glance have been mis-

taken for an eagle, but the hooked bill, bright eye and grapple-like talons as well as the other familiar peculiarities were those of the fish hawk, or as it is better known in print, the American osprey.

I mention this morning's incident because a week ago this osprey was sailing around the sky watching the surface of the water for fish, a wild, free bird, while today it accepts its food from the engineer's hand. The bird calmly kept its position on the perch while I examined it and only showed a desire to fight when Tramp and Nipper displayed an inclination to make a close examination of his hawkship.

The bird has an injured wing and is unable to fly, but if it was still wild it would make an attempt to fly and failing would throw itself on its back, then with talons and beak ready, would say in hawk language: "I can't fly, but you bet I can put up a good fight," and every boy who has seen a wounded hawk would believe him.

THE BEST WAY TO TAME A HAWK

is to take it young and raise it by hand. A red-tailed hawk which I reared in this manner made a beautiful pet and his sharp eyes could detect his master two blocks away. He made known his joy when he saw me approaching, by a loud "Kee—y—oi! Kee You! Kee Yoi!"

There used to be a woodpile in an open pasture on Pumbo Island, and on top of the woodpile was

a cartload of brush which had been carried there by a couple of old fish-hawks; there they would keep house and rear their families. In the middle of the brush heap was a basin-like hollow lined with sea-weed, bits of sponge, pieces of fish-net and fish lines, all of which made a soft nest, soft enough for the fuzzy, big-eyed, claw-footed babies who were cradled there.

I describe the nest minutely from knowledge gained by inspection of other nests. I never was within fifty feet of this particular nest.

It was not a lack of curiosity to examine the woodpile home which prevented me from closer observation, but whenever I attempted to approach the woodpile the parent birds would swoop down at my head so savagely and scream so fiercely that I was glad to make my escape by taking ignominiously to my heels and sprinting for cover.

HOME OF THE AMERICAN OSPREY.

Within half a day's journey of New York City lies an almost desert island, whose barren wilderness is interrupted—marred, I had almost said—by a single habitation. A stone lighthouse perched upon the bluff at the end of the island seems a natural accessory to a lonesome symphony of rock, sand, water, and sky. The inhospitable coast of this island offers no safe port or harbor, but the treacherous sandy beach is ragged and broken with huge boulders and rocks, against whose flinty sides the storm wave is dashed with angry impetus, and

splintered into foam and spray. The occasional fragments of wrecks strewn upon the beach, or forming appropriate monuments to the graves of drowned mariners, testify to the danger of the coast, and add a solemn tone to the sea-song of this desert isle.

A marsh or swamp occupies the center of the island, about which grow trees of moderate height, being in a measure protected from the winds by the surrounding hills or mounds whose sandy baldness is scarcely covered by a thin growth of wiry grass. At the foot of the hills, stretching to the water's edge, are sandy flats, dotted here and there with trees, gnarled, knotted, misshapen, and dwarfed by exposure to tempest and lack of nourishing soil.

Each summer's vacation, as our yacht passed this island, my curiosity has been excited by the great number of birds which make it their home. It was partly to satisfy this curiosity, and partly to try the fishing, which is excellent in the dangerous eddies of the tide, that induced me, with two companions, to land upon this island one quiet Sunday morning. As our little sailboat approached the lighthouse we saw a couple of great northern divers swimming unconcernedly about, or ever and anon disappearing beneath the smooth waters, and that evening we could hear their wild, maniacal laugh across the tide.

After landing, we walked over the sandy flats, disturbing

SCORES OF NIGHT-HAWKS.

These mysterious birds filled the air overhead, and darted down past our ears with a loud whirring noise, while they kept up a constant repetition of their peculiar cry. Numerous as were these birds at first, we only succeeded in finding one egg. Nests they have none; but so closely does the egg resemble lichens, dry grass, or moss, that although the mother bird may rise from beneath your feet, it will require careful search and a sharp eye to detect the little eggs.

Not only are the eggs themselves difficult to see, but I am convinced that the night-hawk carries away the eggs with her when she is disturbed.

I am thoroughly convinced of this from the result of numerous experiments. In no case did I discover an egg when the bird had time to plan her retreat, but whenever I sneaked up close to the sitting bird and with a wild war-whoop and a frantic swing of my hat rushed at her, I was certain of finding an egg in the place vacated by the frightened bird, but never more than one.

In the low bushes or high grass along the edges of the swamp, we found numerous nests of the swamp blackbird. Meadow larks had their nest upon the grass-plot in front of the lighthouse door, on top of the bluff. The sandy face of the bluff was perforated with innumerable burrows of the industrious bank swallow.

On every part of the island the large nest of the

fish-hawk formed a prominent feature of the landscape, and from sunrise to sunset the American osprey sailed around overhead in graceful curves, protesting with shrill cries against the invasion of its territory by strangers.

Baird says that the American osprey or fish-hawk nests almost invariably in the tops of tall trees. He gives as exceptions to this rule a nest upon a small pine tree in Maine, and one upon a cliff upon the Hudson River. Audubon, I believe, found two

FISH-HAWKS' NESTS UPON THE GROUND.

With these two facts in mind, I was somewhat surprised to find ospreys' nests scattered around promiscuously upon the beach, the sand dunes, piles of driftwood, tops of boulders and small trees. The nests are all of them rather well built, the foundation consisting of large sticks, and in some instances pieces of plank weighing fully as much or more than the bird. Over this foundation is a layer, composed of seaweeds, sponges, and other odd material cast up by the waves, the nest itself being a shallow, dish-like hollow, of fine soft seaweeds and grasses. Those I found upon the ground stood about two feet high, but some of the nests in the trees would measure, from foundation stick to summit, fully five feet. Such ones are eagerly seized upon by the purple grakle or crow blackbirds, as offering them exceptional opportunities for housekeeping, and it frequently happens

that all the interstices between the sticks forming the hawks' habitations are filled with the nests of blackbirds. I counted six blackbirds' nests in the portion of an osprey's nest within sight, from where I was sitting on a sand dune. There were three eggs in the hawk's nest, and most of the blackbirds' nests contained young birds just out of the egg. Some ospreys' eggs that I examined in a nest in a tree were prettily marked with dark purplish or wine-colored markings upon a cream-white ground. After keeping a couple of ospreys' eggs in a cigar box for three days, the young birds inside were found to be alive by the naturalist for whom I collected them.

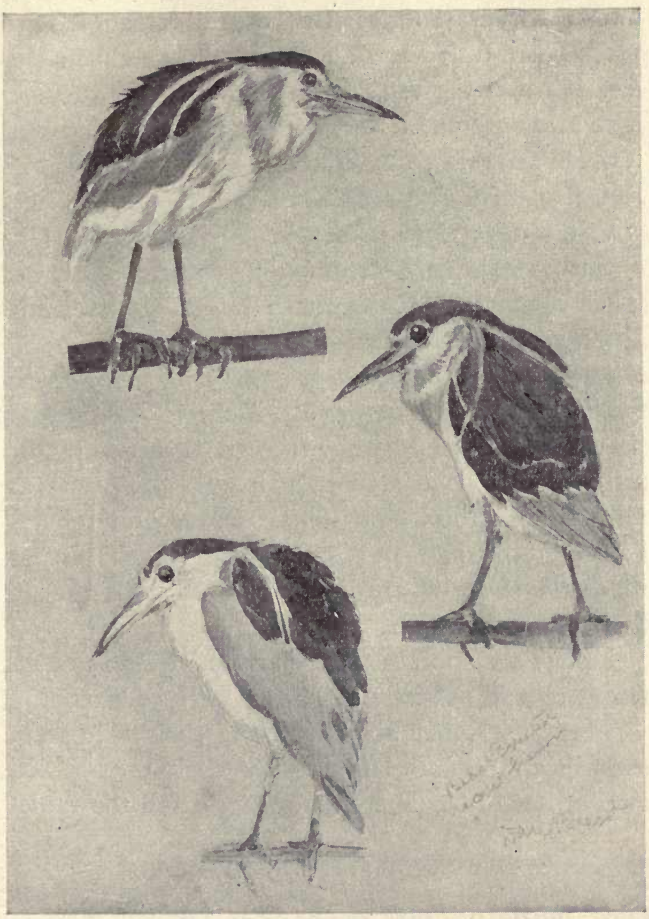
I noticed that in four or five different nests upon the ground

THE EGGS WERE ALL A DIRTY-BROWN COLOR,

harmonizing so perfectly with the dry seaweed lining as to require a quick eye to detect the egg in the nest when the observer stood but a few feet away.

After making sketches, and making a good catch of blackfish, our party bade farewell to the island, and were rowed out to a passing steamer, which slowed up and took us aboard. A few hours afterward we were back again in New York.

Shortly after arriving home I received word that at Bayview, near the Atlantic Highlands, a large fish-hawk had been seen to swoop down into the waters of the bay, embedding its talons in a



BLACK CRESTED NIGHT HERONS
From water-color sketches

huge plaice. The bird rose with its prey, but the fish's weight was too great and dragged down the hawk. Several times the osprey struggled to ascend, but failed and at length became exhausted, and fell into the water still clinging to its captive. The bird's talons were so embedded in the fish that it could not release them and it was drowned. The fish also died and both were washed ashore, and with difficulty were separated.

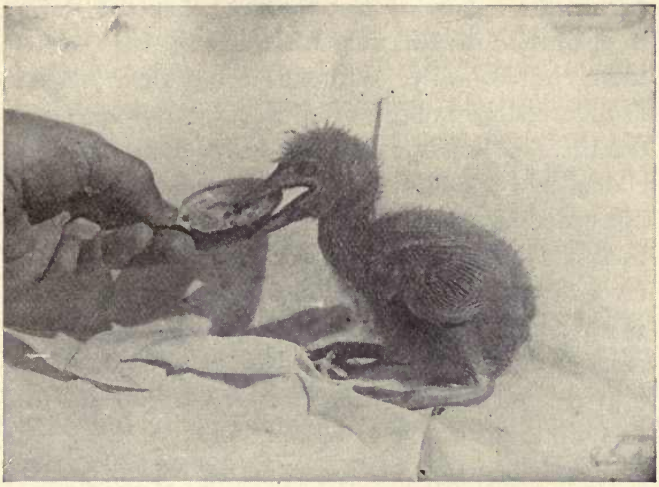
Such stories are common and I never placed much confidence in them until I saw a hawk again and again pulled under water by a big fish in Yellowstone Lake. The osprey several times lifted the fish from the water, but such was its weight that the bird could only succeed in carrying the fish a few yards at a time; at length, the prey was allowed to drop again in the waves and the exhausted bird had just sufficient strength left to reach the shore where it literally fell upon a dead limb of a small tree.

Unless sea food is plenty and handy do not attempt to add fish-hawks to your back-yard zoo.

There are other birds which in their wild state use fish and aquatic animals for their diet, which may be taught to live upon scraps from the table.

A BLACK-CRESTED NIGHT HERON

that lived in the same coop with a crow in my back-yard, developed an appetite for ham skins and fat pork, great slices of which it would gulp down to the amusement



AUTHOR FEEDING YOUNG BLACK CRESTED NIGHT HERON

of the dainty crow who never ate but little of anything at one meal, and who evidently had the greatest contempt for the graceful looking long-legged glutton.

The black-crested night herons formerly had a heronry in some woods bordering on Flushing meadows, but a Flushing saloonkeeper went there with his gun and exterminated the whole flock. This he did not do for the love of blood, or the delight of killing, but to supply the milliners with the bird skins with which your mothers and sisters decorated their hats. Before the ladies had exterminated these birds, I used to visit their haunts along with my friends the Gibson boys. I attempted to rear one of the young herons, and if young barn-owls are goblins in appearance, young

herons are fiends. Not only have they the ability to open their mouths very wide, but they can stretch them horizontally, without using their fingers in their cheeks as boys often do at school when the teacher's back is turned. I fed my young heron on clams, and sometimes it would swallow a jagged piece of clam shell an inch or more in diameter, then I would take my fingers and strip up its neck until the clam shell came out of its mouth. There is no doubt that I would have been successful in rearing this bird, had not a little baby boy toddled into the yard and wrung the bird's neck because, he said, that "Bad bird make faces at Will."

Prophets have no honor in their own country

THE YOUNG BLACK CRESTED NIGHT HERON FROM FLUSHING HERONRY

and neither have birds. The American people did not appreciate their own birds nor realize the almost incredible number of insects destroyed by the white-throated swallows, the purple martin, and the wrens. Becoming tired of the beautiful bluebirds and the other native feathered Americans, the Honorable Nicholas Pike of the Brooklyn Institute worked from 1850 to 1853, introducing the noisy, dirty, gutter-loving, English sparrow to take the place of the birds just mentioned.

The United States Government has since published a book of over four hundred pages warning people against the English sparrows; this volume also gives suggestions and advice tending to the final extermination of the sparrow. But the sparrow does not know it and he is flourishing and increasing as rapidly now as he did before the book was published, and all his crimes and misdeeds proclaimed to the world.

In a weak moment the inhabitants of Jamaica introduced the old world mongoose for the purpose of exterminating rats which devastate the cane fields.

Now they say that the mongoose drove the rats into the cocoa trees; ate up the useful insect-eating lizards; devoured the harmless rat-killing roof snakes; destroyed the game birds and insect-eating birds; raided the nests of pigeons and domestic fowls; fattened on suckling pigs and newly born farm animals; all but exterminated the famous edible black crabs and in many other ways proved

to man that once again he had made a fool of himself.

In the southeastern part of Scotland the farmers killed off all the native hawks and owls and the field mice, freed from all their enemies, increased and multiplied until, like the hordes of grasshoppers in Kansas, they destroyed all vegetation upon hundreds of acres of farm land; this the mice did to show man that he must not "monkey with nature's buzz-saw," but we have not yet learned the lesson and are at this present moment introducing the stupid brown trout into streams once occupied by our brilliant game native brook trout. We are exterminating our prairie chickens and ruffed grouse, both of them magnificent game birds, and introducing in their place the long-tailed Mongolian pheasants. Evidently we Americans believe that the great Creator did not know His business when He peopled this continent.

But fortunately there is a strong and growing sentiment among cultured people which endorses all efforts to restore to us our native birds, which have all but been exterminated in the last thirty or forty years.

The only martin's house inhabited by martins that I have seen lately is one in Branchville, New Jersey.

Before the War of the Rebellion there existed very few farms or suburban residences which did not own a martin house of some sort. In the South it was often a long pole surmounted by a lot of

bottle gourds, each of which had a hole in it for the birds to enter. Even some of the Ohio River and Mississippi steamers sported gayly decorated martin houses perched on poles on their after-deck and presented the novel sight of a colony of purple martins making regular trips to Louisville and even to New Orleans.

This was before the days the dirty, noisy, useless English sparrows had usurped all the shelters which were formerly occupied by our native swallows, martins and wrens. It was before our thoughtlessly savage sisters began to wear the dismantled carcasses of our native birds on their hats and in their hair. A few years ago I saw a ball dress worn by a beautiful girl entirely trimmed with hundreds of

HUMMING BIRDS SKINS!

and she was innocently disappointed because I did not admire the grisly dress.

It may be well to call the attention of the Daughters of the American Revolution and also the Sons of the American Revolution to the fact that in the time of their brave old ancestors, upon whom many of these modern descendants rest their only claim for distinction, the happiness of the American birds was a matter of great solicitude; every lawn, every garden, and every farm was supplied with houses or shelters for the birds.

In fair weather the spacious verandas of the

Colonial mansions were used as outdoor breakfast and dining-rooms. The table was covered with a snowy homespun cloth and decked with shining pewter and quaint old English silver which is so highly prized today.

Around the ample board were seated the high-heeled be-powdered dames, their families and guests, dressed after the fashion of the day in silks and damask gowns and coats, and it made as pretty a picture as was ever painted by Kaemmerer.

During fair weather our revolutionary ancestors drank their "American" tea in these open-air dining-rooms, devoid of screen doors or other artificial protection from the incursions of troublesome insects, but while there were no screen doors, the big old-fashioned breakfast bell which called the guests to the table also called the birds, and the oriole, robin, wren, kingbird, and phœbe, flew around the table eagerly devouring venturesome flies and other annoying insects. The birds were as tame as those in an aviary.

Before this time, when the Pilgrims made their first clearing and started the settlement which was to become a mighty nation, the thrush, robin, bluebird, wren, swallow, and other native American birds bid the somber epoch builders welcome; they nested in the eaves of the rude log houses, on the posts of their fences, in the trees of the first orchards and broke the blue laws every Sunday in spring by singing their lovely songs.

When human Sabbath breakers were put in

stocks, pilloried and caged, to be exhibited to the church-goers along with the wolfheads which were nailed over the church doors, the birds sang to the poor wretches and even made nests in the dried wolfheads.

During the migrating season the flocks of wild pigeons darkened the skies and in the Carolinas and other Southern States the waters were covered by myriads of wild fowl; there were acres and acres of ducks floating in the lagoons which only swam aside to allow the boats to pass through them; the mud flats and shoals were crowded with shore birds, plovers, snipe, herons, and other waders. It was the golden age of bird life in America.

I have just returned from a trip in the northern wilderness, a few hundred miles south of Hudson Bay, where I spent two weeks in company with six Indians and two white men on a canoe trip, paddling up the Ouiatchouanish River to a long, dry portage, which led us over a sun-baked hill denuded of timber by forest fires to the shores of some beautiful lakes. After leaving the lakes we traveled down the River Croche until we came to the pioneer settlements of La Toque. To a person familiar with the birds of the United States this

was a most interesting trip, for while he could recognize some of his old familiar

FRIENDS AMONG THE FEATHERED SONGSTERS,

the woods were filled with notes and calls entirely new and unfamiliar, and even the songs like those of the thrush, veery, and other equally well-known birds differed from the songs these birds sing further south in the swamps of Pennsylvania.

In the black spruce forest of this northern country a bird looker has little opportunity for identifying the specimens with his field-glasses, for the reason that the birds, as a rule, occupy high positions in the dark foliage near the top of the black spruce and balsam trees, and when good luck has won an opportunity to discover a songster the glasses can only aid him to see

THE UNDER PART OF THE BIRD,

and a trip of a few hundred yards to one side or the other of the old Indian trails, which are the only paths in this wilderness, will reduce ordinary clothing to tattered rags. After my first attempt I went around camp in my under-garments while the Indians patched my clothes.

This land is

THE HOME OF THE WHITE-THROATED SPARROW,

and alongside of the trail I found a nest made in the dry grass in which was deposited one egg; both egg and nest were so like the surroundings

in color that it was not until I had my face close to it that I really discovered the home of the little bird which was itself perched on a bush close to my side uttering a mild protest. The white-throats up here are very tame and in the wilderness their song seems to be very much louder than it is when they visit us in the fall and winter, or possibly the silence of the forest makes the birds' notes sound louder, but I really think that they sing with more joy and more volume to their voices when in their northern homes. Not only does the white-throat sing all day in June, but whenever I was awakened in the night and busied myself removing a boot or a hatchet which had been doing duty as a pillow and substituting in its place some softer object, I was sure to hear the piping notes of the white-throated sparrow. For fear that I might not hear him at night he would sometimes perch upon the ridge pole of the tent and sing.

The one egg in the white-throat's nest which I found by the trail was of a dingy white color finely speckled at the small end and thickly blotched with light rufus brown at the big end. The white-throat lays from three to four eggs, but this season was late and these little birds had evidently just commenced their domestic arrangements. Along the shores of the Ouiatchouanish the alders hang over the water. The leaves had not yet come out and the branches were black and bare on the alders, and, although it was the tenth of June, the dark branches formed a hedge row on both sides

along the borders of the stream. In these branches some birds had built their nests, composed entirely of gray lichens, but although we passed a number of newly built nests of this description, we did not get a glimpse of the birds to whom they belonged.

In the black spruce forest there was a bird which from the under side appeared to be very similar to our greenlet, but apparently much larger and it had a most remarkable song which began in a very high key with a fine note at

TSEE—EP TEE—SEEPE

then with a full round note chur—chur—chur—chur—followed by a rollicking laugh

HE—HE HE—HE

ending up with a

WEE—CHEETA! WEE—CHEETA! WEE—CHEETA! WEE—CHEETA!

Each one of the changes in this song sounds like the note of a different bird. There was an inconspicuous dark-brown sparrow in the trees around the hotel at Roberval which had a surprisingly loud, pleasant and altogether an unfamiliar song, but even at this place in the comparatively open country I was unable to get a good enough view of this bird for certain identification, although it was probably a Lincoln sparrow. The field-glass naturalist's place is not in the raw wilderness of the north woods.

OUR COMMON PURPLE GRAKLE, OR CROW BLACKBIRD

was replaced by the rusty blackbird of the north. During the whole trip I did not see more than three crows, and saw the first goldfinch just after reaching La Toque Junction which was the southern end of our journey. On the lower River Croche, below the Gros Rapids, where the sand banks replace the rocks which border the upper river, we found numerous colonies of bank-swallows and in every available place there were one or more large holes of

THE KINGFISHER.

It was not until we reached the vicinity of La Toque that I heard the vireos talking in the trees, but redstarts, yellow-throats, yellow warblers, song-sparrows, blue-birds, and woodpeckers, were plentiful in all neighborhoods adapted to their taste.

As we came around the bend in the smooth part of the River Croche, our Indians gave an exclamation and I saw a female sheldrake flutter up the stream a short distance and then turn and follow the canoes; and I saw that the Indians were paddling after

THE YOUNG DUCKS.

Presently one little fuzzy fellow dove into the water close to the shore, and came up near the

canoe in which I was seated. For an instant it looked at us in alarm, then it started up the stream on the surface of the water, its little downy wings striking the water in exactly the same manner as do the spoon oars of a racing shell when the coxswain calls upon the crew for a spurt; but you must not think that any college crew that ever pulled an oar could possibly row with a rapidity of stroke equal to that of the young sheldrake. The little birds easily ran ahead of canoes propelled by two stalwart Indians working their paddles with all the strength they had in them. The river at this point has a very rapid current, but the little birds found no difficulty traveling up-stream almost as fast as they did in the opposite direction. Our child-like Indian canoe men shouted with glee and cried out, "Steamboat," referring to the motion of the little down-covered wings which looked more like revolving paddle-wheels than the wings of a bird.

There were other ducks, probably sawbills, which flew ahead of the canoes; some showed a great deal of white on their wings, while others were apparently pure white. The Indians called them divers, but they were not grebe, and as we refrained from shooting any of these birds, and we did not get a very close view, we were unable to identify them. The ordinary black duck occasionally flew over our heads, but piebald and white ones always flew down the stream beating the surface of the water with their wings

to the first bend where they rested until the canoes appeared in sight. One bird in particular kept up this program from morning until late in the afternoon and, as we made forty miles that day in our canoes, it must have been quite a distance from home before it at last dove and came up under shelter of bushes along the shore, which offered concealment until the canoes had passed and it could fly up-stream unmolested. When we reached the settlements the chimney-swifts were twittering around over our heads, but it was the birds in the dark, thick spruce woods which interested me most and their wild, sweet unfamiliar notes will always remain in my memory as a source of pleasure and regret. Pleasure from the joy of recalling their memory, and regret because they were unidentified and I shall never know who our serenaders were.

As might be expected in a country where all the inhabitants, white and red, speak French, and can use but few English words the

BIRDS ALSO SPOKE FRENCH,

at least one of them did, and we could hear its plaintive voice, never near but always at a distance, in the forest crying,

TRES BIEN!

To an Eastern man probably the most interesting bird in the West is a little fellow dressed in a complete suit of dark-gray clothes. It is

AN ORDINARY APPEARING BIRD,

with a rather short tail, but there are no strongly marked peculiarities about its appearance. Its plumage is as modest as that of a catbird, and very much the same color. Its body is shaped very much like our wood-thrush, and near the same size, but notwithstanding its modest apparel and the fact that it neither has the long legs of a crane nor the abnormally developed beak of a parrot, or any other strikingly peculiar feature, this bird is sure to attract your attention immediately because

IT DOES SUCH UNEXPECTED THINGS.

You may be fishing in a trout brook and reach a point where the waters come rushing over the boulders and leaping down precipitious falls, when all of a sudden a little bird makes its appearance. If you are not a bird enthusiast you will pay no attention to the little fellow until you see it dive right into the rapids and disappear under the water, then you will sit up and take notice.

On Glacier Creek, McDonald's Lake, Montana, I studied the water-ouzels and watched them as they kept up a peculiar bobbing motion, not teetering, but bobbing up and down, and I noticed that they never get wet; the water has no effect upon their plumage, but rolls off as soon as they emerge from it. Mr. Vreeland claimed that he saw them use their wings while under water, but I did not.

SKETCHES OF FLAMINGOES

They seemed to dive and take advantage of the eddies behind the rocks just as do the trout.

It will be interesting to know the object or reason for that peculiar bobbing up and down indulged in by so many of the birds that frequent the shores or the water. The first time I ever saw

A LOUISIANA THRUSH

it attracted my attention by going through the same sort of manoeuvers, and if any of my boy readers see a bird bobbing up and down, no matter what kind of a bird it appears to be, they can make up their mind that there is water near at hand or at least the bird's home and hunting ground is upon the edge of streams or other bodies of water.

My first experience with any creature is the one that remains indelibly impressed upon my memory. I may see thousands of water-ouzels and enjoy watching them; I may meet thousands of Louisiana thrushes and take careful note of everything they do, but as soon as I begin to tell about these birds I forget all the notes of the thousands I have seen; often forget even to refer to my note books, and only remember the first birds I met.

Every artist has had similar experience with his first impressions; he may find nothing to sketch around his own home, but if he visits a new place, he finds it filled with possibilities of interesting pictures, while the strange artist visiting the home of the first one is delighted with its picturesqueness.

I have seen thousands of yellow warblers and watched them for hours at a time, but the first double nest I found is the incident I always remember in connection with these birds.

TWO-STORY BIRDS' NESTS.

While the expanding leaves of tree and shrub retain the tender tints of pink, and the broad lily pads commence to mosaic the surface of the ponds with green, in perfect harmony with the bursting bud and opening flower comes the summer yellowbird, and from hedge and bush may be heard his song, as simple and pleasing as the tasteful but modest plumage that covers his little person. Almost immediately after the first appearance of these industrious little birds they commence their preparations for housekeeping. The male bird flies busily about selecting such material as feathers, plants, fibers, the furze from ferns, the catkins from willows, and other similar objects, all of which he brings to his mate, who arranges and fashions their delicate nest. So quickly and deftly do this little couple labor that they build the greater part of their house in a single day.

There is often a third party interested in the construction of this nest, a homeless, irresponsible, immoral,

BIRD OF MANY HUSBANDS,

who has a sort of tramp's interest in the housekeep-

ing arrangements of most of the smaller feathered denizens of copse and woods. This is the well-known cow blackbird, who disdains to shackle her freedom with the care of a family, and shifts a mother's responsibility by farming her progeny out, while she seeks the incongruous but apparently congenial companionship of the cattle, with whom she appears to be on the most intimate terms.

THE COW BLACKBIRD

deposits its eggs indiscriminately among the nests of smaller birds. The blackbird's eggs generally hatch out a day or two before the adopted mother's own eggs, so, when the legitimate members of the family do come, it is to find their nest already occupied by the strong, lusty interlopers, who, on account of their superior size and strength, come in for the lion's share of all the food brought to the nest. Thus the innocent parents

REAR THE ALIENS, WHILE THEIR OWN YOUNG STARVE.

It is really a pitiable sight to see a couple of little greenlets anxiously searching from daybreak till evening for food to fill the capacious crop of one or more young cow blackbirds, considerably larger than the foster parents themselves.

The summer yellowbird, though confiding little creatures, are not readily duped or imposed upon. Their instinct is sufficiently near reason for them

to detect the difference between their own little fragile, prettily marked, greenish-colored eggs and the great dark-colored ones the vagabond cow blackbird has

SURREPTITIOUSLY SMUGGLED INTO THE COZY NEST.

The domestic little couple cling to the spot selected for their house and will not leave it, neither will they hatch the obnoxious eggs, which they are apparently unable to throw out; but the difficulty is soon surmounted, and so are the gratuitous eggs, for the indefatigable workers proceed at once to cover up the cow blackbird's eggs, constructing

A NEW NEST ON TOP OF THE OLD ONE,

building a second story, as it were, to their house.

One of these two-story nests found in Flushing, Long Island, contained two cow blackbird's eggs in the bottom compartment, and in the upper one three eggs of the summer yellowbird. Mr. Langdon Gibson watched the construction of the nest. Visiting it again after it was finished, he discovered the egg of a cow blackbird. Next day two of these eggs occupied the same nest. Some time afterward, to his surprise, he found the nest contained three eggs of the yellowbird and no signs of the existence of those deposited by the blackbird, but the nest had the appearance of being much taller than at first, and an examination disclosed the true facts of the case.

Mr. Nuttal was the first naturalist, I believe, to record the observation of these two-story nests. Baird mentions

A THREE-STORY NEST,

each of the lower nests containing the eggs of the cow blackbird, the whole structure being seven inches high.

After writing the above I received a copy of "Bright Feathers," in which Mr. Rathburn describes and illustrates a three-story nest that was found upon a honeysuckle. I mentioned the fact of three-story nests being sometimes found, but this one described by Rathburn is an interesting specimen from the fact that the second compartment is said to have contained one cow blackbird's egg and one of the legitimate eggs of the yellow warbler. According to Baird Mr. Nuttal says that, "Where the parasitic egg is laid after her own, the summer yellowbird acts faithfully the part of foster parent." But from the specimen described by Mr. Rathburn we must be led to believe with Mr. Baird that the yellowbird will not act the part of foster parent, and rather than do so will sacrifice her own eggs with those of the obnoxious cow blackbird.

MANY-STORIED BIRDS' NESTS.

In 1882 a friend of Mr. W. L. Scott, of the Ottawa Field Naturalists' Club, found a nest of

the summer yellowbird composed of *five stories,* each of which, except the top one, contained a cowbird's egg. The fifth story was not quite completed when the nest was taken, but the egg of the intruder was already more than half buried in the new structure.

But other birds sometimes build

COMPOUND NESTS,

but not for the same purposes as the summer yellowbird although these novelties are always interesting.

Almost everyone whose business or occupation has introduced him to an intimate acquaintance with the salt marshes that line our eastern coast, is familiar with the odd, chattering notes of the marsh wren. This little bird finds its board and lodging among the reeds and rank grasses of the damp salt meadows. Morning and evening its song, if such vocal efforts can be so called, may be heard, but especially does it delight to sing at night. Often after a long sail, when belated and overtaken by night, the writer has welcomed the unmusical but not unpleasant, notes of the long-billed marsh wren as a signal from shore and home.

A sailing party composed of some of my friends were once caught in a dense fog and only discovered their dangerous proximity to the shore when they heard the warning notes of one of these

LITTLE COASTGUARDS.

Other birds find refuge and sustenance among

the salty sedges inhabited by the marsh wrens. Among them may be seen the brilliantly decorated

RED-WING OR SWAMP BLACKBIRD.

The lustrous black plumage of the male bird shines in the sun, giving out greenish metallic reflections. Its shoulders and lesser wing coverts are ornamented with crimson epaulets, giving it a very martial and rich appearance, in strong contrast with the modest brown plumage of its friend and neighbor the marsh wren.

On Flushing salt meadows was discovered another two-story nest. This time both nests bore unmistakable evidence of being inhabited. The lower compartment, from its peculiar spherical form and the reeds and cat-tail cotton of which it is composed, would be at once recognized as

THE NEST OF THE MARSH WREN,

even if it did not contain the little chocolate-colored eggs of that bird. The upper nest is cup-shaped, three inches inside depth and diameter. The outside is made of coarse straw and fibers, and the inside lined with fine grass. A single glance suffices to prove it to be

THE NEST OF A SWAMP BLACKBIRD.

Two bluish-green eggs, with strange hieroglyphic markings on the end, occupy the upper floor, and three little brown eggs are hidden in the lower

nest. The blackbirds must have commenced the upper nest as soon as the wrens finished the lower one.

In both the upper and lower stories of this seaside apartment house the eggs were warm when discovered, which proves that the mother birds had been off the nests but a few moments. The writer knows of no other recorded instance of a compound nest occupied by the red-winged blackbird and the little marsh wren.

CHAPTER XXX

SMALL BIRD TALK

ODD HOME OF A FOREST KING—SCARLET TANAGER'S FOOD AND SONG—BLUEBIRDS, ROBINS, NUTHATCHES, ORIOLES, OVENBIRDS, HUMMINGBIRDS AND MISCELLANEOUS ITEMS FROM THE AUTHOR'S NOTE BOOKS AND SKETCH BOOKS.

A MODEST FOREST KING AND HIS PEOPLE.

Upon the west shore of Big Tink, well up toward the inlet and not far from the sand spring, a burnt hemlock and a leaning chestnut mark the location of a little cove.

With its many toes of knotted roots tightly clasping the blue stone of the rocky shore there was a dwarf alder.

In its desperate efforts to escape the benumbing effects of the cold shadow of the dark forest the alder reached as far out over the water as its strength permitted.

But for the firm grip with which its roots clasped the rocks, the plucky plant would have measured its length in the water of Big Tink.

If the alder's struggles had no higher aim than

to assert its inherent right to live, the battle was in vain, for its moss and lichen-covered arms and fingers were sapless and dry, destitute of leaf or bud. But all around the fresh green leaves were bursting forth, and underneath the dead supplicating branches of the little tree, the lily pads were pushing their round heads above water or covering the shallows with a carpet of the light red and pale greens of their unfolding leaves.

Towering trees were all around whose sturdy fat trunks proved them to be winners in life's race and subjects for the saw-mill to consider. Yet the little alder's dead branches were chosen as a fit location for

THE THRONE OF THE KING!

No degenerate offspring of an effete monarch and a worn-out family; but a sturdy self-reliant king, a democratic king, who modestly conceals his bright crown of ruby jewels beneath a gray quaker headdress and only displays the insignia of royalty when an enemy is in sight.

When the

TIMID RUFFED GROUSE

lies close upon her nest at the foot of two pine trees, trusting to her dead-leaf-colored plumage for concealment, and while all the other denizens of the woods are trembling with fear, then the monarch proudly displays the royal colors.

The kinglet selected the poor dead alder as a foundation upon which to build its rustic home and with such discernment had the roots, mosses and coarse grasses been selected and so deftly woven into a nest that it required experienced eyes to detect its presence upon the alder; but, if you had been there, you might have paddled your canoe under the dead limbs and from your seat looked into the nest and seen the hidden treasure of the royal pair.

Four little cream-colored globular objects, decorated with small specks and spots of light brown, lay on the soft, fine grass and intermingled with a few horsehairs which lined the cup in the inconspicuous bunch of fine pieces of bark, roots and moss.

BIG FISH HAUNT THE BLACK WATERS

of the deep hole at the outer edge of the lily pads, and each day as my boat drifted by the cove I made a cast with gaudy colored artificial flies, to tempt the fish to strike.

Every cast that I made brought one or both of the royal couple from their perch, swooping down in pursuit of the imitation insects on my line.

It was only by constant watchfulness and quick back casts that I was able to save myself the mortification of seeing the saucy little creatures cruelly caught on the wicked hooks.

On several occasions I noticed that peculiar swirl in the dark waters, a swirl which never fails

to make a fisherman's nerves tingle, for he knows that the hidden force which causes the commotion is the broad tail of the big fish; but each time before the fish would strike the hook I quickly whipped the line away.

It was not because I did not want the fish. Ah, no! that fish was the thing I was after and the blank countenance of an empty frying-pan was ever before my mind protesting my action, but I snatched away my line

TO SAVE THE KING AND HIS ROYAL CONSORT.

It may be that to this hour there are two birds and one or more big bass puzzling their rudimentary minds in vain efforts to account for the nimbleness of the brilliant insects which visited the cove with such regularity, and with equal regularity escaped capture, in spite of the best laid plans of bird and fish.

In due course of time, the little globular treasures of the nest cracked and came apart disclosing four as comical,

PINK, SKINNY YOUNGSTERS

as ever cracked an egg-shell or wore a downy topknot.

If approached silently, an inspection of the nest would disclose nothing to the first glance, but closer observation would reveal a flesh-colored or pink mass at the bottom of the cup which seemed to be covered with a luxuriant growth of gray mil-

dew. However, the instant you made known your presence by some slight noise there would be a sudden change and from out the reddish mass would shoot four funny little heads and four wide open mouths, and it was then you discovered that, that which appeared to be mildew was in reality the sparse, downy growth on the young birds.

Long before the eggs were hatched the kinglets learned that the man in the boat would not harm them. Nevertheless, when, in their judgment, he was awkward in handling the branch, nest or contents the birds would utter sharp commands of caution or reproof; but as a rule they placed such confidence in their visitor's good-will that they had no hesitation in leaving the perch near his head to dash after passing insects.

Down in the swail near the outlet, the pitcher plants and cranberries grow in the sphagnum moss around the outlet of the lake; here the yellow birch and tall spruce soak their feet in cold muck and their heads in hot sunshine. In one of these trees

A RED-TAILED HAWK HAD ITS NEST.

Occasionally the hawk came sailing by the alder bush, its keen eyes searching every spot of ground in hopes of finding an unwary mouse, but it never caught any near the cove, for the instant the hawk hove in sight the crest upon the king's head became erect, displaying the bright colored war feathers concealed there, and with a volley of bird adjectives issuing from his throat the little kinglet

launched himself from his observation perch, like a bolt from a cross-bow.

Up! Up! he goes until he reaches a point above the unprotected back of the invader; then down he dashes on to the broad, unprotected back of the mouser.

The kinglet's little wife did her share in making the neighborhood unpleasant for marauders of all sorts and it was amusing to see how the robin up by the roadside, the flicker in the hollow tree, the song-sparrow from the copse, the catbird from the swamp blueberry bush by the spring, and the chewink whose home is in the underbrush of the burnt district, all counted and relied upon the kinglets' ability to discomfort their enemies.

THE POETIC LITTLE FIELD SPARROW

who had built its nest among the wild flowers near the edge of the "tote" road, trusted to its unobtrusive plumage for concealment and to the power and energy of the king to drive the enemy away, but after the hawk had disappeared the little sparrow would mount upon a tree and burst into a glad song of rejoicing, and this is what it sang: "Gee-o! Gee-o! Gee! free; free; free; free; free;" the first four words louder, prolonged, and in a higher key than the remaining words, gliding quickly to a lower pitch, gradually becoming softer and more gentle until the last self-assuring "free" is reached and is evidently not intended for the public ear, for it can only be detected at a short distance, but his

gentle mate in the growing bouquet hears and rejoices.

Away back under the black foliage of the giant white pines, a wee bit of fuzzy stuff attached to a dead limb showed, to the knowing ones, the home of one of the pigmies of the bird colony. It is the home of a humming-bird whose body is not much larger than a grapevine beetle, but it conceals the heart of a lion, for never yet did the midget hesitate to take up the battle where the kinglet left off. It did not fear even Uncle Sam, the big eagle.

Old Redtail always seemed to rejoice when he had sailed safely by these warriors, for when he would reach his own fortress in the swail you would hear him screaming,

KEE—YI—A; KEE—YI—IA;

which in bird language means, I dare you to come in my back-yard.

In due course of time the fuzz upon the young princes' skinny bodies was underlaid with large, juicy-looking quills and a little later the ends of these quills were each marked with a baby feather. Progress after this was rapid, and it was not long before the

EMPTY NEST OVER THE DARK-GREEN LILY PADS

told the story of another deserted home. The royal couple had succeeded in rearing all their children and in protecting all their neighbors, because

no fair, tender-hearted lady was there to demand the lives of the parent birds, that she might have their poor upholstered skins with which to decorate her hat and add two more lives to the 200,000,000 wild birds brutally murdered for that purpose each year.

A ruby-crowned kinglet was unfamiliar to me; that is, I only knew it from my books, and it was from Chapman's description that I identified the little fellow. Chapman says that the male bird has upon its crown a partly concealed crest of bright red. This bird had that sort of a crest. The rest of the upper parts are of a gray, olive green, brighter on the rump. This description also fits my bird and so does the rest of the description, down to the two whitish wing bars and slightly forked tail. Chapman also says of the nest that it is usually semipensile, of moss, fine strips of bark, neatly interwoven and lined with feathers. This agrees practically with the nest in the alder bush, although it had more small roots than bark, and inside were a few horsehairs. His description of the eggs, as dull whitish or pale buffy, faintly speckled and spotted with pale brown describes the eggs in the nest on the alder bush, but there were but four eggs in this nest, and from all accounts I think it must be unusual for the ruby-crowned kinglet to build in low bushes overhanging the water.

A word respecting the nest-robbing habits of some birds. It is my opinion that any insect-eating

bird will not hesitate a moment to make a meal of the unprotected young of any other small bird; and while I have never seen bluebirds, thrushes, catbirds and robins, for instance,

PILLAGING OTHER NESTS,

I have noticed some suspicious movements among small birds which more than once has caused me to think that my friends had been committing some mischief.

Once while fishing in the trout brook I was conscious of a loud buzzing noise, but knowing that rattlesnakes do not make that sort of a noise, and that there was nothing else in the country to fear, I continued to work at my leader, endeavoring to loosen a whipped-out fly, when I noticed that the guttural noise was notes of distress of a nuthatch, accompanied by a loud humming noise close to my head; carefully resting my rod against a white birch tree, I looked around for the cause of the commotion and saw that a ruby-throated humming-bird was making life

NOT WORTH LIVING FOR A WHITE-BREASTED NUTHATCH;

the latter seemed to hope for protection from me, for it flew around my head in a bewildering manner, trying in vain to dodge the tiny speck of jeweled feathers which was pursuing it.

The question is this: Is the nuthatch a nest-robber? If not, why the vicious and persistent

chase by the humming-bird? Over and over again I have seen the red-eyed vireo chase robins away from a certain location claimed by the smaller bird, and I have never heard of

A ROBIN ROBBING A NEST,

but I do suspect that *any bird which lives on insects would not hesitate to eat unprotected young birds.*

Many young birds are little skinny, pink things about the size of fat grub worms, and must be a tempting morsel to birds which are

NOT GENERALLY SUPPOSED TO BE CANNIBALS.

After the young birds are feathered they are probably safe from the older birds of the neighborhood, excepting, of course, the crows, jays, hawks and shrikes.

It is an outrage to call our beautiful oriole after Lord Baltimore simply because the latter, an offspring of an effete and dying aristocracy,

HAPPENED TO CHOOSE THE ORIOLES' COLORS

as a livery for his hirelings; colors mind you, which were worn by the bird before England had emerged from the stone age, and if you listen to one of the birds you will constantly hear him calling your attention to the fact and asking for judgment; he cries, "Look here, look here looker, verdict!" or simply makes the demand for a verdict.

ROBBING A ROBIN.

The Baltimore orioles nest every year in the

maples at the side of my house. There is a pair of orioles which have built a nest in an elm tree from carpet ravelings that I supplied. The robin in the corner tree saw that his neighbor was making a pretty nest, and, not to be outdone, he took a bright piece of a kite-tail a boy had lost in the tree, and wove it in his nest. The oriole saw it and came and tugged at the ribbon until he had stolen it away from the robin.

It has lately become quite a custom

TO SUPPLY RAGS TO THE ROBINS

with which to decorate their nests, and yarn to the orioles for the same purpose.

Last spring my neighbors had

"THE LAUGH ON ME"

because the robins refused to use my cast-off red neckties and preferred some white cotton strips furnished by a lady across the street.

I noticed a kingbird helping himself to some of the white rags although I have never seen rags in their nests.

A robin on Jamaica Avenue, Flushing, decorated its nest with bits of fine lace which it found bleaching upon our alderman's lawn.

As I stepped from my door in Flushing for my customary walk, a voice from the branches of the maple tree overhead exclaimed, "Chip Jar!" and I knew that it was one of our most beautiful summer visitors

THE SCARLET TANAGER,

it was not long before I caught sight of a fiery red bird with black wings and scarlet body, and later saw his modestly garbed mate.

Continuing my walk, I entered the wood of tall chestnuts, sweet gums, oaks, maples, and dogwood, whose many branches form a shade which shelters the jacks-in-the-pulpit, wild geraniums, violets, and anemones. This wood is in the heart of the old village of Flushing, and only about two blocks long and one in width, but it is composed of tall and ancient trees, and in them I discovered several of these birds.

Once I saw five male tanagers in an oak tree, but this happened in the spring. The same scarlet tanager builds its nest on this corner (Bowne and Amity Streets) year after year.

Last year its nest was in the oak tree in front of our home; this year I have not discovered it, but the male bird is never over a hundred yards from the corner, and with the exception of three days it has not ceased to sing from early morn until dewy eve; it is indeed a most tireless singer, but it's summer song of

"OH DEAR! TOO RICH, TOO RICH, TOO RICH FOR ME!"

has not the rollicking enthusiasm of its robin-like song in the springtime, when it crys:

" Chur cheer chinic chinic wee wick cheer week.

Cheer chee—r—r chunic chunic.
Wee wick cheere wick."

Very much like a robin, but with a sound as if one were saying e—r—r down in one's throat.

A scarlet tanager at Wild Lands on an August day, found a very large luna moth caterpillar, the larva was about the size of one's first finger; indeed it was so large that it seemed to be with great difficulty that the bird could fly with it and as it did so the larva was allowed to drop three times before the tanager succeeded in reaching a dead branch about thirty feet above the ground.

Upon the branch there is a bunch of lichens; here the bird placed the fat, flesh-colored caterpillar and then taking hold of one end of the worm-like body, it bruised it with its bill until the larva's insides were mashed to a pulp, then with evident enjoyment, it sucked out the juices of the *dainty* morsel as one would suck an orange. I have since seen this bird so often feeding upon the larva of the luna moth, that I am led to believe this big ungainly caterpillar to be an important part of its diet.

THE TANAGER'S RED COAT IN AUGUST IS MOTTLED with blotches of dingy white or greenish white where the feathers have fallen out. This particular Wild Lands bird nests somewhere in the swail adjoining my log house, and I have seen what I have every reason to believe to be the same bird here season after season.

There is no doubt in my mind that the same birds build within a hundred yards of the same spot year after year, or until they are driven away or killed.

One season we arrived at Log House on May 13th.

THE PHOEBE NEST OVER THE KITCHEN

door was destroyed, consequently, she built a new nest under a shed near the door; there

PHOTOGRAPH OF LIVE FREE WATER OUZEL ON GLACIER CREEK, MONTANA—BIRD IS ABOVE ARROW POINT.

were no eggs in the nest when we arrived, but by the 20th there were four eggs, and on June 5th one egg was hatched. We knew something was happening because of the agitation of Mr. Phœbe who up to this date spent most of his time roosting on the other end of the eave-trough, occasionally taking a bath in my tin wash-basin, but now he sat on the edge of the nest and talked in

LOW, SWEET TONES TO HIS WIFE;

when she would leave the nest he would continue his low talk occasionally picking at the inside of the nest.

The nest is so located in the passage that some one of our household is constantly passing and repassing under it almost brushing their heads against the planks supporting the nest; but the birds for more than a dozen years have nested over the kitchen door and do not seem to mind us further than to keep their keen eyes on us while we were near their nest. In 1907 the flying squirrels took possession of the phœbe birds' nest and the birds moved to the other side of the house under a projection of the second story.

For two weeks or more (August 25), the

AMERICAN GOLDFINCHES

have been frequenting a young orchard near by and often fly over our place.

I was surprised to hear them singing this time of year.

The autumn song is as quick and nervous almost as that of a red-start and does not, as a rule, resemble in the least the canary-like notes I have heard from the same birds in the springtime, but the other day, September 10th, at Rowland Station I heard one singing in great form and much better than the canary.

Up to the middle of August the robins, catbirds, and indigo-finches have been singing, and along the lake edge in the evening dozens of invisible birds sang an indescribably sweet, plaintive melody, but I was unable to see the little musicians.

Last July Mr. Elmer Greger and Harold Williams from Forest Lake Club came over and Mr. Fred Vreeland went with us in canoes to the outlet of Big Tink. We forced our way along the outlet until we became so hopelessly entangled in the jungle that we left the canoes in the top of a fallen tree and made our way through the bog among high ferns, tussocks of grass, alders, yellow birch trees and thickets of briars, until we found the trail to the cranberry "mash," where the wild calla grow in patches and in the path on the floating mass of entwined roots of cranberry, sphagnum moss and tamarack, the tall green and red woody blossom of the pitcher-plants rear their heads, while here and there are the beautiful rare orchids, the purple-pink long-leaf, and the more delicate but scarcely more beautiful salmon pink-

one-leaf in middle-of-stem, nod their dainty heads above the cranberry's light blossom.

It is always wild and always charming on the floating Indian rubber-like shores of Little Tink, and although the mosquitoes sing, the strange

FASCINATING NOTES OF THE VEERY

drown the minor key of the insect pest.

In July all throughout the thickets of young trees, in the paths of the forest fire, thrushes are singing; their notes are not unlike those of the wood-thrush, but of a more liquid and even more flute-like tone than the former. None of the latter appear to be near the log house, although they are common not far away and in Flushing their song is almost as common as that of the robin.

About three or four P. M. and at intervals, until some time after sunset

THE OVEN BIRD

mounts the air above the tree-tops and sings that exultant rhapsody which does not resemble in either quality, notes or tone its ordinary day song, of "Teacher! Teacher!" or "Preacher!" or "Tcher! Tcher!" which it repeats over and over again earlier in the day.

There must be thousands of veerys in the swamps and swails in the outlet of Big Tink and bordering the marsh of Little Tink.

PHOTOGRAPH OF PIKE COUNTY OVEN BIRD'S NEST.

In Spruce Swamp their song is constantly ringing, or rather going in spirals, on all sides of the daring explorers who brave the bog, fallen trees and tangled rhododendron thickets which form the underbrush in this swamp.

This spring while walking through the woods, now called Waldheim by the real estate men, but what we Flushingites formerly knew by the name of Macdonald's Woods, I heard a voice crying:

Quick! Quick! Quick!
Look-a-here; Look-a-here!
Three; Three.
Yellow-link! Yellow-link!
Pretty Bird, Pretty Bird!
Wheat Oh! Wheat Oh!

Tweet, Tweet,
Tu-r-r-r, Tur-r-r-r,
Wee-ah; Wee-ah!

and I knew that our prince of songsters was feeling good and telling every other inhabitant of his joy by his quaint song.

It took but a few moments to locate him on the topmost branch of a pin oak where his reddish-colored body, speckled breast and long tail made the brown thrasher a conspicuous object against a patch of blue sky. "Cherer-link, chere-er link," cried a robin in response, while a half-dozen brilliant little redstarts flew nervously from tree to tree inspecting the branches, leaves and buds, keeping in constant motion and saying their say as if they were in a great hurry and feared interruption,

"T'WEET WHEE—WHEE—WHEE WHIS—ETT!"

Taking out my pencil and note book I counted the words and syllables by making a series of dots and dashes as the brown thrasher birds sang; of course the song often varied in the number of words used, but the normal number is as here recorded.

In among the small dogwoods, briars and poison ivy, a little yellowbird, with a sort of orange-colored dots on its breast, flew, peering under the leaves, often even descending to the ground and turning over last year's dead leaves which lay there among the rank grasses and wild flowers; this was

SKETCHES OF THE OVEN BIRD

1. Pose assumed by mother bird as she creeps about in front of you, like a rat to entice you away from her nest.
2. Oven bird's nest, sketched from nature, Rowland, Pike Co. Pa.
3. Young oven birds; five in a nest.
4. Cross section of nest showing latter below level of floor of oven.

the summer yellowbird or summer warbler, which builds its dainty little nest in the fork of a sapling and when a vagrant cow-bird deposits its egg in the nest expecting the warblers to act as foster parents, the egg of the interloper is deftly covered up and another nest built on top of the egg as already described. The song of this warbler is very difficult for one to distinguish from the redstart; but by the same process of counting and experiment I found that the yellowbird's cry was for wheat, this is what he said:

"WHEAT, WHEAT, T'WHEAT, WHEAT, WHEAT, WHEAT, WHEAT!"

A catbird in quaker guise listened with its head to one side and remarked: "Ticka tea-o, whay oh! wheet," then it imitated with wonderful skill the flute-like notes of the wood-thrush.

After this exhibition of mimicry it seemed to say, "these songs are all very well for you poor birds with a limited vocabulary, but I'll show you how to sing," and with that it gave an exhibition of its vocal powers which were second only to those of the brown thrasher.

A gray squirrel scrambled up a chestnut tree and yellow-hammer scolded him from the shattered end of a broken branch, where a neatly excavated hole was plainly discernible in the rotten wood.

Reluctantly forsaking this charming bit of wood, my path led me by some small dwellings packed closely together, but even here the catbirds, robins,

and wood-thrushes were singing, and when I reached the open fields which the real estate men are still holding for the unearned increment to pile up upon, the meadow larks showed their white feathers as they flew low over the long grass outside of the baseball diamond and cried, "Oh so che-ap! Here so-ch-e-a-p" and the little sparrow with a smut mark on his breast sang his little ditty.

When I reached the swamp woods and thickets bordering the old railroad "fill" the swamp blackbirds were calling for Barbara, Bar-ba-ree! Bar-ba-ree! and their brilliant red epaulets and black uniforms were conspicuous among the willows, alders, and cat-tails of the swamp-lands.

Here I saw a chestnut-sided warbler and heard him making his wish although he did not state what he wanted, but simply said: "Whish, whish, whish, wish, wish, wish, wish!"

A little dust-colored sparrow answered with a soft and plaintive,

"Chue, chue, chue;
Tch, tch, tch, tch, tch, tch,"

the last six words spoken quickly in an ascend ing scale.

In the woods a black-and-white creeper, running up and down the trunk of trees with a celerity which made the red-headed woodpecker envious, paused for a moment to greet me with, "Chee wee, eweet, eweet, eweet," and I doffed my hat to the little acrobat.

Already and dressed for the mask ball with a

velvety black mask on his face the Maryland yellow-throat sang,

"Tu we, cheete, we cheete,
We chete, we chete,
We chete, we chete too!"

But bless his little heart he cheats no one and his mask in place of acting as a disguise, is the principal mark by which the bird-looker identifies the little denizen of the thicket of wild honeysuckles, grapevines, sweet ferns, and elderberry bushes.

"Tut, whe oh! what? tut!
Whee oh, whee oh!"

cried a voice in loud, distinct tones, and when I advanced nearer, a small bird scolded me in a guttural voice and I recognized the white-eyed vireo.

A beautiful indigo bunting perched on an old fence-post, but had nothing to say for himself, and I was much disappointed, for they often sing for me when I have no pencil or note book.

There was a yellow streak as a small bird flew by me and the next moment I heard him say, "Wizhe-zr-zr-zr-r-r-r," but I did not know the note and failed to see the bird, again; however, it was no doubt a blue-winged warbler. Such experiences as the last do not discourage the lover of birds. He knows that there are still new acquaintances to make and abides his time. From a brush heap a brown and black bird informed me that his name was Cheewink, and for fear that I would forget it he repeated the name several times,

but as he made but one attempt at a song, I did not have an opportunity to make any short-hand notes of his ballad, although I have some made since this was written.

But what pleased me most of all was to hear a clear voice in a truck garden crying:

"BOB WHITE, BOB WHITE!"

Poor little bob-white! He lives in a city populated with two-legged, blood-thirsty animals as numerous as grasshoppers in Kansas, and there is scarcely one of these fierce creatures called men who would not rejoice over an opportunity, and call it sport, to kill this persecuted little bird who with his modest mate has dared to set up housekeeping within the corporate limits of New York City.

We once called it sport to set wild beasts upon defenseless people in the arena, later we called it sport to set vicious dogs at bulls, horses, bears, and badgers.

Man is slowly evolving from the brute, but he has a long road to travel yet before he becomes a real man!

While I am a nature lover and have a real affection for every live thing on earth, be it a blade of grass or a highly developed animal, I do not wish my boy readers to understand by this that I approve of the degenerate sentimentality which, according to a current paper, was exhibited by a wealthy widow of Chicago. The news item in my

hand says that she chartered a special train, hired two maids and a surgeon to take a pet dog across the continent, and when the dog died, placed it in a white velvet-covered coffin, lined with white satin and decorated with solid gold handles. Such exhibitions of extreme affection are nothing but a form of hysteria, and do a great deal of harm by disgusting many people with the whole band of nature lovers. What I want to encourage in the young reader is a sane, comprehensive love for the world he lives in. Some of my friends have jokingly suggested that in my enthusiasm for Nature I am becoming a worshipper of Pan. While this was not said seriously, I choose to take it so. You know, boys, that Pan is the ancient god which artists paint and draw when they wish to personify Nature, but whose grotesque form indicates that he was not originally intended for that purpose, but really to represent what we know as "of the earth, earthy." The great army of outdoor people do not claim any divinity for Nature itself, but we do claim that Nature is the handiwork of God. Now, even if we were worshipers of Nature, we would still hold a higher position than do those people who pretend to worship a deity, whose handiwork they spend their lives in mutilating and destroying.

NO MAN RESPECTS AN ARTIST

and destroys his handiwork. Now, boys, let us start a camp fire of nature lovers. Each of you

bring a log and put it on the fire till the blaze reaches so high that it will illuminate the whole country around, so that people will stop and ask what that light means reflected in the sky; and you can honestly reply, "That means a REVOLUTION—a revolution from the hard, suicidal, unsentimental, dollar-and-cent way of viewing life, to one in which each of us is doing our little part to restore this world, as near as may be, to its original plan of a pleasure-ground and garden for those who are sojourning here."

Vacation is almost over. The author has been working in his log house on the banks of Big Tink Pond. Outside the chipmunks are scolding, in the swail the oven-bird is calling, and at night the whip-poor-will across the lake repeats its own name as fast as it can for over a hundred times in succession without taking breath. The other night we counted one hundred and eighty times that this energetic, long-winded bird repeated whip-poor-will, although often it sounds as if the bird was saying, "Whip her well." One evening two of these birds flew down where the writer was sitting, and took a position within reach of his hand. Both birds then made a low, clucking noise which was accepted as a friendly greeting.

The blue lupin has gone to seed, the goldenrod is turning yellow, the fringed gentian has swelling buds and the mushrooms and toadstools make spots of color in the pathway and mingle

with the puff-balls which push their balloons through the dry leaves.

This is the time of the year for us to build our campfires and gather around them to tell campfire stories and discuss the campaign of real nature lovers for next season. While we ourselves may not take our guns and go to the woods and fields to wreak havoc among the few remaining woodcock, wood ducks, and ruffed grouse, we must not look with displeasure on the real sportsmen who do go abroad with their guns, for after all it is upon these men that we must depend to enforce and uphold the game laws which are now the only barrier against the utter extermination of our little brothers in fur, fin, and feathers.

CHAPTER XXXI

HOW TO GET ACQUAINTED WITH THE BIRDS—HOW TO LEARN SHORTHAND FOR BIRD TALK AND HOW TO DRAW A BIRD—SOME NEW BIRD NOTES

NO boy or man can really enjoy himself in the country unless he has a speaking acquaintance with the wild inhabitants of the copse and woods. He should be able to tell the name of any one of the common frogs, turtles, snakes, salamanders, mammals, and birds, and there is but one way to learn these, and that is by observation and notes.

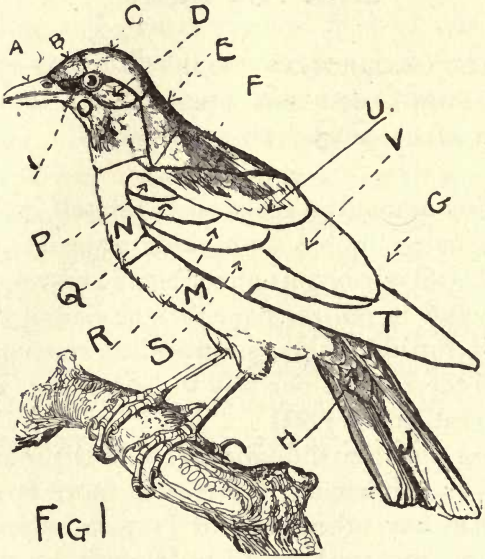
The most popular wild inhabitants of the country are the birds, and consequently there are more bird books written than any other kind of Nature books. This makes it an easy task to identify most of the little songsters *if you have properly taken notes.*

HOW TO KEEP A BIRD FIELD-BOOK

Secure a cheap blank book with a stout cover and of a size to fit your pocket. It should also have straps or loops for holding a pencil. On the first leaf of the book paste a tracing of Fig. 1, with the explanation distinctly written below the diagram.

With this in the front of your field-book, you need not write the names of the parts in your notes, but sim-

ply write, for instance, A, black; B, red; C, yellow, which would be translated black bill, red forehead, and yellow crown.



Map Showing Divisions on a Bird Used in Description

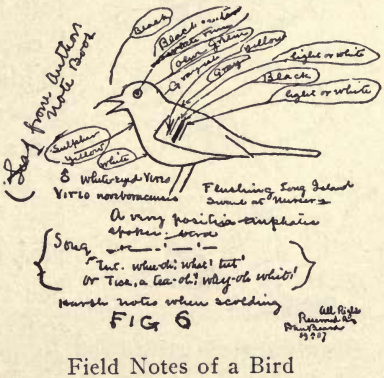
A, the bill; B, the forehead; C, the crown; D, the cheek; E, the nape; F, the back; G, the rump, the lower part of the back just above the upper tail-covert, both concealed in the diagram by the wing; H, the lower tail-covert; J, the tail; P, Q, R, S, T, U, V, the wing; P, the lesser wing-covert; Q, the middle wing-covert; R, the greater wing-covert; S, the secondary wing-feathers; T, the primary wing-feathers; U, the shoulder; V, the third wing-feathers; M, the belly; N, the breast; X, the throat; W, the lores; O, the chin.

While it is well to have a diagram of the wing divided up into all the natural divisions so that they will

be familiar to you, it is not possible in making notes from live birds by the aid of your field-glasses to see and put down all these divisions, because the bird does not pose for inspection, but flutters and hops about in a most bewildering manner. Hence I have adopted the plan of making a rough diagram of a bird on each page of my note-book, as may be seen by Figs. 6 and 7. It is not necessary to be an artist to make these diagrams; anyone who can write well can make a rough sketch of a bird which will serve the purpose.

HOW TO SKETCH A BIRD

Make a round figure like A, Fig. 2; then add a larger oblong body of a rude egg-shape as B, Fig. 2. Now add the tail F, G (Fig. 3), and draw the lines C, D, and J, I, joining the head to the body; next the lines E, F and H, G for the upper and lower tail-coverts, Fig. 3. You may now rub out the lines where they are dotted in Fig. 4, and add a beak and legs, as in the diagram; then draw the wing L, M, N (Fig. 5), and you will have *a bird,* and a good enough one on which to make your notes.

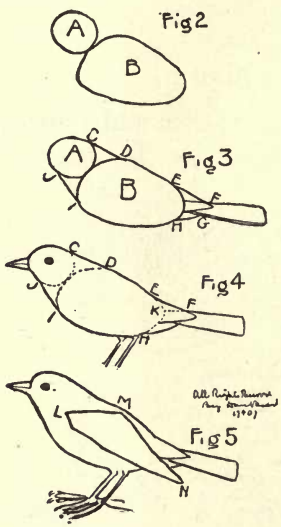


Field Notes of a Bird

Ornithologists have a certain list of colors which they have adopted as a standard, and of which Frank Chap-

man has a color-chart, introduced in his most practical "Book of the Birds of Eastern North America," but it is not necessary for you to use this system in your notes. If, for instance, a wing is yellow with a tinge of red, call it reddish yellow. But if it is more red than yellow, that is, red with a yellow tinge, call it yellowish red.

If you are unable to decide which color is dominant or strongest, call it orange, and you will not be far from the truth. Field-notes are necessarily made hurriedly, and the bird may fly away while you are trying to decide whether the back is "olive," "olive-brown," "rufous-brown," "rufous," or "chestnut," so mark it brown, reddish brown, or grayish brown, brown or brownish, as it may appear to you, *but mark it quick,* and then go on to the next item, look for wing-bars, and note them as in Fig. 6. See if the bill is thick like a sparrow's or thin like an insect-feeder, and note it; don't stop to draw it properly, just write sparrow bill, short bill, long bill, thin bill, etc. After you have noted all the details possible with the aid of your field-glasses, note what the bird was doing, how it acted, and this in your own language. Don't try to write as it is in books. The value of your personal notes is the originality of your ob-



How to Sketch a Bird

servations. Put down date and location, the sort of woods, brush, or field, in which the bird was seen; whether the land was swampy, hilly, or dry pasture, etc., and then get the song if you can. I have tried all sorts of experiments in recording bird song, and the most practical way for me is to use a series of dashes like these ——— ——— —, for long and short notes, or dots for quick trills or chatterings. With this method it is possible to get the number of words, syllables, or exclamations in each bird song. I spent three afternoons recording the brown thrasher's song given on page 527, and comparing the results until I secured his average or normal song, and this is the way the notes appeared:

— — —	Quick ! Quick ! Quick !
— — — — — —	Look-a-here, Look-a-here !
——— ———	Three, Three.
— — — — — —	Yel-low link, yel-low-link.
— — — — — —	Pret-ty bird, pret-ty bird.
— — — —	Wheat oh, wheat oh.
——— ———	Twert, twert.
— — — — — — — —	Tw-r-r-r, Tu-r-r-r.
— — — -	Wee-ah-wee-ah !

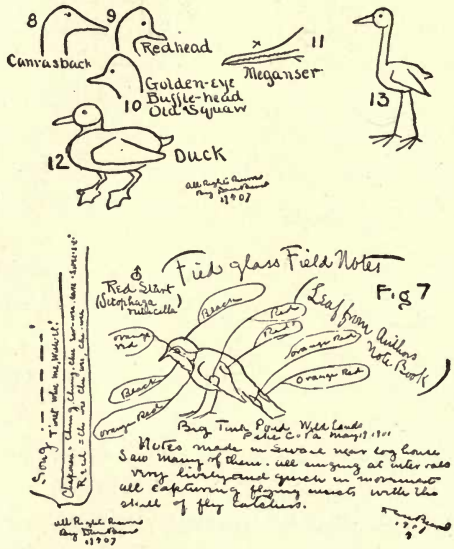
Of course, the brown thrasher does not speak English, but one must fit words to the sounds the bird makes, and fit the words which come nearest to the bird notes.

The scarlet tanager near my home every summer is singing all during the hot days, as if he enjoyed warm weather, but his song must refer to his little greenish-colored wife, or maybe the publishers, for it certainly does not refer to the author when it says. "Oh gee! too rich, too rich, too rich for me!"

A very pert oriole at my farm boastingly announces

that he is the offspring of the gentleman in charge of the culinary department of a ship; his words are "I am the son of a sea-cook, I am! So there! So there!"

It is great fun working out these bird songs and then comparing one's notes with those of some enthusiastic fellow like Chapman or Burroughs, and noticing how



A Page from the Author's Notebook

and where you differ from them. Do not think that you are wrong because your notes do not agree with others. Birds themselves differ in their songs.

There was an oriole which for five summers lived on the same street with me, and its song differed more from the ordinary oriole than does the scarlet tanager from the robin.

Figs. 8 to 13 show how to make notes of ducks. Fig. 12 is simply a duck of no particular breed. If it has a red head shaped like Fig. 8, it is a canvasback; if it has a red head shaped like Fig. 9, it is a redhead. If it is a golden eye, bufflehead, or old squaw, its head will look something like Fig. 10, but if it has a bill like Fig. 11, it is a merganser. Describe the duck as in Figs. 6 and 7, and then mark the head which corresponds with the one observed with an X, as in Fig. 11.

Fig. 13 is a wader, and the notes for it may be made in the same manner as the other birds described.

In the spring watch for the arrival of birds from the South, and in the late autumn note the arrival of the Northern birds taking their annual trip South, and also note the time of departure of our own birds.

At my farm at Redding, Conn., the same birds that were here last year have returned: the pair of blue birds that built in a hole in the tree next door are inspecting their old nesting-place; the brown thrasher is singing now in the same tree he occupied for the same purpose last year; the chimney swifts are booming up and down my big chimney and occasionlly coming out through the smoke of the open fire to bang their silly heads against the window-glass, until I catch them and toss them out of the door; the barn swallows that built on a board in the wagon shed are busy talking over proposed improvements to their old home; the same little humming bird occupies the same perch on the telephone wire that it did last year. As if purposely to furnish me with another illustration of shorthand notes of bird songs, my friend the purple finch has returned

and has this moment interrupted my work with his insistent and oft-repeated roundelay. We have had a cold rain and his feathers are all wet, but he sings as if he was wound up with an eight day clockwork attachment; he is sitting on the bare branches of an old apple tree, but to catch his message I must work my pencil with great rapidity, often losing time and place and again making more marks than there are notes in his song. But by the exercise of patience, and testing, and retesting my notation, I find the result to be as follows:

quick time — — — — — — — slower — — — — — —

Whoo Whew, Whew, Chu, Chu, Chu, Weak-ah Wee-oh!

or,

quick time — — — — — — — — slower — — — — — —

Weeo, Wheoo, Wheoo, Wheoo, Chi, Chu, Chee Chu Week!

Once or twice the rose-tinted bard added a little flourish at the end of the song, but he failed to repeat it often enough for me to catch, and translate it into English. That the flourish belongs to the regular song is very doubtful. I have known other birds, when they felt in the humor, to add unexpected variations to their regular song. One white-throated sparrow, that spent many winters in my back-yard in Flushing, when he felt particularly happy would end his plaintive whistle with an unmistakable trill, but I never knew any other white throat to attempt anything in that line.

Since writing the above notes the temperature has grown balmy and the change in the weather has pro-

duced a change in the purple finch's song, in fact, it is a brand new song and is accompanied by some clever acting. The little bird spreads his wings, erects a crest on his head, dances along the apple tree limb and sings

Chee Chee Chee Cheer, My Dear Sweet

or reversing it, sings

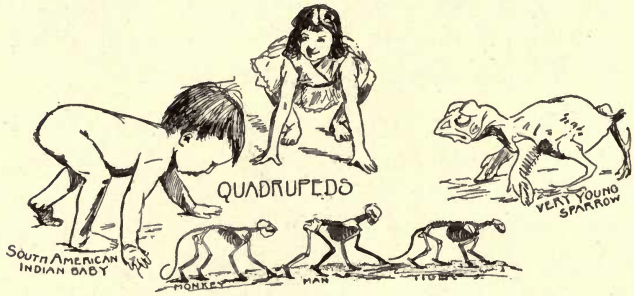
My Dear Sweet, Chee Chee Chee Cheer

It is great! He acts as if he knew I fully appreciated his efforts, but this is probably only appearance, for just now I caught him going through his little song and dance before a sparrow-like bird, which is probably his sweetheart, the female purple finch. Before I saw his lady love I thought he said "Hi there, Wheat," but now I know it was, "My Dear Sweet."

CHAPTER XXXII

ORIGIN OF OUR HANDS AND BACKBONE—DAME NATURE'S EXPERIMENT WITH AEROPLANES—HER FAILURES AND SUCCESSES—ARMS AND LEGS OF FISHES—ALL MEMBERS OF THE SONS OF EVOLUTION

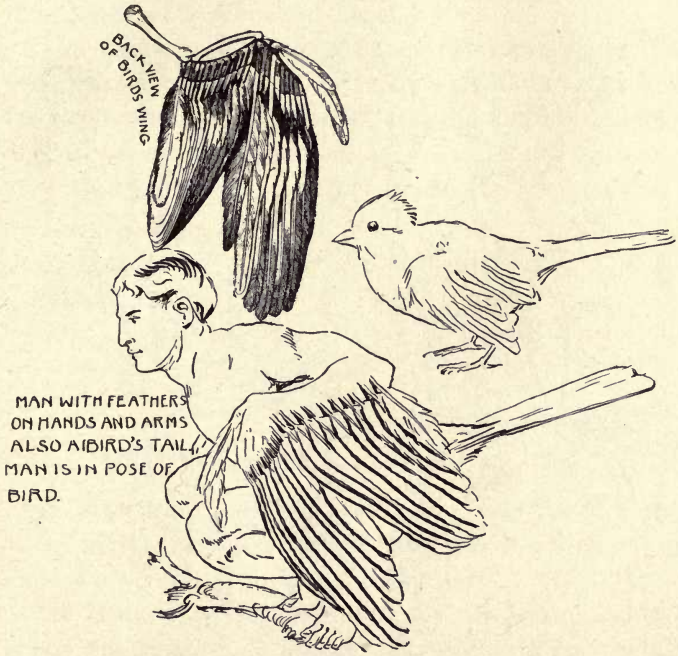
YOU often hear the contemptuous expression, "That man has no backbone," and in speaking in commendation of a man, you will hear them say, "He's all right, he's a man with a backbone."



Sketches from the Author's Notebook. Originals made from Life and Photographs

There is a deep and grand meaning to this expression, for it is the back-boned animals that are the winners in life's race, and it is only the back-boned animals *that possess hands*. If you wish, you can see how the backbone was probably first developed, by examining the eggs of fishes. At a certain stage of development of the

fishes' eggs, there may be seen in them series of bead-like objects between which is a string; this string is called the dorsal cord. It is the rudimentary, the baby backbone. In the fish's egg this is cartilaginous (what the boys call

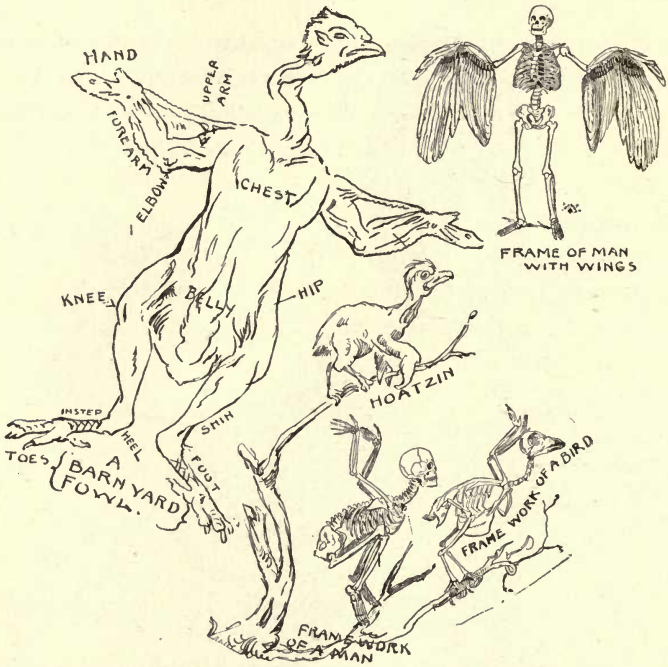


Sketch of Man in Pose of a Bird

gristle), and it is still only gristle in those holdovers from a past age—the sturgeon and its relatives.

The petrified fishes, the ancestors of the modern fish, in the stone strata below the coal formation, when they lived, all had gristle in place of a backbone. But all the back-boned animals are linked together by the fact that they have either a soft or hard backbone of some

sort, insulating and protecting the telegraph wire we call the spinal cord, which terminates in a strong box called the skull, protecting the battery called the brain. The back-boned animals never have more than two pair



Fowl, Showing Parts Corresponding to Man

of limbs, and they are all built upon the same general plan, but unless we study the plan we will never suspect the relationship of a giraffe to a humming-bird.

The backbone originated in the water and if we go to the water we may even find the origin of our hands.

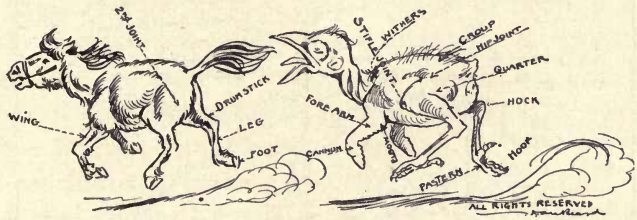
There is in South America a queer creature called the

lung fish, which is a living example of an ancient family, a blue-blooded aristocrat!

If you will examine one of these strange creatures, you will find that it has four fins, corresponding to the four limbs of a man and beast.

The front fins of any ordinary fish correspond, bone for bone, with those of your own arm; but the bones are shortened and broadened, and the hand is composed of many fingers called rays.

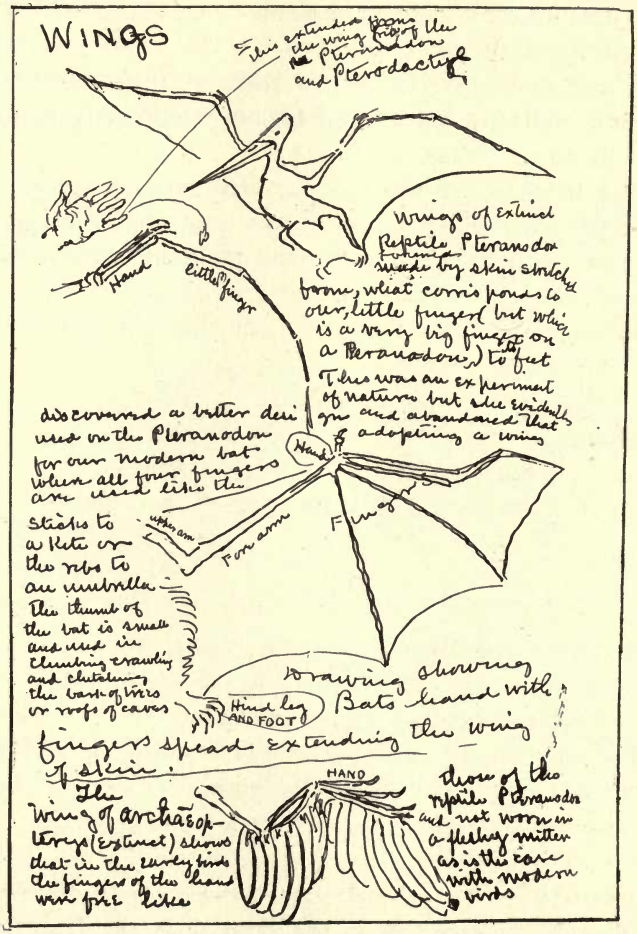
Study this out for yourselves, at the museums or in



Comparative Diagram of Horse and Bird

your illustrated natural history books, for we must hurry along in this chapter to the less complicated and more simple anatomy of land animals.

The fish is not remarkable for its brains, and its hands are very crude affairs, only suitable for paddles, for balancing paddles; the real propelling power of the fish is its tail. But a little further in the line of evolution we will find that the alligator's fins or hands are very much like our own. It is the same with the frog, the newts, and salamanders, shown in the previous chapters, and also with those extinct monsters of gigantic proportions whose bones you will find exhibited at the Museum of Natural History in Central Park. In the chapter on



Original Notes on Hands and Wings
From the Author's Sketchbook

whales I have told you about the whale's flipper and its five big fingers. All of these back-boned folks have

hands, so also had the pterodactyl, and the other huge bird-like reptiles and dragons, which inhabited the earth in ancient times, and were the forefathers of our modern beasts of the field and birds of the air, rough memorandum sketches of which are shown in the reproduction of a leaf from the author's note-book. It is evident that they were the first experimental machines from which the modern ones were gradually developed.

The pterodactyl was experimenting in the use of hands as wings; it had a good idea, like our men with the flying machine to-day, but like some of them, it got on the wrong track. To make its wing it enlarged and lengthened its little finger like the bow on an English kite, and stretched a skin or membrane from that to its body. By referring to the illustration on page 93 you will see that our modern bat has very much improved upon the crude attempts of the pterodactyl. The bat has a hand of four fingers and a thumb, bone for bone, like your own hand. Its thumb is small and free, its forefingers are elongated like the ribs of an umbrella, and, like the ribs of an umbrella, connected by a membrane. The bat carries its elbow bent, and the skin runs from its thumb to its shoulders, while the skin covering the fingers runs from the ends of the fingers to the end of the tail, the latter forming another umbrella rib or kite stick. This is a vast improvement upon the awkward attempt to make a wing out of a little finger. The bat's flight, as you all know is easy, well sustained, and skillful, but I doubt if the old animated aëroplane of a pterodactyl could do any more than skim or sail like a flying squirrel. It was probably what our modern

aviators would call a glider, a machine with no power of continued flight.

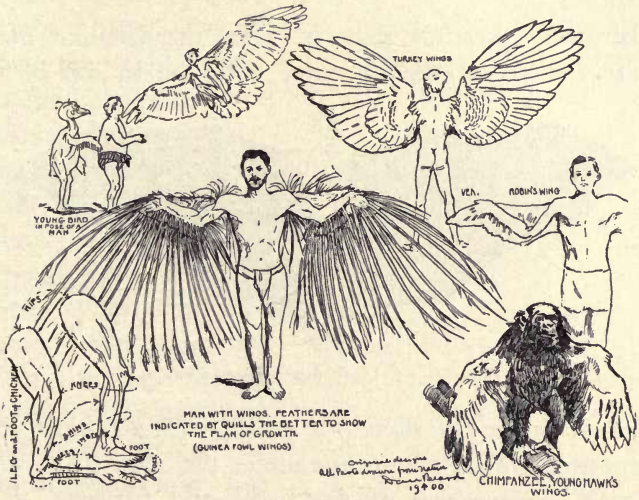
Away back somewhere in the past, when the lithographic stone was soft mud, there was a bunch of other experimenters. They started out in a different line. They had the membrane running from the root of the thumb to the shoulder like the modern bat, and modern birds, but the fingers of the hand were free, and from their forearm they developed feathers. They had a tail like a rat with feathers growing on each side of it. It

Sketch of Foot of Man and Horse

would be flattery to call these things birds, and it may be stretching a point to call them reptiles.

They bear the same relation to our modern birds as do the first experiments of steam to a modern locomotive; or as Franklin's electrical kite to a modern electric motor car. But let us inspect some modern birds that we may see without visiting a museum. If you will take a Thanksgiving turkey, for instance, before it is carved, or a common barnyard chicken, and examine it carefully, you will find that the wing corresponds, bone for bone, and muscle for muscle, with your own arm and hand. The hand of a bird is welded together or enclosed in a sort of fleshy mitten, but the thumb is distinct, as it is in your own mitten that you

wear on a cold day. Further examination of the fowl will also show you that the succulent second joint corresponds with your own thigh and hip, that the drumstick is the calf and shin, and that the scaly part, which you call the leg of a chicken or bird, corresponds with the foot of a human being. Birds walk on their toes with their heels in the air, as do horses, cows, dogs, and



Man and Ape with Wings. Man and Bird's Legs Compared

other beasts, with the exception of coons and bears; the latter walk on the palms of their hands and soles of their feet, and are called plantigrade animals. It is interesting to know that the naked babies of some savage tribes walk in the same manner, and do not creep on their hands and knees like children of civilized parents.

We have seen that a bird's wings are its arms, corresponding in every essential particular with the arms of

a man. To illustrate this I have made a drawing, showing a man in the pose of a bird with the wing feathers growing from his forearm and hand as they do on a bird. The small feathers have been removed so as to better show the arrangement of the larger or quill feathers.

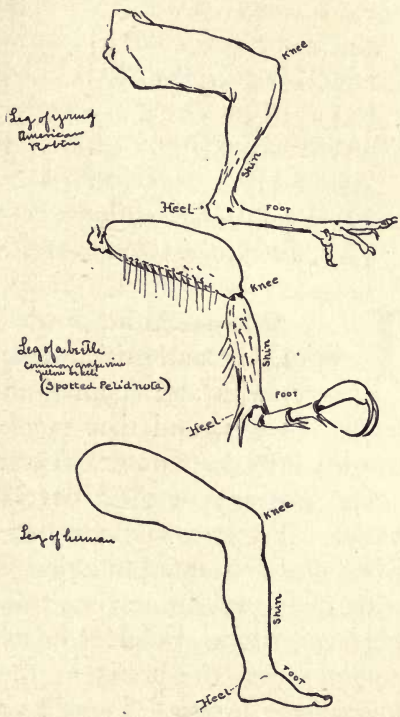
Had this man's body been covered with feathers, like a bird, only his toes would be visible as he stands bird-fashion.

In these sketches may be seen the bat-like membrane connecting the shoulder with the thumb of the

Sketch of Man with Bat's Wings

chicken, and in the sketch of a man with a robin's wing is another similar membrane under the arm. The wing proper is composed of the hand and forearm, as is shown by this illustration of a man with the wing-feathers of a bird growing on his hand and forearm. Had the artists, who first invented the church-window form of angels been better acquainted with anatomy, they would never have made creatures with two pairs of arms, one pair growing from the back where there is no place for a shoulder joint and no muscles to move the arms. Wheels on the smoke-stack of a locomotive would be just as useful to the engine as wings stuck

on a man's shoulder blades. The wings of the typical church-window angel, being devoid of supporting muscles, would trail behind like a woman's skirts in the mud. They would not only be of no use, but a great encumbrance. They would hang limply down the angel's back, bumping against its heels and dragging on the ground as it walked, but angels' wings as a symbol of a being's power to traverse space are, like those little ones attached to the hat and heels of Mercury, perfectly proper. The old masters may not themselves have been ignorant of the elementary principles of anatomy when they painted angels' wings on the shoulder blades, and they were probably doing the same as modern artists are doing to-day, accepting the ancient idea of an angel, and reproducing it as we do that absurd monster, the centaur.



Leg of Man, Beetle, and Bird

CHAPTER XXXIII

STRANGE CREATURES MET WITH IN THE WATER—THE WOODS FULL OF TRAGEDIES—EVEN FOXES NOT SURE OF THEIR GAME—BEASTS NEVER TROUBLE TROUBLE TILL TROUBLE ITSELF TROUBLES THEM

IT is a common belief that all wild animals can swim, but authorities deny that llamas or giraffes ever swim and claim that camels, like men, must learn to swim, and that monkeys and apes drown if thrown into deep water. Personally, however, I have never seen any of these particular animals attempt to bathe. It was a common belief among the boys that when pigs attempted to swim they cut their own throats with their rapidly moving front feet; but I have seen pigs swim long distances in swiftly flowing rivers and emerge upon the banks of the stream with no blood upon their throats. I once knew an old pig which frequented the levee where the then unfinished abutment of the Cincinnati and Covington bridge stood, and I have seen this pig, time and again, jump into the water of the Ohio River, swim fifty or a hundred yards out in the stream and come back again, apparently for no other purpose than the pleasure it derived from the bath.

Upon several occasions I have seen both horses and cattle escape from steamers upon which they had been

loaded, swim long distances in the Western rivers and also in the East River here in New York. Once when I was a small boy I was watching the soldiers loading a steamboat with Texas steers. It was during the War of the Rebellion and the town was in a state of siege and filled with blue uniformed soldiers. Along the levee, in three thin blue lines, were stretched six or eight regiments; the men were sitting or lying on the dusty ground with their arms stacked in front of them; the soldiers were all laughing at the efforts of their comrades to drive the cattle aboard the steamer. There was a gang-plank from the levee up to the steamer deck and a fence lashed upon each side of the gang-plank, but the cattle did not relish the idea of traveling across this bridge, nor did they like the looks of the boilers and furnaces on the deck of the steamer, so, to persuade the cattle to move ahead it was frequently necessary for the soldiers to grasp their tails and wind them around, as one would turn a key in a clock. The men were busily engaged in this operation on the caudal appendage of an immense longhorn Texan ox, when the enraged animal broke down the railing, threw his two tormentors into the water on one side and plunged into the stream himself on the other side of the plank. The men swam and scrambled ashore, but the ox got there first, and, lowering his head and breathing defiance to the whole United States army, he charged the regiments bivouacked upon the levee.

The boys in blue were brave men and seasoned veterans; they all knew the hot breath of the cannon and the song that the Minie rifle balls sang, but when the

steer from Texas came after them and plowed right through the ranks there was not a show of resistance. When I saw him last he was pursuing his triumphant way, with his proud tail erect, as he disappeared up the street in a cloud of dust.

But it was not of domestic beasts that I intended to speak; it was of the wild forest folk in which we are all so interested.

Killing a Rattlesnake in the Middle of a Lake

A little while ago I spoke of the things I had seen in the East River, which recalls the fact that once while crossing on the Thirty-fourth street ferry I saw a bunch of spotted sandpipers drop on the surface of the water, where they were apparently as much at home as the sea-gulls. Although I had never seen this happen before, nor have I seen it since, it was not as surprising to me as was the sight of an elephant which emerged from the

early morning mist some years ago alongside a boat of astonished fishermen in New York Harbor. The escaped animal landed at New Dorp, apparently having enjoyed his early morning bath.

One time while fishing on a small lake I observed a great commotion in another boat a short distance away. One of the fishermen grasped an oar, with which he

Woodchuck Swimming Across Big Tink

beat some object in the water, which I afterwards discovered to be a large rattlesnake. Jimmy Rosencrantz, who was in the boat at the time and who killed the snake, said that as the reptile swam it kept its rattle above the water. It is the second rattlesnake I know of being killed in the act of crossing an extensive body of water.

A few years ago some boys, who were swimming

from the pier I had built in front of my camp, captured a woodchuck in the act of swimming across Big Tink Pond. They killed, cooked, and ate the little animal.

Audubon describes swamp rabbits which are expert swimmers, but the ordinary hare and rabbit, when in deep water, are like the high-pooped vessels of the seventeenth century. They are so far down at the bow that rough water would probably be very inconvenient to them.

During the migration of the gray squirrels they do not stop at a stream, but frequently cross the largest of rivers, although many are said to be drowned on such occasions.

ALMOST ANY BIRD CAN SWIM

in the water until it becomes frightened and wets its plumage. I once put a pet bantam hen in a bathtub filled with water and placed all her little fluffy chickens carefully in the water beside her, where they floated as lightly as so many ducks. But after a few moments the hen realized her novel position, lost confidence and began to flap her wings, which splashed the water over her body and also over her chicks, and had I not hastily removed them they would have drowned in the tub.

A PET CROW

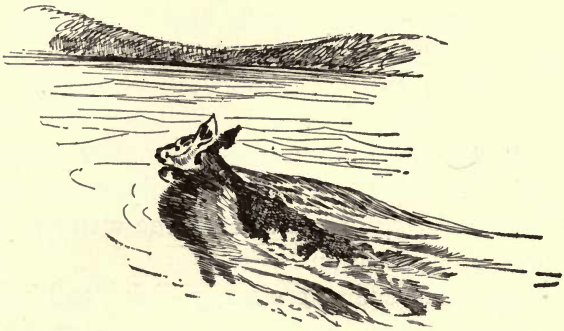
I once owned, was accustomed to bathe in a shallow fish pond that I had built in the back yard. In fact, this little shallow body of water was the only one with which the bird was familiar. Consequently, when one day it

flew down to the river it did not hesitate to alight in the middle of the stream, having no previous experience to teach it that all water is not shallow. The crow would have drowned had not some boys in a canoe rescued the very wet and much frightened pet.

All of our native deer appear to be good swimmers and fond of the water. The caribou, moose, and white-tailed deer have frequently been photographed while swimming, but these photographs show the poor animals plunging along in a desperate effort to escape. A deer can, however, swim very quietly, with so small a part of its head appearing above the water as to attract little or no attention.

I watched a doe swim across Big Tink Pond in broad daylight while there were several boats upon the lake occupied by fishermen, none of whom observed the animal. I was seated upon the pier with my field-glasses in my hand, waiting for Uncle Sam, the bald eagle, to come down to the lake, when I noticed something that looked like an inverted basket floating on the water. The next time I looked at it I was astonished to see that it had traveled quite a distance, although there was no current to the water and no wind blowing. I then examined the object with my field-glasses and discovered it to be the head of a doe, which was swimming deep down in the water, with its ears laid back behind its head and its eyes and nose just above the surface of the lake. It swam noiselessly and rapidly to a point of woods, where it stealthily and noiselessly emerged among the rushes and, like a shadow, faded away in the underbrush at the edge of the forest.

A boat is one of the best vantage grounds from which to observe the wild forest folk without alarming them. I have paddled close up to deer, bear, and all sorts of wild creatures without being detected. I once saw a



[1] Plunging along in a Desperate Effort to Escape

[2] Doe Swimming Noiselessly and Stealthily

muskrat swim to the shore, run up the bank, and rapidly move from one small bush to another, entirely denuding them of their leaves. This it did by standing on its hind legs and using its forepaws to bend the bush down within reach of its mouth.

ALL THE HUNTED CREATURES SEEM TO BE FOREVER IN A HURRY,

but I was surprised at the extreme rapidity with which this rodent stripped and devoured the leaves from the bushes.

A couple of deer which came into the backyard of my camp at Wild Lands fed in exactly the same rapid manner; they also stripped the leaves from the small bushes and devoured them so quickly that one would think that these animals must all soon be victims of chronic indigestion.

While on the subject of the stealthy movements of the deer, I am reminded of one cold, rainy day when, being out of kerosene, we had drawn lots to see who should take the walk of eight miles to the railroad station to get the cans filled. With my usual luck I won the opportunity for myself, and with my head down to meet the storm, I was trudging along the muddy road, the two cans for the kerosene banging together, making a noise like a cow-bell. There was a big buck lying in the bushes alongside of the road, but I had no knowledge of its presence until I was within ten feet of it, and then surprise and astonishment almost caused me to sit down in the muddy road when the animal gave a mighty spring from its resting place and stood for an instant before me. The next moment its body sank down as low as that of a stealthy cat creeping on its prey, and then the big buck glided away among the trees like a shadow, without making the slightest noise. So quickly did the deer disappear that for a few moments after

the occurrence I was not certain in my mind that I had seen the animal, and it was not until I had stepped forward and examined its bed, which still felt warm to the touch of my hand, that I was convinced that my eyes had not played me a trick.

THE WOODS ARE FULL OF TRAGEDIES;

the lives of all its inhabitants end in tragedy, and all the modern Nature books are filled with accounts of

Even Reynard the Fox is Never Sure of His Quarry

these tragedies, so that the casual reader is impressed with the idea that there are practically no escapes. But this is not true; even Pussy misses more birds than she catches, and I have seen a fishhawk, one of the most accurate of sportsmen, miss its quarry, and even Reynard the Fox is never sure of the game he stalks.

One June day while wading through the tall green grass in Southern Ohio, I saw a red fox bounding up in a manner which told me that it was watching something

of interest. I was quite close to the fox, but so intent was the latter upon the object of pursuit that it did not see or heed me. Presently it came to a little open spot in the grass, where a bunch of bobwhites were scratching and feeding like barnyard fowls. Watching for an opportune moment, the fox suddenly sprang into their midst, but all he secured was the tail feathers of one of the little birds.

The little exertion required to pull all the tail feathers from a bird seems to be a provision of Nature purposely to aid the bird in escaping from its enemies.

Once when I succeeded in grasping a ruffed grouse by the tail, it flew away, leaving not only all the tail feathers but also all the feathers of the hind part of its body in my hand, so that the bird was nude half way up its body. We have all had rats and squirrels leave the skin of their tails in our hands and escape. Many of the lizards and even some of the snakes when caught by the tail leave the whole of that portion of their anatomy squirming in the grasp of the enemy, while the rest of the reptile makes good its escape.

There is one noticeable peculiarity about all the lower animals when they have an adventure. As soon as the adventure is over and the danger passed it is apparently forgotten. Only last week I pulled a lusty trout to the top of the water, to see it slip off my hook, drop back again in the pool and escape to the shadow of a big stone. I put a fresh worm on my hook and threw it carefully to the retreat and had the satisfaction of landing the same fish and placing it on the fresh grass in my creel; but this was a very foolhardy fish.

The heron, told of on page 475, which escaped the attack from Uncle Sam, after the adventure was over, looked over its shoulder, gave vent to a contemptuous "quok," and the incident was closed.

The quail which had had such a narrow escape from the fox flew up to the limb of a neighboring tree, where

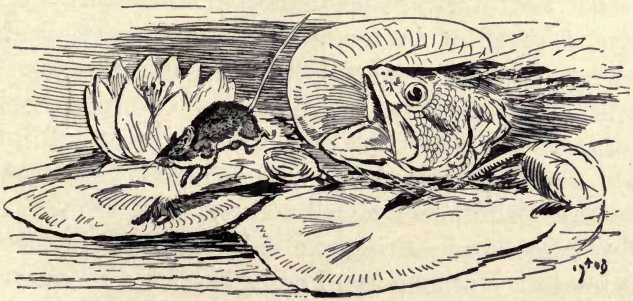
The Blue Heron Whips an Eagle

they began preening their feathers as if nothing had happened.

A little white-footed mouse that ventured out on the lily pads on the shores of Big Tink was observed by a large bass. The fish gave a jump and a rush, but the mouse was too alert for the fish to catch and it escaped over the lily pads to the shore, where it immediately be-

gan playing around among the brush as if nothing had happened.

An ordinary man having as narrow an escape from death would be all of a tremble for an hour afterward, and he would tell with bated breath how all his past life passed before him. But the rule of the wilderness is that each creature must individually acquire its own experience and not forget what experience has taught, but at the same time not worry over past dangers. What they teach us by their actions is, if we have had a close call and escaped, don't borrow trouble; forget it!



CHAPTER XXXIV

THE VERY IMPORTANT BUT VERY LITTLE PEOPLE OF THE OUT-DOOR WORLD AND THE ASTOUNDING THINGS THEY DO

MANY of my frosty-headed readers smile with glee when they remember the time that they were freckled-faced, tow-headed, and barefooted country boys, the terror of all owners of orchards and melon patches. This is not written, however, to recall the memory of the orchard and the melon patch, or of other boyish escapades, but to remind them of the happy days spent in the midst of tall, waving corn catching the ants from one hill and transferring them to another to see the little insects fight, or carefully placing hairs from the tail of the plow horse in the pool in the swail, firmly convinced that the sun and water would transform them into living "snakes."

But schoolboys are not the only ones who believe in such myths. Not long ago I had a letter from a man solemnly telling me that he had killed a hoop snake, and every day I meet people who are firmly convinced that the gordius or horsehair "snake" is really produced from hairs which have been accidentally dropped into water. If you tell them that you have personally conducted experiments in this line, the result being only

water-soaked hair, they will answer that you did not pluck the hair out by the roots and that it is the root that makes the head to the "snake"; besides, the water must be muddy and warm. When these conditions are all right, they say, the hair will absorb the vitalizing elements, and the substance of the hair being itself live animal matter, it only changes its habits when it begins an independent life as a hair animal.

Thus the myth is passed on from one generation to another. But naturalists will tell you that the larvæ or the young of the gordius are sort of tadpole-like animals which live in the bodies of live May flies and caddis flies.

Since the horsehair "snake" is aquatic in its habits, and the larvæ of both the caddis fly and the May fly also live in the water, it does not seem improbable that the gordius should find its way to the inside of their bodies. I have caught many caddis worms, May flies, and caddis flies, but I never discovered any live creatures inside of them. While out trout fishing one day, however, I selected a black cricket for bait, and as I impaled the insect upon the hook I was astonished to see a full grown gordius five or six inches in length emerge from the cricket's body through the hole made by the fishhook.

The body of the cricket was not more than a half inch in length, consequently the horsehair "snake" inside must have been wound up like a watch spring, not leaving much room for anything else in the line of intestines and other necessary organs.

One of the most familiar of insects is the common fly,

and for that very reason it seems to have escaped the serious study which has been devoted to some more rare species. Last summer, while paddling for three weeks down a wilderness stream we did not see a single house fly until a few hours before we struck the first backwoods settlement. Then a fly lit upon my hand. Pointing to the fly I said to my Indian, "Come to house soon, eh?" The Indian smiled and replied, "Wey, ze house we see soon, maybe dinner time." At my log cabin at Wildlands there are no house flies until the teams come up from the station with the baggage and provisions. The house fly accompanies both the oxen and the horses and then stops over to visit us.

On a cold day the flies all crawl up the chimney to get warm over the smoldering fire, but if a fresh log is thrown on the embers it is amusing to see two processions of flies hurriedly marching down, each side of the fireplace in search of cooler quarters. If you want to keep flies out of your farm house you must put screens on the top of the big chimney.

I said that there were no house flies in the wilderness; the truth is we do not need them there. Their place is bountifully supplied by myriads of little humpbacked insects known as the black fly, only too familiar to anglers who frequent the north woods. The bite of a black fly produces a red spot about the size of a soda mint tablet, which feels as if a pinch of cow itch and a red-hot coal had been introduced under the skin. Fishermen protect themselves by the use of various "dopes," with which they anoint their face and hands, and also by a net worn over their heads and kid gloves on their

hands. The ends of the fingers of the glove are cut off to give freedom to the fingers and muslin sleeves are sewed to the tops to protect the arms. But with all these protections I have suffered the torments of the damned from the attacks of these minute insects.

One time when I was camping in the north woods the exposed portions of my finger tips were eaten until they

A Bear Driven Wild by Black Flies

were perfectly raw. The flies even got inside of my shirt, and I almost wished that I was back in the city. I felt ashamed of myself to think that I should allow little things like black flies to cause me so much discomfort, so I inquired of a number of the Indians what effect the black fly had upon the wild game besides driving the deer and moose to water.

One famous bear hunter, whose camp was littered with the skulls of these beasts, told me that he had often seen a bear, driven wild by the attack of the black fly,

go crashing through the forest and turn somersault after somersault in the vain effort to rid himself of these minute enemies.

I have seen lumps as large as a baseball on the foreheads and the backs of the hands of people exposed to the attack of the black fly, and I feel convinced that the exposure of the entire person to the bites of these insects would cause death to the victim.

Not long since, while returning home from a trip in the black fly country, I met a physician of national fame, who is also a member of the Camp Fire Club of America. He, too, was returning from a camping trip. The doctor said that the bite of any insect might produce death, and that the black fly did produce death when it had previously been feeding upon the blood of some diseased animal, and transferred the poison into the healthy subject, the effect being a fatal "malignant postule."

Recently I saw in the daily paper a report from the Cobalt region stating that six men had perished from poison injected by the black fly.

In 1880 a very remarkable "fly storm" occurred at Havre, and the same year here in America the steamer "Mary Powell," of Haverstraw, ran into a bank of flies which appeared like a great drift of black snow extending as far as the eyes could reach.

There were millions upon millions of long black flies with white wings. Of course. the crew of the "Mary Powell" are not naturalists, and any sort of an insect might be classed by them under the head of "flies." The same may be said of the reports from England,

when the village of Emsworth was visited by a remarkable "storm of flies." So thick were they that the inhabitants had to put handkerchiefs over their faces to keep from inhaling them into their lungs.

Another "fly storm" was encountered by the "Bay Queen" on its trip from Providence to Newport.

In all of these so-called fly storms the insects were probably not true flies, but what are known in various parts of the country as day flies, May flies and shad flies. I have seen one of these so-called "fly storms" on Lake Erie, when they were so thick that the lights had to be put out in the summer hotels and lanterns placed along the verandas to keep the insects out of the bedrooms and parlors. I have sailed through twenty miles of scum composed of the cast off skins of May flies, and on the shores of the Licking river, in Kentucky, I have myself been compelled to cover my face with my handkerchief to keep the little lace-winged May flies from being drawn into my nose or mouth with my breath.

The May fly is a harmless insect, the larvæ (young) of which lives in the water, like those of the dragon fly and the mosquito, but all of us who are familiar with accounts of the storms of locusts in Africa and grasshoppers in our own West, know that the latter insects are anything but harmless. They will devour every green sprig and leaf within reach. They cover the street so thickly that the horses slip and fall upon the bodies mashed underfoot. The grasshoppers eat up the clothing hung up on the lines to dry. A flight of these insects is not called "a storm," but a plague of locusts.

A locomotive attached to a loaded train on the Chota-Nagpur railroad of India was charged by a rogue elephant, derailed, and put out of commission, but the elephant lost its own life in the act.

When we think of the size of a large elephant we are not surprised that one could derail a train, but when one looks at a potato bug, an army worm, a grasshopper, or a June bug, it seems as if it would be an impossible task for these little insects to stop the onrushing, heavy, and powerful locomotive, with its long, heavily loaded train. Nevertheless, they have done it over and over again. When an army of the tiny creatures are caught on an up-grade the mashed bodies of the insects make the track so slippery that the huge drive wheels of the engine whirl and buzz in impotent wrath, unable to move an inch on their way.

In 1888 the inhabitants around Ninety-six, S. C., were aroused one night by a fall of black "bugs." (The "bugs" were probably beetles.) The same phenomenon had happened in that county before. A similar cloud of black beetles, in a state of religious fervor, entered a church in Chenoa, Ill., during service. The pastor and the congregation beat a retreat and left the church in possession of the beetles.

Most of my readers have seen very lively, brilliant, metallic, green-colored beetles run along the dusty road or sandy shore, fly a short distance ahead and then run along again. In 1887 a cloud of these beetles, or some nearly related species, invaded the town of Trenton, Mo., to the great annoyance of the people.

This notion of migrating in vast armies does not seem

to be confined to any special breed of animals. There is a common little fellow known as the gossamer spider. He is an aëronaut by profession, and makes himself a tailless kite of a bunch of his own web, attaches to it a string of the same material, then as the zephyr catches the gossamer kite, the little aëronaut lets go all hold of the earth and sails aloft. All of us have brushed these webs from our faces and many of us wondered how they came to be stretched across the paths and sidewalks.

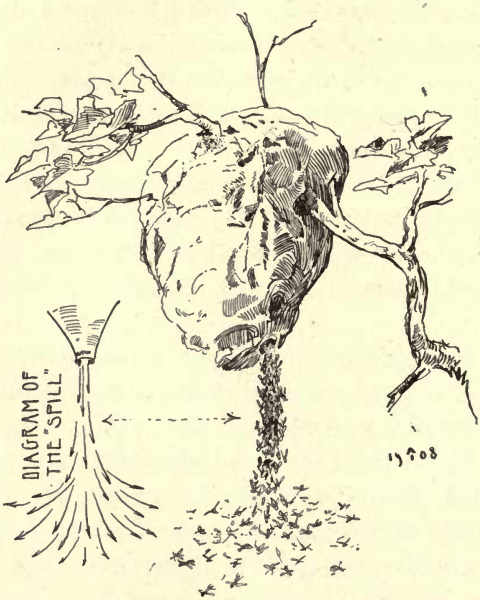
In May, 1890, an odd fog bank a thousand or more feet long and several feet thick was observed in California. When this phenomenon slowly settled upon the earth the wonder-stricken spectators were horrified to discover that it contained millions and millions of spiders. It was a mighty migration of gossamer spiders.

From my studio window on Fifth avenue, in New York city, I have seen a cloud of the black and red milkweed butterflies passing over the city. I have seen the same thing in St. Louis and also from the top of the Mercantile National Bank, on lower Broadway. In 1889 a butterfly storm swept over Carson, Nev. From the printed description of the insects they appear to have been the imported European butterfly (Vanessa antiopa).

A large cloud of minute butterflies visited parts of California in the same year, and similar phenomena are reported from Canada and abroad, but storms of butterflies will frighten nothing except horses and farmers. A cloud of wasps or bees, however, will stampede almost any living thing.

INSECTS DISABLE A RIVER STEAMER

Recently the steamboat "Liberty," running between Piasa, Chautauqua, and Alton, encountered near St. Louis a swarm of those ephemeral insects with lace-like wings, soft, long bodies, variously known as day fly,



A Spill of Hornets

May fly, or shad fly. The insects settled in clouds on the boat, got mixed up with the machinery until it ceased to work and set the mate, pilot, and engineer off in search of new adjectives to express their feelings.

There was no sign of any unusual congregation of insects on the journey up the river, and the sudden attack

on the return found the young people on the upper decks enjoying the breeze. Those nearest the searchlight suffered most, but none escaped the creatures, which buzzed and beat their way beneath collars and cuffs, and into eyes, noses, mouths, and ears. To relieve the passengers, the lights on the upper deck were put out.

There was a large paper balloon built by the hornets on a little maple tree near the shores of Big Tink Pond, and, having upon various occasions been made painfully aware of the exceedingly rapid manner in which the hornets emerge from their nest, I determined, if possible, to discover how they did it. Selecting a position close to the hornets' nest, where I was protected by the banks of the lake, I threw a stick at the little maple tree. Instantly a hundred or more hornets poured from the hole in the nest. It seems that it is their habit to have their soldiers, so to speak, placed in such a position that by letting go all hold they drop through the hole. None of these hornets took wing until all had fallen some distance below the nest; then they spread in every direction looking for their foe, but no moving object being in sight, they gradually recovered from their excitement and returned to duty.

During the War of the Rebellion a large portion of the Union Army had been marching for weeks through a country devastated by both Federals and Confederates. Their rations were almost exhausted and they had been on half fare for three weeks, when they suddenly struck a country literally "flowing with milk and honey." Strict orders were given that no looting should be done, but even military discipline cannot restrain

hungry men, and all along the line the soldiers were breaking from the ranks and robbing the farms. The general and his staff came up to where a group of soldiers were pillaging a prosperous farm. The general sternly ordered one of his young staff officers to go in and stop the men and the young officer put spurs to his horse to obey the order.

There were some old-fashioned beehives made of

The Bees did not Sting the Soldier Who Picked Up a Hive

straw twisted in spiral cones, and the soldiers had discovered that by picking these up and running with them the bees would stream out behind and not hurt the man with the hive. It so happened that a soldier had picked up a hive just as the staff officer came within reach. It is needless to say that the staff officer gave no order to the men. His horse's tail went around like a Fourth of July pinwheel, which was rivaled by the rapid revolutions of the staff officer's military cap. The horse

charged straight into the mass of moving soldiers and disappeared down the long line. Its progress could be noted only by the commotion caused in the dusty ranks of the men and the waving forest of muskets, but the sequel was that all the men of the Thirtieth Missouri regiment had more honey than hard tack that night for supper.

During the draft riots in New York word was sent to a well-known Quaker gentleman in Flushing that the mob was going to visit him on the following day, and they did march out to within a short distance of his suburban home, but fortunately for the rabble they, for some reason, turned back. I asked the old gentleman what preparations he had made for receiving his guests and he replied: "Friend Daniel, thee knows that we Friends do not fight, but I distributed my beehives around my veranda in such a position that I could easily upset the hives and enter the house. I also filled several bottles with live bees, covering the opening with gauze to let in the air; these were not intended to throw at the people who might visit me, but it was my purpose to free the poor captives when the crowd came by throwing the bottles from my window and smashing them on the driveway around the house." And as the old gentleman told me this I could see that his peaceful soul was filled with regret because the mob had not complimented him by a visit and given him the opportunity of using his bees to defend his home.

CHAPTER XXXV

CURIOSITY OF BIRDS AND BEASTS—BRUTES AS ART CRITICS—FOOLED BY A REAL OWL—VOICES OF THE NIGHT

MANY birds possess a great deal of curiosity, as everyone knows who has owned a pet crow. One time when I was sketching down in Jacksonville, Fla., I was astonished to find two queer heads thrust between my face and my sketching pad. The tops of the heads were covered with a rough, red skin, sprinkled with short black hairs. They had long black beaks, but I did not wait to observe more. Instinctively I raised my drawing-pad and struck at the intruders, with the result that I had a race of two blocks, pursued by two noisy and very angry sandhill cranes.

Inquisitive Sandhill Cranes

The birds were tame ones belonging to some citizen, and their curiosity was excited to such an extent that

they personally inspected my drawings. I really think that the people on the street enjoyed the event more than I did.

Curiosity seems to be very much developed in many wild creatures, and it is probably owing to the fact that the panther possesses a large amount of it that causes this animal to follow people for miles and miles with no apparent reason, for I have no record of one making an attack upon a traveler under these circumstances. Where panthers abound, however, there is always an uncomfortable feeling experienced by the artist while sketching in the wilderness.

A man sketching or painting seems to excite the greatest curiosity and interest not only among his fellow-men, but among his four-footed brothers as well. I was once making a map of a town and, while stepping off a short distance, passed a horse hitched to a heavy cart. After making my measurements I was busy drawing in the houses with a scale and ruler, when I was startled by a large nose over my shoulder. Turning around I discovered that the horse had drawn the cart for half a block so that he might see what I was doing with the paper and pencil.

An Uncomfortable Feeling

Once when I was sketching on the coast of Maine a family of minks which inhabited the rocky shore began to play "follow the leader" around my feet, over which

they would jump, backward and forward, while I was working on my sketch.

In the olden days when the buffalo, elk, and antelope covered the Western prairie it was sometimes a difficult problem for the buckskin-clad trapper and plainsman to get within rifle shot of the prong horns, and it was

Horse Studying Art

then that he resorted to various absurd maneuvers, such as lying on his back with his feet in the air to excite the curiosity of the timid game. In this or some similar way he would induce the little creatures to approach within range of his deadly, "new purchase" rifle, and then he seldom failed in securing at least one of the bunch.

Men devoid of curiosity would make no investigation,

no experiments, and consequently no progress, and it would be interesting to know how much the possession of this trait in other creatures has to do with their mental development and their position among the higher animals. When camping on the high bluff overlooking the torrent of the *Pend, Oreille,* it was hard to tell when

Fooling the Animals

evening came, for at half-past nine o'clock at night in August it was still light enough for fly fishing.

We knew when it was time to retire, not because of the approaching darkness, but because at bedtime a procession of solemn skunks would climb up the steep sides of the cañon and march into camp. As soon as we saw them approaching we would hastily bid each other "good-night" and enter our tepees and tents,

being careful to securely fasten the flap of the tents after we had entered. It was still light when we retired, and it was light when we got up in the morning. If it is ever dark there I have no personal knowledge of the fact, but I suppose some time during our slumbers darkness must have spread over the prairie. There were insects around our camp in plenty. There were crickets as large almost as the field mice of the East (see page

The Voice of the Coyote

359), which ate tobacco and everything in reach, but if they sang at night I did not hear them. The music which soothed us to slumber on the Flathead Reservation was the sound of rushing and gurgling water, the distant lowing of wild cattle, and the yap, yap, yap of the coyote.

I am not a musician and hence can give you no musical scale of the coyote's voice, but here is a diagram of it which may convey to the reader some idea of the song of this prairie ventriloquist. A single coyote can throw

his voice a mile away and then startle you with the noise of a pack in full cry at your heels, and all the time the little animal will be sitting behind a stone not fifty yards from you.

If you have ever seen one of these little wolves in cockle burr time you will forgive it for many of its sins, on the ground that it has received all the punishment due even a wicked animal. The coyote's whole body is then covered with burrs and the poor thing's tail is a heavy, round ball of hair and burrs. They are comical in appearance, and as they go bobbing over the prairie one cannot help laughing, unless pity for the misery of the brute curbs one's mirth.

When we changed camp to a swail, where some tall cottonwood trees grew on the edge of a marshy brook, the hum of the insects was very noticeable, and their voice had a familiar Eastern accent. In fact, we had to fill our frying-pans with hot coals and cover them with green boughs, to smudge out our tents before the mosquitoes would allow us to sleep. Here it was that the sulphur-breasted fly catchers abounded, and their loud, clear voices awoke us early in the morning—so early that the light from the outside, coming through our canvas roof, was of a gray color, that showed no traces of sunshine. Comfortably snuggled in our sleeping bags, like caterpillars in their cocoons, we were content to lie awake and watch the antics of the big ground squirrels, which at early dawn used the steep sides of our tepee for a toboggan slide.

I said we watched the antics of these animals, but really it was only a shadow pantomime, for it was their

shadows on the canvas that entertained us. The little animals were having "dead loads of fun"; they would run and scramble up the tepee as far as possible and then slide down, just as the naked boys do down the muddy banks of the Southern rivers. The animals appeared about the size of large muskrats, but we never saw

A Barking Fox

them, for whenever we poked our heads out of the tent door they disappeared, and there was nothing in sight.

The foxes bark at night, and in the afternoon. I watched one while giving voice, and it did it so quickly and looked so solemn immediately afterward that at first I was not certain that the animal under observation made the noise. As a rule the fox gives three barks in quick succession. "Ow! ow! ow!" with the accent on

the first letter. This almost makes it sound like "iough," but "ow" comes nearer to it. I have never seen the female fox bark, although she probably answers the male.

A bear when surprised makes a noise in its throat like "oug," and ends through its nose with "i-s-s-s"; but when talking together they say "ou-e-e-ee!" with variations.

When the stillness of the night is broken by the scream of a puma the sound does not lull one to sleep, although after the novelty of the noise has worn off the scream of this beast will probably do no more than make the camper roll over, grumble a little, and then doze off again to Nemo's Land. But when an old she-grizzly with cubs spends a quarter of an hour sniffling around the hem of the tent and you are armed only with a five-ounce trout rod, the experience is not at all conducive to sound, dreamless slumber.

One night, when we were camped on the Jocko, in Montana, the tents had been placed in a circle with the doors facing out. This was for privacy, and gave us all dressing-rooms of miles in extent, because each door faced away from the other. On this particular night

A BEAR ENTERED THE CIRCLE,

and, as all our doors faced the other way, we could not see the creature, but anyone could have heard it a mile away. The bear ate up all our butter, and in the morning the butter pail looked as if it had been scoured with sapolio. As the only arms we carried

consisted of light trout rods, we listened to the earnest persuasion of our wives and did not attempt to drive Bruin away.

The proverbial bull in a china shop is utterly incapable of making half the noise of one bear among the

We Listened to the Earnest Persuasion of Our Wives

camp kettles. Our complacency upon this occasion and our ability to see the humor of it was largely due to the fact that we intended to break camp early in the morning and eat our breakfast on the dining-car, where there was plenty of good butter.

In the spring and early summer the windless nights are all silent, except during the noisy period, when the peeper and the brown wood frog are in voice.

Once in a while a bird will wake up and sing; more frequently, however, the noise they make is evidently of the same nature as that of a dog which yelps in its dreams, or the man who mumbles in his slumbers. But the little interruptions made by restless birds only make silence more palpable.

At the close of one blustering November day I was sitting on the rough stone veranda to my log house, when a voice behind the building shouted "Hoo-hoo, hoo-hoo! Who-ah!" and I smiled to myself at what I thought to be someone's crude attempt to imitate an owl. I thought that it was too loud, too much of a yell, and altogether a very poor imitation. Imagine my dismay when, on investigation, I discovered nobody back of the house, but on a limb of a white oak there sat two big owls laughing in a loud, fiendish manner at my discomfiture.

Last summer, while on an expedition exploring a new district west of Lake St. John, I heard the owls hooting at noontime near our camp. But hoot-owls only occasionally visit my camp in Pennsylvania, and I have had city visitors come to Wild Lands who declared that the silence at night was so intense that it hurt their ear drums with its pressure.

Along about the Fourth of July, when the chestnut trees are in bloom, the lightning bugs make their appearance and sprinkle the dark woods with sparks of fire. The grasshoppers are maturing and all the insects become more numerous. In August the cicada, or, as it is commonly known, the locust, begins to sing in the trees with a dry, vibrating noise, so much resembling

that made by a rattlesnake that when I hear one on the ground I know that it is a snake, and I hunt for a stick, but when the same sound is in the trees I know that it is an insect making the noise.

One day a cicada flew around over my head in a most bewildering manner, all the time emitting its dry, rattling noise, and it was some time before I discovered that a large dragon fly had seized the "locust" and was darting back and forth with its noisy captive. After the cicadæ have been singing for some time they are joined by other arboreal musicians, and on cloudy days or the late afternoon the katydids may be heard stuttering among the branches overhead.

For two or three days they get no further along with their conversation than "stut-stut-stut" at irregular intervals. As a rule, the katydids begin to sing just about the time the cicadæ quit, and on moonlight nights I have heard them keep it up until morning.

Some persons, with a sad lack of imagination, have declared that the katydids do not really voice their own names or engage in a dispute and parliamentary debate on the question whether katydid or katy didn't; but these folk with equal truth can say the American quail cannot articulate the words "Bob White," and that the Phœbe bird, chewink, and chickadee are incapable of pronouncing their own names. But the fact remains that the noise they make does sound like the words attributed to them. To translate any of the bird or insect noises into English requires some imagination on the part of the listener. The truth is that no one can be a naturalist, or, for that matter, no one could be a

poet, artist, scientist, or an inventor, without a vivid imagination to aid him in his work.

What the katydid really does say sounds more like "kack-kack!" and "kack-kack-kack!" with the accent on the final word. While some people may deny that this insect pronounces its own name, they cannot rob it of sentiment. Even the unimaginative critic must grant that the noise is the love call of the green knight of the trees, and what he really says can be found translated into human language in any book of love songs or poetry, written by the human katydids, known as bards and poets.

As the season further advances other little musicians join the orchestra. But, strange to say, when the rasping notes of a katydid, the strident scraping of the grasshoppers, and the shrill harping of the cricket mingle, the combined sound is softened and mellowed by thousands of near and distant insects, until the night air pulsates and beats in regular waves. The rhythmic undulations of sound are delicious to a drowsy person and form the primeval lullaby which soothed our prehistoric ancestors to sleep. But such a night, accompanied by such music, is not to be found in all wild places.

All these things, however, are signs of the advance of summer, and the hum of insects at night is the forerunner of the chorus of katydids.

Every boy knows that when the katydids begin their loud dispute it is only "six week to frost." Scientists may dispute this, but they cannot dispute the fact that vacation is almost over when the katydids begin to fiddle and produce the rasping sounds from which they

take their name. There will soon be one calling down in the swail, and it will be answered by another green fiddler in the white oak tree between my window and Big Tink Pond, which means that the end of summer is approaching, and with it this book must come to an end.

APPENDIX

THE BIRDS OF WILD LANDS.

The following is a list of the birds which have been observed and positively identified in the neighborhood of Wild Lands by Mr. Elmer Gregor of Forest Lake Club and the Author.

The check list numbers, orders, latin names, &c., that appear upon the original list have all been omitted here because this is not a technical book.

Great Northern Diver
Horned Grebe
Red Breasted Merganser
Mallards
Black Duck
Pintail
Green Winged Teal
Blue Winged Teal
Wood Duck
Redhead Canvasback
Scaup
Golden Eye
Canada Goose
Great Blue Heron
Little Blue Heron
American Bittern
American Coot
American Woodcock
Spotted Sandpiper
Killdeer
Bob White
Ruffed Grouse
Morning Dove
Kingbird
Phœbe
Marsh Hawk
Whip-poor-will
Night Hawk
Chimney Swift
Ruby throated Hummingbird
Crested Flycatcher
Least Flycatcher
Wood Pewee
Blue Jay
American Crow
Bobolink
Cowbird
Barn Swallow
Tree Swallow
Bank Swallow
Cedar Wax Wing
Red-eyed Vireo
Black and white Warbler
Parula Warbler
Yellow Warbler
Black throated Blue Warbler
Myrtle Warbler
Magnolia Warbler
Chestnutsided Warbler
Blackburnian Warbler
Palm Warbler
Oven-bird

Sharp-shinned Hawk
Coopers Hawk
Red Tailed Hawk
Bals Eagle
American Sparrow Hawk
American Osprey
Screech Owl
Great Horned Owl
Snowy Owl
Barred Owl
Yellow-billed Cuckoo
Belted Kingfisher
Hairy Woodpecker
Downy Woodpecker
Pileated Woodpecker
Red Headed Woodpecker
Yellow-billed Sapsucker
Flicker

Maryland yellow-throat
American Redstart
Catbird
Brown Thrasher
House Wren
Winter Wren
Brown Creeper
White breasted Nuthatch
Chickadee
Golden-crowned Kinglet
Water thrush
Wood Thrush
Veery Thrush
Hermit Thrush
American Robin
Bluebird
Herring Gull
Common Tern

Afterword

The growing frequency of requests from both old and young readers asking for some standard, rules or law to govern one's conduct on the game field, combined with numerous demands for a detailed list of what may be considered as honorable achievement in the outdoor world, causes the author to believe that the following code of ethics by Dr. William T. Hornaday and a list of honorable achievement compiled by Mr. Ernest Thompson Seton, and revised and adopted by the Board of Governors of the Camp-Fire Club of America, will be welcomed by all people who love life in the open. The Camp-Fire Club has not only adopted Dr. Hornaday's code of ethics, but it has also set a good example in not serving game at any of its banquets unless it happens to have been shot by some one of the members and sent in for that occasion. The list of honorable achievements is a result of years of work and consultation with the highest authorities on all the particular outdoor pursuits, and has been subjected to careful revision until it is safe to say that it now represents the consensus of opinion of the most prominent authorities and sportsmen in the world, and is here published, by permission, for the benefit of the readers of this book, with the belief that it will be welcomed by both the boys and their sport-loving parents.

A Sportsman's Platform

FIFTEEN CARDINAL PRINCIPLES AFFECTING WILD GAME AND ITS PURSUIT

Proposed by William T. Hornaday

AND ADOPTED BY

THE CAMP-FIRE CLUB OF AMERICA

AS ITS CODE OF ETHICS

December 10, 1908

1. The wild animal life of to-day is not ours, to do with as we please. The original stock is given to us *in trust,* for the benefit both of the present and the future. We must render an accounting of this trust to those who come after us.

2. Judging from the rate at which the wild creatures of North America are now being destroyed, fifty years hence there will be no large game left in the United States nor in Canada, outside of rigidly protected game preserves. It is therefore the duty of every good citizen to promote the protection of forests and wild life and the creation of game preserves, while a supply of game remains. Every man who finds pleasure in hunting or fishing should be willing to spend both time and money in active work for the protection of forests, fish, and game.

3. The sale of game is incompatible with the perpetual preservation of a proper stock of game; therefore it should be prohibited by laws and by public sentiment.

4. In the settled and civilized regions of North America there is no real *necessity* for the consumption of wild game as human food; nor is there any good excuse for the sale of game for food purposes. The maintenance of hired laborers on wild game should be prohibited everywhere, under severe penalties.

5. An Indian has no more right to kill wild game, or to subsist upon it all the year round, than any white man in the same locality. The Indian has no inherent or God-given ownership of the game of North America, any more than of its mineral resources; and he should be governed by the same game laws as white men.

6. No man can be a good citizen and also be a slaughterer of game or fishes beyond the narrow limits compatible with high-class sportsmanship.

7. A game-butcher or a market-hunter is an undesirable citizen, and should be treated as such.

8. The highest purpose which the killing of wild game and game fishes can hereafter be made to serve is in furnishing objects to overworked men for tramping and camping trips in the wilds; and the value of wild game as human food should no longer be regarded as an important factor in its pursuit.

9. If rightly conserved, wild game constitutes a valuable asset to any country which possesses it; and it is good statesmanship to protect it.

10. An ideal hunting trip consists of a good comrade, fine country, and a *very few* trophies per hunter.

11. In an ideal hunting trip, the death of the game is only an incident; and by no means is it really necessary to a successful outing.

12. The best hunter is the man who finds the most game, kills the least, and leaves behind him no wounded animals.

13. The killing of an animal means the end of its most interesting period. When the country is fine, pursuit is more interesting than possession.

14. The killing of a female hoofed animal, save for special preservation, is to be regarded as incompatible with the highest sportsmanship; and it should everywhere be prohibited by stringent laws.

15. A particularly fine photograph of a large wild animal in its haunts is entitled to more credit than the dead trophy of a similar animal. An animal that has been photographed never should be killed, unless previously wounded in the chase.

CAMP-FIRE CLUB OF AMERICA

Standard of Honors

Whereas, Much mischief has arisen through wrong standards of honorable achievement in the pursuits that are naturally associated with outdoor life, the Camp-Fire Club of America has decided:

First, To define the exploits belonging to its world, which are to be considered "honorable."

Second, To confer an appropriate badge on those who, having duly performed any of these, make the proper application, with evidence satisfactory to the Board of Governors.

Third, This holds whether the applicant be a Member of the Club or not, but non-members will be charged a fee for registration.

GENERAL RULES

Each Honor is recognized in two degrees, *Honor* and *High Honor.* This list is intended for men; that is, males over 18 years of age.

If application is made by a lad, that is, a male under 18, and his claim proved for Honor, it shall count him a High Honor, because of his age.

For this purpose all women without regard to age are considered in the lad class; that is under 18; also, men over 70 return to the lad class.

Honors once won cannot be cancelled for subsequent failure on the part of the winner.

The applicant for Honors cannot hold Honor and High Honor in the same department. For example, a member with a low Honor for 500 miles canoe-travel would surrender this on winning the High Honor for 1,000 miles. But, an applicant who has a low Honor for climbing Pike's Peak would not surrender it when allowed a High Honor for climbing Grand Teton, but would but add the latter to his string, because each mountain is a department of Honor by itself.

The applicant must fill out and forward two copies of each Honor Claim. These forms may be had of the Secretary of the Club for 2 cents each, or 10 cents a dozen. If "allowed," one is returned to the claimant, and the other goes on file.

The Board of Governors is the sole arbiter and uses its judgment in the matter of witnesses.

Successful claimants must forward registration fee of 50 cents for each Honor allowed, unless they are members of the Club, in which case no fee is required.

The badge is of gold, plain for Honor; with an enamelled center for High Honor, and costs $1.50. The center is red, green, or white, according to the class.

Red, standing for red blood or heroism, is symbol of those outdoor exploits which call for courage, nerve, and strength.

Green, for achievements calling for skill rather than courage.

White, for outdoor scholarship, *i. e.,* nature study.

By this plan we hope: First: To greatly foster an interest in sane pursuits connected with Camp Life.

Second: Put an end to many evils that have arisen through false ideas of creditable achievement.

Class 1. Red Honors

CAMPING

Canoe-camper. To have made a continuous canoe-trip of 500 miles, sleeping out every night, *honor;* 1,000 miles, *high honor.*

Saddle-camper. To have made a continuous saddle-trip of 500 miles, sleeping out every night, *honor;* 1,000 miles, *high honor.*

Camper. An *honor,* for passing 30 successive nights out-of-doors, never once sleeping under a roof, but in tent, tepee, or bivouac, every night. A *high honor,* for 60 nights of the same.

Lone Tramper. An *honor,* for travelling alone, on foot, 100 miles, carrying one's outfit, sleeping out every night; a *high honor,* for 200 miles.

Gang Tramper. An *honor,* for travelling 150 miles on foot with a party, carrying one's own outfit, sleeping out every night; a *high honor* for 250 miles.

Expert Canoeman. To paddle (single) a canoe 1 mile on dead water in 10 minutes; spill the canoe in deep water, get in again and recover control without help, *honor.*

To make the mile in 9 minutes; spill and recover 3 times in succession, and run a rapid that falls 6 feet in 200 yards, *high honor.*

Swimmer. To have swum 250 yards (no time limit), *honor;* to have swum 5 miles (no time limit), *high honor.*

TARGET-SHOOTING

Revolver-shot: Target 4x4 feet. Bull's eye 8 inches (counts 4 points). Inner ring 2 feet (3 points). Outer, the rest of the target (2 points). Distance, 30 yards.

96 shots divided in any number up to six days, one hand, standing; 250 points count *honor;* 300, *high honor.*

Half with left hand only; half with right hand only; 230 points, *honor;* 260, *high honor.*

Rifleman: To be an expert according to militia standards, *honor;* to be a distinguished expert rifleman, a *high honor.*

BIG-GAME HUNTING

Inasmuch as Hunting Big-Game must be recognized in our list of national outdoor sports, it should be elevated to a higher plane by the adoption of these rules, because they tend to give the utmost prominence to the many admirable features of the chase, and at the same time reduce the total sum of destruction.

To have gone alone into the haunts of big game, that is to say, without professional guide, and by fair hunting, unaided by traps or poison, or dogs (except where marked "d"), have killed and saved for good purposes, *in absolute accordance with the game laws,* any of the following kinds of game (or others of a corresponding character), counts Honors as below:

Each species counts one Honor; that is, one Tiger would count 1 Honor, 10 Tigers would not count any more; when he gets his Tiger, his Moose, etc., the

sportsman is supposed to stop so far as that species is concerned.

The presence of a professional hunter reduces a High Honor to an Honor, and if he took any part in the actual killing it does not count at all. A native gun-bearer is not necessarily a professional guide.

Honor

Black-bear (d)
Puma (d)
Gray-wolf (d)
Waterbuck
Wild Boar, otherwise than with spear (d)
Caribou
Deer
Moose, Wapiti, etc.
Tiger (from elephant-back or machan)
14-foot Crocodile or Alligator

High Honor

Jaguar
Tiger (without help of elephants)
Elephant
Lion
Leopard
Puma
Rhinoceros
Indian Bison
African Buffalo
Gorilla
Okapi
Hippopotamus
Moose (by stalking)

Mountain Goat
Mountain Sheep, adult ram
Chamois
Himalayan Tahr, adult male
Gray-wolf
Grizzly-bear
Spectacled Bear
Wild Boar, with spear, etc.
Sword-fish, 15 feet long, from small boat

MOUNTAIN CLIMBING (All Afoot)

By Sir Martin Conway, ex-President of the Alpine Club

The exploits in this class are repeaters.

The first one to climb a standard peak gets double honors; one for *climb,* one for *first climb.*

Honor

In Europe: Mont Blanc, Monte Rosa, Monte Viso, Ecrins, Grand Paradis, Jungfrau, Finsteraarhorn, Wetterhorn, Bernina, Ortler, Gross Glockner, Matterhorn from Zermatt.

In North America: St. Helen's, Adams, Shasta, Pike's Peak, Hood, Rainier, Mt. Stephen, Popocatepetl, Orizaba.

In Asia: Fujiyama, Tabor.

High Honor

In Europe: Meije Aig. du Grepon, Aig du Géant, Aig. du Dru, Matterhorn (by Italian or Stockje Ridges), Dent Blanche, Mischabelhorner from Seas, Schreckhorn, Monte di Scerscen, Funffinger Sp., Kleine Zinne.

In North America: Mt. Sir Donald, Mt. Logan, Mt. Assiniboine, Mt. Fairweather, Mt. St. Elias, Grand Teton, Mt. McKinley; any peak in Alaska over 13,000 feet.

In South America: Chimborazo, Cotopaxi, Illimani, Aconcagua.

In Asia: Any peak over 19,000 high.

In Africa: Any peak over 15,000 feet high.

Class 2. Green Honors

CAMPERCRAFT AND SCOUTING

Match-fire. Light 15 camp-fires in succession with 15 matches, all at different places, all with stuff found in the woods by himself, one at least to be on a wet day, for *honor;* if all 15 are done on wet days, or if he does 30, of which two are on wet days, it counts *high honor.*

Rubbing-stick Fire. Light a fire with fire-drill or rubbing sticks, with material of one's own gathering, counts an *honor;* to do it in one minute counts a *high honor.*

Diamond Hitch. Pack a horse with not less than 100 pounds of stuff with diamond hitch, to hold during 8 hours of travel, *honor;* ten days in succession, a *high honor.*

Birch Canoe. To have made a birch canoe that has travelled, with at least one man aboard, 100 miles or more in safety, *high honor.*

Trailing. Know and clearly discriminate the tracks of 25 of our common wild quadrupeds, also trail one for a mile and secure it, without aid of snow, *honor.* Similarly discriminate 50 tracks, and follow 3 tracks a mile as before, but for 3 different animals, *high honor.*

Fishing. To take on a rod, without assistance in hooking, playing, or landing, a trout, black bass, pike, muscallonge, grayling, salmon, bluefish, weakfish, striped bass, kingfish, sheepshead, or other game fish, whose weight in pounds equals or exceeds that of the rod in ounces, *honor.* To take under the same conditions a game fish that is double in pounds the ounces of the rod, *high honor.*

Fly-Casting. To cast a fly with a rod of 5 oz. or less and not over 10 feet long; 80 feet, *honor;* 95 feet, *high honor.*

Class 3. White Honors

WOOD-LORE

Beasts. Know and name correctly 25 native wild quadrupeds, for *honor;* know and name correctly 50, and tell something about each, for *high honor.*

Birds. Know and name correctly 100 of our native birds, the female and young to count separately when they are wholly different from the male. This counts *honor;* 200 birds, for *high honor.*

Forest Trees. Know and name correctly according to any standard authorities 25 forest trees, describing their properties and value of the wood, *honor;* 50 trees for *high honor.* (English names allowed).

Star-gazing. Know and name 20 star groups for *honor;* know 30 star groups, and tell the names and something about at least one star in each, for *high honor.*

PHOTOGRAPHY

Bird. Make a good recognizable photograph of any wild bird larger than a robin while on its nest, the bird itself to be at least 3 inches long on the original plate, for *honor;* the same for 3 different species, *high honor.*

Beast. Make a good recognizable photograph of a wild animal in the air, for *honor* or *high honor,* according to merit.

Fish. Ditto for a fish.

Stalking. Get good photographs of 3 different large wild animals in native surroundings, and not looking at you; *honor* or *high honor,* according to merit.

(As these are tests of Woodcraft menagerie animals do not count.)

All applications must be mailed to the Secretary, ARTHUR F. RICE, Flatiron Building, New York City, from whom additional forms may be secured at the rate of 10 cents per dozen.

THE END

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