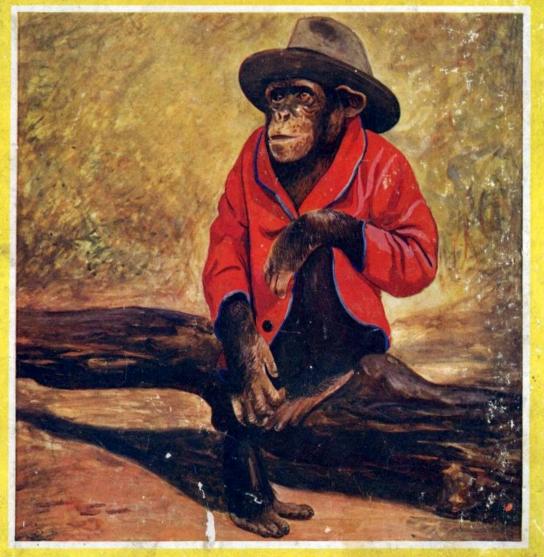
ZOO BOOK

By ENID BLYTON



SIX FINE COLOUR PLATES

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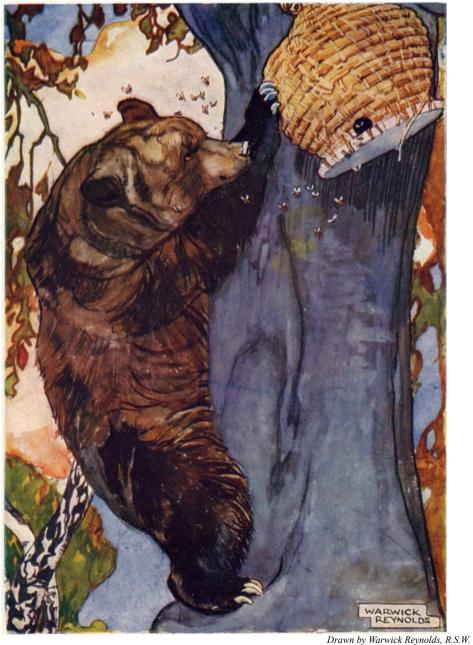
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## THE ZOO BOOK

# BY ENID BLYTON



LONDON GEORGE NEWNES, LIMITED SOUTHAMPTON STREET, STRAND

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## The Zoo Book

## CHAPTER I NOAH'S ARK IN LONDON

There are all sorts of things to be seen in London—museums, Parliament, the Tower, picture galleries, the ships on the Thames—but best and most interesting of all, the Zoo. Animals are exciting—they are alive and moving, they eat and drink and play, and at the Zoo you can watch them doing all these things.

You read in your books about the lion of Africa, king of all the beasts, the jumpity kangaroo of Australia, and the great bison of America, and you think you would love to go exploring over the world to find these interesting animals and see them for yourself Perhaps you will some day, but until then there is the Zoo to explore, and there you will find most of the animals you want to see. There you can watch polar bears splashing in their pond, and see the giraffe stretching up his long neck to nibble at his food. You can hear the lions roar, and you can ride on the elephant, or on the camel. You can feed the monkeys and laugh at their funny ways and mischievous looks. There are so many lovely things to do that you could not possibly crowd them all into one day.

The London Zoo is a splendid one. The proper name is "The Garden of the Zoological Society of London." This Society (which perhaps *you* will belong to some day) is made up of all sorts of people who, by paying so much money a year, become "Fellows," and are allowed, if they wish, to attend the many interesting meetings of the Society. There are between four and five thousand "Fellows"—and you must not think Fellows means only men, it means women, too. The Society is governed by a Council which has to be elected each year.

Perhaps you wonder how the Zoo first began. Well, far back in the nineteenth century, about a hundred years ago, there was formed the first "Zoological Society of London." People did not take nearly so much interest in animals then as they do now. Often they were cruel to them because they did not understand them. They knew very little of their ways, and still less of the reasons for many interesting things. Most people had no idea, for instance, why tigers were striped and giraffes spotted, and as there were no books then which were as beautifully illustrated with photographs and pictures as there are now, probably many people would not have known which was the tiger and which was the giraffe, if you had shown them the two animals!

So people who cared for animals, and who wanted to learn more about them, formed themselves into a society under the leadership of Sir Stamford Raffles—and the Zoo gardens, with the first animals on show, were opened on April 27th, 1828, nearly a century ago. Soon it will be the hundredth anniversary of the Zoo, and I wonder what will be done to celebrate it, don't you? What a pity there is no animal at the Zoo now who was there when it was first opened! He ought to hold a party! But only tortoises could be expected to live so long—they are sleepy enough to let a hundred years slip by unnoticed.

There are a great many people at the Zoo to look after the animals and the gardens. There are a few people whose duty it is to look after the general affairs of their section of animals—

they are called curators. There is a curator of mammals and birds, a curator of reptiles and of the Aquarium, and a curator of insects. Then there are a good many head keepers, and a head gardener, besides more than a hundred other keepers, under-gardeners and workmen. For not only do the animals have to be looked after, but also the Zoo gardens, which are very trim and well kept all the year round.

The Zoo is a big place, and a pleasant place. It is divided into three parts, called the South Garden, the North Garden, and the Middle Garden. Tunnels and bridges connect up these gardens. They are very different now from what they were when they were first opened. New ideas are always being thought of, and the animals are better cared for, better fed, and better housed than they used to be. Some years ago the Mappin Terraces were built, in order that the sheep and goats might have plenty of room to run and jump, leap and spring as they would naturally if they were in their native place. Big artificial hills were built, with caves here and there for the animals to shelter inside when they wished. You will see how much the animals enjoy these hills when you watch them leaping and jumping all over the slopes and ledges. Then just below these hills were built big new enclosures for the bears, paddocks for the deer, and a crescent-shaped paddock with a pool for water-fowl. There you can see the graceful flamingoes standing on one leg, or wading in the water.

And now one of the finest things in the Zoo is finished, and that is the splendid new aquarium, which is a wonderful place, full of fascinating creatures. You will read all about it later on in this book. Now that that is finished, there will probably be other ideas thought of, and the Zoo will become a more and more interesting place every year.

Perhaps you sometimes think, when you see one or two animals pacing up and down their cages, "How cruel to keep so many beasts caged up so that people may come and look at them!" But you must remember that they are very well treated, are free from all danger of enemies, and have no fear of going hungry. Probably most of them would say, "We'd rather stay at the Zoo, thank you," if they were given the choice now, of staying to be looked after, or running wild again! Of course there are some animals who would never get used to being caged—the wild cat for instance—but most of them are contented and happy. Many too have been born in the Zoo, and have known no other life.

There are probably over 4,000 creatures of all kinds to be seen at the Zoo, and you will find there almost any animal you would like to see. The more you see them the more you will want to see them, and to get to know them. If you are really fond of animals, they will soon find it out, and make friends with you. There are some lucky people who are able to go into the cage of almost any animal and talk to it or stroke it. They love and understand animals, and the animals love them in return.

Perhaps you will be one of the lucky ones!

FEEDING TIME.—Most of the animals are glad when feeding-time comes, though some of them, like the alligators, for instance, sometimes make no attempt to take their food when it is given to them, and may go without for one or two days. Some animals are disgusting to watch when they are being fed, and some are not at all interesting. The hyænas have no manners, and simply gulp their food savagely. The crocodiles snap quickly and wickedly, and so do the alligators. The eagles are not very nice to watch, for they are so savage and fierce over their meat.

Every one goes to see the lions fed some time or other. Perhaps you have been. They are fed at four o'clock, and long before that time people drift into the Lion House and climb up the steps to the back of the house and wait. They stand there watching the lions and tigers, and

wondering when the keeper will come along with the food. More and more people come in. Children stand all along the steps. Then the great cats begin to stir out of their drowsiness; they see the gathering crowds, and they know their feeding-time is near. One by one they yawn and stretch themselves. Some of them get up and look through the bars at the people and swish their strong tails from side to side. Perhaps they are wishing that the bars were not there, for they are very hungry.

Then the tigers begin pacing up and down, to and fro, round and back again. When is that keeper coming? One of the tigers roars a great echoing roar that seems to rush all round the Lion House and fill every corner with its sound. Then a lion answers with another booming roar—it is a frightening sound even when you know there are bars between the lions and you. It is just the sort of noise you would expect great animals like lions and tigers to make. Perhaps the others think they will join the concert to-day, and then the Lion House is filled with a tremendous outburst of booming roars that seem to echo round you and by you and behind you.

More and more people crowd into the Lion House until it is packed full, and feels very hot, and smells musty. When is that keeper coming? It is just four o'clock. Is he going to be late? Oh, look! The lions have heard something we have not—some far-away sound of an opening door perhaps; they pace up and down and roar again—the keeper is coming! Yes, here he is, wheeling his trolley along by the rails. He comes to a cage—up goes the bar, and in goes the joint of meat. The lion is crouching down, waiting. It grabs the meat quickly and takes it to the back of the cage—you can hear the crunch of the teeth and the savage scrape, scrape of the rough tongue!

And soon all the great cats are fed, and their roaring stops. They do not take long over their food—and once again you will see them lying peacefully down after their meal, drowsy and lazy, watching the crowds of people file out of the house.

I think once or twice is enough to see the lions fed. The house is so crowded and so hot, and the roaring is not a pleasant sound. I think most people are glad when the lion feeding is over and they can go out again into the open air. "And now where shall we go to?" they say.

"Oh, let's go and see the sea-lions fed!" say the children, and run off towards their big rocky pond.

I would far rather see the sea-lions fed than the lions. The lions simply stand and wait and eat, but the sea-lions are as good as a circus! They are clever and tame, and the best catchers in the world! They would make simply splendid cricketers.

There is nearly always a crowd round the sea-lions' pond at half-past four, their feeding-time. The railings are black with children, the steps are full of people. The sea-lions and the seals know that their feeding-time is near, and the crowd excites them. They begin to bark loudly—aark—aark! It is a tiresome bark, and I should not like a dog with a bark like theirs! Then into the water they go, splash and ripple, across the pond and back again!

Half-past-four! The keeper unlocks the gate. He has a basketful of shining fish, and he goes to stand by the pond edge. And now you can see a really fine exhibition of throwing and catching. I don't know which is the cleverer of the two—the keeper or the sea-lions!

Up into the air goes the gleaming whiting, and then another and another. Seals and sealions plunge about in the water, catch the fish in their mouths, gulp, swallow, and are off for another, quick as lightning! The water churns and ripples as the sleek grey bodies flash in and out and round about, almost too quick to follow!

The keeper goes on throwing here, there and everywhere; he knows to an inch where to throw the fish and exactly how many each animal has had, for he has to see that each seal and sea-lion gets his fair share. Even the patient seal who waits near by is not forgotten, and he gets his feast of shining fish in between the keeper's throwing.

Then a fish is thrown up on to a high rock. A sea-lion sees it going with his quick, observant eyes. Then you see him lift his huge wet body out of the water, and up the rocks he climbs, leaving a dark, wet trail behind him. He finds the fish and gulps it down. Then he flippers himself to the edge of the rock and waits. Perhaps he barks at the keeper to tell him he is waiting to show how well he catches. Whizz! Through the air goes a gleaming fish, straight to the sea-lion's mouth! What a good throw, and what a good catch! Gulp! The fish is gone, and the sea-lion waits for another. Here it comes, curving through the air, and another, and another, and another! The sea-lion catches them all, every one. Then the keeper plays him a trick. He throws a fish just short of the rocky ledge where the sea-lion waits, so that it will fall into the water. "Ah, you can't catch that!" the watching crowd thinks. But the sea-lion knows that trick very well. He throws himself up into the air off the ledge, catches the fish neatly, curves for a dive, and plunges beautifully and cleanly into the water below! It is the cleverest and gracefullest thing to watch, and I really think every one ought to clap!

After that the keeper takes up his empty basket and goes quietly away. It must be splendid to be able to throw as well as he does—fish must be horribly slippery and difficult to get hold of—and I think many cricketers would be glad if they could catch as cleverly as the sea-lions!

Once a sea-lion ate more than his fair share of fish, and this is how it happened. The keeper had a truckful of fish, which was the supply for the *whole* of the Zoo, not just for the sea-lions only. He wheeled it into the sea-lions' enclosure and then went to shut the gate.

Albert, a sea-lion, happened to see the fish on the truck, and thought it a glorious idea to eat fish without having to catch it first! So he galloped clumsily up, and when the keeper came back after a few moments he *found his truck empty*! How Albert could have swallowed all the number of fish on it is a mystery, but he did. The keeper said he looked just like a blown-up halloon!

Of course, the other fish-eating members of the Zoo could not go without their meal simply because Albert had been so greedy. So in a great hurry messengers had to be sent to buy more fish from all the fishmongers round—and, would you believe it, when the keeper took his place to feed the seals and other sea-lions, Albert barked for his share just as if he had never touched a fish in his life! But I don't expect many fish were thrown in *his* direction that day!

Then there are the diving birds. They dive beneath the water after live fish, and very fascinating they are to watch. They streak through the water followed by a trail of shining bubbles. The penguin is the most graceful, for he uses his flipper-like wings in the same way that we use our arms for swimming. His feet are trailed out behind him. He is marvellous in the water. It is hard to believe that the shuffling, awkward bird we saw on land can be this graceful, curving bird, which seems almost to *fly* under water, so swift and sure are its movements.

You can, of course, feed many of the animals yourself. Bananas, oranges, apples, bread, nuts, you will find most animals willing to take some of these. The antelopes will come and plant their forefeet up on the railings and ask for bread or nuts. The hippopotamus will open his tremendous mouth and stand yawning in front of you, inviting you to "have a shot" and see how many things of all kinds you can get in. The elephant will wave his trunk near you

and beg for an orange. The polar bears will sit up and say they will do their best to catch a bun, if only you will throw one; and if it is a nice big bun they will even roll over into the water for it, if you throw it there, and have a little game with it. And, of course, the monkeys will take anything you like to give them, even if they only mean to drop it on the floor! They like fruit very much, and if you want to be a favourite with them you have only to take bananas and oranges with you, and the monkeys will love you.

Some people feed animals with the wrong food, and that makes them ill. And sometimes the animals get too much given them, and over-eat themselves, especially on bank holidays. One of the queerest sights I saw was a schoolboy feeding an ostrich with oranges. It had taken three, and, of course, had swallowed them whole. They went down its throat slowly and, because they were rather big, they stuck out like balls all the way down its long neck. You could see them all going down one after the other, and the schoolboy was most excited. He got his camera out to take a photograph, but the ungrateful ostrich trotted away, so the poor schoolboy didn't get his wonderful photograph of an "ostrich with oranges going down its neck" after all!

# CHAPTER II HOW ANIMALS ARE CAUGHT AND TAKEN TO THE ZOO

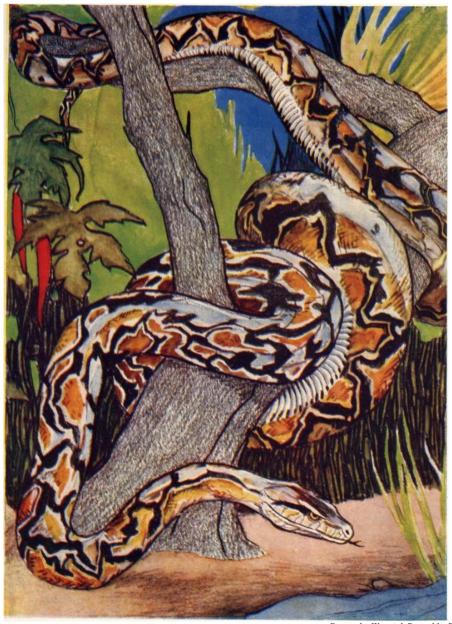
There are three kinds of people who go to hunt animals—there are those who go to kill them for the sake of sport or for their skins, those who go to take photographs of the animals, and those who go to capture them alive for show purposes. All these things are difficult and dangerous.

When animals are captured in order to be taken to Zoos, it is usually the young ones which are caught. They are more easily tamed, are not so much trouble to cage on the journey, and have longer to live. But even so, it is a very difficult business, and not one half of the animals caught, live to be placed in a new home.

Running animals, such as giraffes, antelopes and buffaloes, are chased in herds. Gradually the young ones become tired, and drop behind. Then they are seized and captured fairly easily. Young elands are caught by seizing them by the tail. But capture is not so easy in the case of animals who turn to protect their young ones. Rhinoceroses and elephants will fight for their young and usually the baby animals can be taken only after the old ones are killed.

Hyænas, panthers and baboons, are usually caught in carefully built traps. Birds too, are snared in many different ways. Crocodiles and hippopotamuses are often attacked in the water. Natives are very clever at this. They choose a young animal, and harpoon it so as to make as small a wound as possible. Then they surround it and push it ashore, where it is roped and bound. The wound is attended to, and soon heals up. The animal is then sent off to its new home, in company with many others caught.

Baboons are caught in an interesting way. First of all their drinking-places are found. Then all but one are closed up with thorn bushes, so that the whole company is forced to come for water to the same place. After a time, a cage is placed by this pool, and food is scattered around and inside it. The baboons explore it suspiciously at first, but gradually become used to it, and soon go in and out for the food. Then one day a rope is tied to the pole which keeps the cage door open. This rope, covered loosely by sand, runs along to the hunter's hiding-place. At evening time, along come the baboons as usual. Two or three run into the cage to find the food they know will be there. The watching hunter pulls the rope. Click! The pole falls and the trap is closed! And the baboons inside begin to yell and bark, trying to find a way out. Up come the hunters, and with forked sticks catch each baboon by the neck and pin him to the ground. Then the top of the cage is taken off, and the baboons are bound and muzzled. For a day or two they are terrified, but they soon recover, and get used to captivity.



Drawn by Warwick Reynolds, R.S.W.

## GIANT PYTHON.

A young hippopotamus is sometimes caught on land by means of a pit. The mother hippo always makes her baby trot in front of her so that she can look round for any danger, and does not need to turn round at all. Hunters find out the path she often uses, and in the middle of it they dig a pit which they hide with branches. When the pair come along, the mother hippo suddenly sees her baby vanish into the ground, and she is so terrified that she turns and runs.

Then comes the job of getting the hippopotamus out of the pit. It has to be taken out as soon as possible, otherwise a lion will find it and eat it. Even a baby hippo is tremendously heavy, and it takes about twenty men to pull it out of the pit by means of a noose of thick rope round its body. Before it is taken right out, its legs and jaws are bound, for an angry hippo is a dangerous beast. When it is at last out of the pit, it is put on a stretcher of strong poles and branches and carried away to the nearest river, where it is placed on a river barge. As it probably weighs half a ton, you can imagine that the men are glad to get rid of its enormous weight.

Wild horses are caught by suddenly startling a herd during their rest hours by shouts and yells. They start up in alarm and race away, with the hunters riding after them on their own horses. Soon brown specks are seen lagging behind the herd away in front, and these become larger and larger until the hunters catch them up and see them to be foals. These young horses become worn out and at last stand still and panting, unable to move a step further. A noose is flung round their necks and they are led back to the camp and given to tame horses to nurse. After a little, they become used to their new life, and are taken away to be shipped to Europe.

You might think that snakes would be difficult and dangerous to catch, but they are not. In the marshes of India, natives, during the cool season, go out before dawn in search of snakes. When they find them, the creatures are so numb and helpless with cold that it is easy to catch them by means of a forked stick which pins them by the neck to the ground, or else by means of a net at the end of a long pole. Large snakes are caught in another way during the dry season. Nets are laid out round a certain spot in which snakes are known to be. Then the place is set on fire, and the snakes come hurrying out and become entangled in the nets.

A python is usually caught after it has had a meal, and is sleepy and lazy. A large net is thrown over it, and drawn tight, until the snake is thoroughly tangled in the meshes. Then it is put in a big bamboo basket, and carried off. There are some natives who find pythons and other snakes by smelling them at a distance. They go out with ropes and baskets, and directly they smell a snake, they track the smell down and catch the snake!

Seals are usually caught at night. They come out of the water and sleep on sand banks. Men creep up and place nets on one side of the bank. Then hunters on the *other* side begin shouting and yelling. The seals wake up in a fright, and make for the sea, becoming entangled in the nets. The hunters pounce on the young ones and throw net bags over them, letting the others escape. The men have to wear strong Wellington boots when they catch seals, for their teeth are so very sharp.

Difficulties are not over even when the seals are captured. They have to be taken away in sealing ships, and these have special water-tanks in which to keep the seals. Some of the animals pine for their home, and refuse to eat anything at all. The younger ones usually recover their spirits very soon, and are very playful and quick at learning tricks. It is very difficult to move them from the ship's tank when they reach port. Fortunately they have to come up to the top of the water every few minutes to breathe, and men stand ready with ropes or nets to catch them one by one as they come to the surface.

When animals are taken across land before they are shipped, they have to be very carefully looked after. The young animals are fed with milk, and if there are a great many, a whole herd of goats has to be taken in order that goat's milk can be given to the baby animals. If the goats die, or if there are more than are needed, they are given to the flesh-eating animals, such as lions or tigers, to eat, should the caravan happen to be taking some of those along too. Sheep are also taken to feed these animals. Running animals have to march, but savage animals are

carried in boxes or cages. Rhinoceroses, after a time, learn to know their keepers, and will follow the caravan like dogs! Snakes are carried in boxes which have holes pierced in to let air through, and are very little trouble.

Sometimes the distance over which the animals have to be taken is very great, and many beasts die on the way. The heat kills a great many. Unsuitable food causes the death of others, and some die of fright and homesickness. But as the trader loses money on every animal that dies, every possible care is taken of them, and they are looked after and tended as if they were delicate babies!

Just imagine a trader who has to take a whole menagerie of animals he has caught, over a desert where he knows there will be little food, and hardly any water. He has to make his plans very carefully indeed, and take all his food, and a great deal of water with him. If he has a hippopotamus in the caravan, he must not only take water for drinking purposes, but also water in which the hippo can take a bath every day. The bath is made of tanned ox-hide, and the hippo greatly enjoys it, after he has been travelling for hours.

Usually the party travels at night when the hot sun is out of the sky. Cattle, heavily loaded animals, sheep and goats, captured animals, and many men, make up the long caravan. A giraffe needs three persons to drive it along, an ostrich one or two, an elephant two, three or four, and an antelope two! Savage or small animals are carried in cages on the backs of camels. Hippos are carried in cages slung on poles between two camels.

When the caravan at last reaches the sea, the animals are shipped for Europe. Elephants and camels are swung across from the shore to the ship by cranes, and they don't like this at all! The cages containing the other animals are swung or carried into the ship, and placed in the care of the ship's butcher whose duty it is to look after any animals on board. It is sometimes a dangerous job, and certainly not an easy one. The feeding is difficult in many cases, and often the animals suffer from seasickness and from having no exercise.

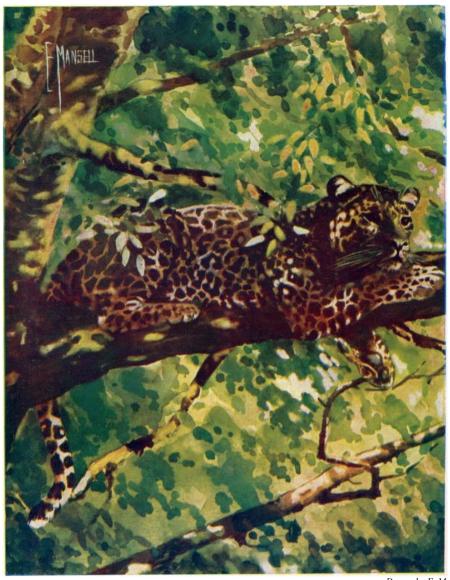
A ship's butcher once had the care of three cheetahs. The sea splashed their fur, and they washed themselves as cats do. But the salt of the sea made them ill, and although everything was done to prevent them it was impossible to stop them licking their coats. Only one lived to reach land.

Sometimes animals escape from their cages on board ship, and then there is a very exciting time for the sailors. It is not very nice to have a bear or baboon loose, waiting to spring out round a corner! Once a bear got loose and fought so savagely that at last he was left to himself in a corner of the deck. The ship's butcher decided to try a quieter plan. He took a tin of treacle and poured it out in a long stream from inside the bear's cage to near where the bear sat growling. Then he left the tin in the cage and waited. After a time, the bear wandered out from his corner and discovered the treacle. He began licking it up in delight, and at last he licked himself right into his cage, when slam! the door was shut, and bolted! But he didn't seem to mind a bit, he just sat and licked out the treacle tin as happy as could be.

Young giraffes are difficult to bring safely through a long sea journey. If they happen to be valuable ones, and show any signs of being unwell during the voyage, the ship puts in to land, and the giraffes are taken ashore for a few weeks until they are fit to stand the sea journey again.

Unshipping animals is just as dangerous and difficult as shipping them. They don't realise at all what is wanted of them and become terrified. It is the big animals who are especially troublesome, for they cannot be carried, and have such strength that they are very dangerous when they lose their tempers. A rhinoceros can give a great amount of trouble. There was

once one which had to be moved from the ship to a van. She was well roped and her keeper held out some food to her, walking backwards as he did so. The rhinoceros followed, eating, and went down the gangway. Through the docks she went, still eating, and everything seemed to be going splendidly. Then the keeper noticed a goods train coming down a nearby railway line. He knew the rhinoceros would be terrified and probably turn and run. So he, with the other helpers, hauled hard on the ropes, and just got the animal into the van in time. Unfortunately the engine-driver blew the steam whistle of his engine, and terrified the rhinoceros so much that she flew into a wild temper in the van, charged the coachman's box, and threw it right up into the air! Then she tried to charge right through the front of the van, but was prevented by every one hauling on the ropes. At last, by fastening cords and ropes to all her legs, she was held a close prisoner, and after some time, was safely delivered to her stables.



THE LEOPARD OR PANTHER.

Drawn by E. Mansell.

A small hippopotamus was once fetched from Bordeaux by a keeper, packed up in a large travelling trunk, registered as luggage, and taken to its new home in that way. Another hippo was not so easy to deliver. She behaved all right until the van arrived at her stables. Then she refused to come out. The keeper gave her food and tried to make her walk down the gangway into her stable. She ate the food and went back into the van. This went on for eight hours, until the keeper tired of it and told his men to prod the animal from the back and make her come out. She lost her temper, turned on the keeper, and came flying out of the van after him, like a jack-in-the-box! He swung round and ran for his life. He ran straight into the hippo's stable

and out between the bars, which were very wide. The hippo pounded after him, but was stopped by the bars. The keeper slipped to the stable door, slammed and bolted it, and there was the hippo, safely caged at last!

It is not easy to send large animals by train. Giraffes, for instance, are too tall. Their heads would bang against the roofs of the tunnels. Elephants, too, are difficult to take by railway. Special low trucks are sometimes used for very big animals. These have to be very strongly made, of course. Maharajah, a well-known elephant, was once put in a closed railway van, and didn't like it. She wanted more air, so she just lifted the roof off! After that, it was decided to take her by road and not by rail!

I think you will agree that catching and delivering wild animals is not a safe or an easy job. The traders who catch the animals and ship them to Europe, and the keepers who fetch them and bring them home, have a much more exciting and thrilling time than the keepers at the Zoo who look after the animals when they are safely caught and caged.

## CHAPTER III SECRETS OF THE KEEPERS

Have you ever wished that one of the keepers at the Zoo was your special friend? Think what exciting and interesting stories he could tell you about all sorts of things! He would tell you which animals could be tamed and which could not. He would perhaps show you a *wolf* which loved to be stroked, and a cat which nothing will tame! He would tell you of the narrow escapes he has had from the animals under his care, and of all the funny things that have happened from time to time at the Zoo.

There is a true and funny story about some white storks which used to live at the Zoo. London air made their feathers very dirty, and, instead of being beautiful white birds, they looked sooty and ugly.

One day a visitor told the keeper that he "didn't think much of the storks. They might be blackbirds by their colour!"

The keeper looked at his storks and thought about them for some time. He didn't like remarks like that. And you will never guess what he did! He took those storks, one by one, and laid them on the table where he prepared their food. He took soap and soda and water, and he washed each stork thoroughly from beak to tail. They didn't like it at all, and for some days they went about looking very draggled, miserable birds; but as the hot sun dried their feathers, they spread out their plumage, and soon, instead of three sooty-looking birds in a paddock, you would have seen a trio of gleaming white, spotlessly clean storks walking about in the sun under the eye of a very proud and pleased keeper.

The parrots keep their beautiful colours, but sometimes one will fall into the bad habit of nibbling her own feathers. If nothing were done to prevent this, the silly parrot would probably go on until she had hardly a feather left! So, when a bird is seen beginning to bite away her coat, the keeper slips a tin collar round her neck! The parrot looks as if she were wearing a tin ruff, and she cannot possibly bend her head down to nibble any of her feathers! Isn't that a good idea?

Birds which come from far-away hot countries are difficult to keep strong and healthy at the Zoo. Our climate is different, and also the length of our days. In winter we have only eight hours daylight, and as these tropical birds had been used to a day of at least twelve hours' length in their own land, it meant that they had not enough time, when they came to the Zoo, to pick up sufficient food in our short eight-hour day to keep themselves well and strong. Many of them starved and died because they would not feed during the darkness, even if they were hungry.

Something had to be done to save these rare birds, and a very good idea was thought of. "We can't make *our* sun shine in the sky any longer than it does," said the Zoo folk, "so the only thing to do is to give the birds an artificial sun and hope they will think it's the real thing and go on feeding!"

And they put big, powerful gas lamps in the birds' house, and had these lighted two hours before sunrise and two hours after sunset! That made twelve hours of light for the birds, and as they did not go to sleep until the house was dark, but fed all the time, the idea was a great success, and is still carried out at the Zoo. The birds do not starve themselves any longer, and are much healthier and stronger than they used to be.

I was once told a most interesting story about a widgeon. Widgeons in their free state nest in lonely wild places by the sea. But there was once a widgeon at the Zoo who made her nest, laid her eggs, and hatched them in a yellow privet bush just outside her aviary!

No keeper saw her get out from her aviary, and no one missed her. She got out somehow and, all unseen, explored around until she found the privet bush in a flower bed. She decided that was just the place, and there she laid her eggs. She probably went back to her aviary every day for her food, and then returned secretly to the hidden nest. One day eight of her ten eggs hatched! What was the mother to do? Take them back to her aviary, of course, where they could get food! And then, to the astonishment of every one, a mother widgeon came bustling across the lawn, followed by eight baby widgeons, trying to get back into the wired aviary! It must have been a charming sight to see.

Sometimes animals quarrel. The keepers take no notice if it is one of the silly hourly quarrels of monkeys, or the spitefulness of animals safely separated by fence or walls. But a fight between lions, for instance, is a serious thing. They are valuable animals, and with their powerful teeth and claws can do tremendous damage to each other. It is not easy to doctor a great savage animal, so fights have to be stopped as quickly as possible, before any real harm is done. Irons and poles are kept ready to separate fighting animals; but there is something even stronger than those, and that is the hose! A great jet of cold water is powerful and surprising enough to make even lions stop fighting!

A real lion or tiger fight must be a savage affair. There was a great fight years ago at the Zoo between a tiger and tigress. The tigress clawed at the tiger's nose and hurt him. He jumped up and knocked her over and bit her. She flew at him and bit him on his side, and this angered him so much that he seized her by the throat with his great teeth. The keeper then thought it was time to interfere, and he separated the two fierce animals; but the tigress was so badly hurt that ten days later she died.

Bears sometimes get angry with each other, and there is an interesting story about a polar bear who lived at the Zoo many years ago. This polar bear had a wife who sometimes irritated him dreadfully. She snarled at him and annoyed him, for she was a bad-tempered creature. He used to bear it as long as he could, and then he would suddenly turn on her and push her into the water. There he sat on her head until he thought she had been punished enough, when he would let her free again; but one day he sat too long on her head, and when he climbed out of the pond he found she did not follow him. She was drowned.

If you watch the monkeys in a monkey cage you will probably see one who is bigger than the others and who seems to be held in great respect by them. If you watch him for some time you will see why. He will come tearing down from his perch if he sees you giving a tit-bit to a smaller monkey, and perhaps he will snatch it away or chase the monkey all over the cage for it. He will pinch other monkeys and smack them, so that, when they see him coming, they scamper away as fast as hands, feet and tail will take them.

"What a horrid, selfish monkey!" you will say. "Why ever do the keepers let him live with the other poor little monkeys? They never get five minutes' rest!"

That is exactly why he is put there—so that the other monkeys won't be able to laze about too much and become ill through want of exercise. Monkeys in a cage are protected from all their natural enemies, and do not need to climb or run at all, except for purposes of play; and if they do not have enough exercise they become ill and die. So you see the horrid bully of a monkey is really very good for them, for he keeps them "on the move" without hurting them

too much. Of course, if he showed any signs of over-bullying he would be taken away, but the keepers are always on the look-out for that.

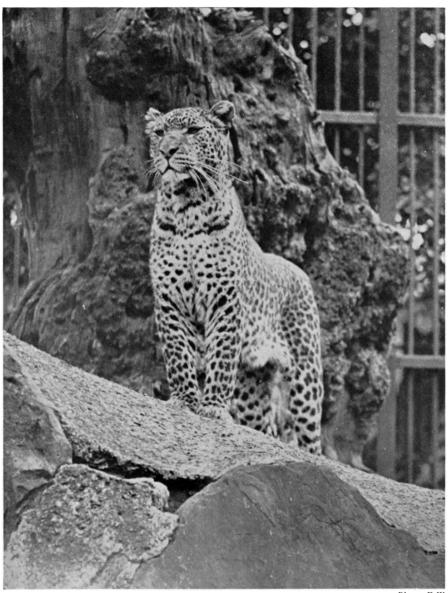


Photo: F. W. Bond.

### A HANDSOME LEOPARD

The magnificent coat of this animal with its black ring-shaped markings on a bright yellow ground closely resembles the sun-flecked spaces of the jungle. It is not easy, therefore, to discover the whereabouts of a leopard in his leafy abode.

The keeper of the sloth bears could tell you a story rather like the monkey story if you asked him. Sloth bears are lazy creatures, and when, as in the Zoo, there is not even the need to go hunting for their daily food, they become lazier and lazier. Animals, to keep healthy, *must* have exercise, and the keepers were puzzled to know what to do. At last the two sloth bears (called Tweedledum and Tweedledee) were put with three young brown bears who were very lively indeed. They loved sitting up on their hind legs and boxing with each other. They were very clumsy at it, but once a paw got home it was a very hefty one! These three brown bears looked at Tweedledum and Tweedledee, and decided to teach them how to box—and that was the end of the sloth bears' laziness!

Animals not only suffer from sheer laziness and from wounds they get through fighting or nibbling themselves; they sometimes suffer from the same sort of illnesses that we have. Apes particularly catch colds which turn to pneumonia or influenza. Because of this a glass screen was put between the visitors and the apes in the hope that the apes would thus be prevented from catching any infection from visitors. But now it has been decided that it is really better for the animals to have fresh air and to be allowed to make friends with people.

There was once a tapir who got the mumps! Tapirs are queer enough looking animals when they *haven't* got mumps, but it must have been the funniest sight in the world to see an animal which is a sort of half elephant, half pig standing and looking very miserable with a large white rag round her neck and throat! Tommy, her companion, couldn't understand it at all, and would insist on taking it off continually, much to the keeper's annoyance!

If you look in the cages of animals which have sharp claws, you will always see logs of wood there. Can you guess why? It is because the animals have no chance of using their claws in a natural way, and if these are not kept worn down they will grow and grow until they enter the foot of the animal and make it unable to walk comfortably. In their wild state clawed animals will scratch their claws down the trunks of trees; and when they are caged they are given logs for the same purpose. But sometimes they will not keep their claws in order by scraping them down, and then the Zoo doctor has to deal with them. When you go to the dentist to have a sturdy tooth out, you are given a "sleepy gas," which sends you to sleep for a few seconds while the dentist takes out your tooth without any feeling of pain on your part. That is what is done to the Zoo animals when their claws are cut. They are just put into a "sleep-box," and directly they are asleep the doctor nips the claws to the proper length.

You might think that claws ought to be cut without all the fuss of "sleepy gas." Well, they used to be. But animals will not sit still and hold up their paws quietly, as you hold up your hands to have your nails cut. So this is what used to be done. Loops of rope were put in the animal's cage, and when he stepped into one a watching keeper pulled it tight. Then the animal was dragged to the bars and its claws were cut short. It was sometimes a long business though, for many animals were suspicious of the loops of rope and would not go near them; and, of course, they hated to be treated like that.

Animals with hoofs also have to be dealt with sometimes, for they cannot possibly get enough exercise in their small paddocks to run and wear their hoofs down. So when the hoofs grow too long, up comes the Zoo doctor, and, after the keepers have roped the animal (a zebra, perhaps) and got him down on the ground, the doctor cuts the hoofs into the proper shape and size.

There are many cages at the Zoo into which I should be very afraid to go. I should hate to enter the lions' cage or the tigers', and I should be afraid of the rhinoceros, with his great horned nose; but the cages I should hate most of all to enter would be the snakes'. I should be

very much afraid of a python or a rattlesnake. But the keepers don't seem to be afraid of anything. There was one keeper in the Snake House who had to get a python out of one cage into another whilst the first cage was being spring-cleaned. What do you think he did? He just opened the door between, got hold of the big snake, and *walked him through*!

## CHAPTER IV APES AND MONKEYS

We are all interested in monkeys because their behaviour is mischievous and funny, and so many of their ways are like ours. They are nearer to us than any other animal. Some of them can be trained to do extraordinarily clever things. There was once a pet baboon whose master, a signalman in Africa, met with an accident in which he lost both his legs. This man thought that he could keep his job if his baboon would help him. So what do you think he did? He trained his baboon to work the levers of the signals for him, and every night and morning his pet pushed him to and from his work on a little trolley which ran on the railway lines!

Although in many ways monkeys are like us, there are some simple things we do that a monkey can never do. He cannot stand upright properly for one thing. His feet are not like ours, and he cannot place them flat upon the ground. His feet are really *hind hands*, not hind feet. He has no proper sole to his feet, and no heel, and his great toe is really like a big thumb, so that when a monkey tries to stand upright he looks very queer, because he has to bend his knees outwards in an awkward manner and he walks on the outside edges of his hand-like feet. All this makes him look much shorter than he really is, and he hobbles along clumsily and ungracefully.

But, because of his hand-like feet, he can do some things much better than we can. He can climb trees wonderfully well. We can only place our feet flat upon a branch to stand on it, but a monkey can hold it with all four hands, and so can climb a tree quickly and surely.

First among the monkey tribe come the apes, and the first member of the ape family is the chimpanzee.

THE CHIMPANZEE lives in the huge forests in Western and Central Africa. It is about five feet high and covered with coarse black hair. It lives on soft fruits mostly, but sometimes feasts on honey, or even birds.

If chimpanzees live near a district where there are corn or banana plantations, they will sometimes band themselves together and creep down to the fields at night. Then they will have a glorious feast, and perhaps ruin a whole plantation. They are very difficult to catch, because they are so watchful, and at the least alarm will go off at once to their forest.

The chimpanzee makes a sort of nest for his family to live in up in the trees. He twists the small branches together so that they make a kind of platform. Here the mother and babies sleep, while the father goes to rest on a bough underneath. It sometimes happens that a number of chimpanzees make nests near together, and so form a kind of tree village for themselves in the forest!

You may be sure of seeing chimpanzees if you go to the Zoo. Most of them can do clever tricks which the keepers have taught them. One chimpanzee called Sally was taught to count, and she would pick up the right number of straws from the bottom of her cage whenever her keeper asked her for two, three, four, or five! She could sometimes manage to count bigger numbers correctly, but not always. She used to make three different sounds, too—one meant "Yes," one "No," and the third meant "Thank you." Her keeper was very proud of all her tricks, as you can quite well imagine.

THE GORILLA.—The gorilla is bigger than the chimpanzee, for it grows to a height of nearly six feet. It lives in dense forests in Africa, near to the equator, and has rarely been seen

by travellers. It is enormously strong and has powerful arms and jaws. Its head is large, with small ears, deep-set eyes, and a wide, gaping mouth with great teeth. It has thick, short fingers and big, spreading feet. Its skin is black and covered with coarse, short dark-grey hair. The hair on its face is reddish-brown and there is a ruff of hair under its chin.

This ugly and powerful animal spends most of its time in the trees, and leaps and springs from branch to branch, and tree to tree, quickly and cleverly. It can jump thirty feet from a tree to the ground without hurting itself at all. When it is on the ground, it usually walks on all fours and bends the fingers of the hands inwards, so that it rests upon the knuckles. Its food is fruit and insects, birds' eggs and honey, and, when it can get it, sugar cane.

The gorilla, like many of the great apes, shelters itself in a queer manner when it rains. It sits down and covers its head and shoulders with its huge hairy arms. Now the hair on its arms grows in a curious way. From the shoulder to the elbow it grows *downwards*, and from the elbow to the wrist it grows *upwards*. Therefore, when the gorilla shelters its head with its hairy arms, the rain runs from the shoulder and from the wrist to the elbow, and drips off there, and the gorilla is kept quite dry. If you look at the down on your arms, you will see that it grows in the same directions as the gorilla's hairs!

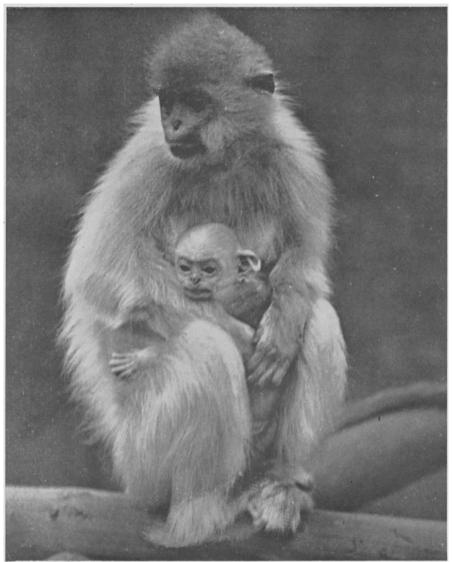


Photo: F. W. Bond.

CAPPED LANGUR AND BABY
This baby Langur, although only three days old, looks like a tiny old man.

Although it is such a powerful animal, the gorilla is shy, and is hardly ever seen even by those who live near its home. If a man met it and fought it, he would have very little chance with the gorilla, for it can beat even such a strong, fierce animal as the leopard; but, though it is strong and courageous, the gorilla is not clever. It builds itself a home in the tree tops, but it cannot even think enough to put a roof on to keep its family dry!

THE ORANG-UTAN.—The queer name of this animal means "a man of the woods." It was given that name because, as you can guess, it lives in the trees. It loves to make its home

in the tops of the tallest trees of the thick forests in Borneo and Sumatra.

It is not so big as the gorilla or chimpanzee, for it usually grows no more than four and a half feet. Its colour is reddish-brown, and it has much longer and shaggier hair than its bigger cousins. Its face is large and broad, and the forehead is very high. The most curious thing about this man of the woods is its arms, which, when they are hung down by its side, nearly reach the ground! Our arms do not even reach our knees, and we should find them rather in the way if they were much longer. The orang finds its long arms very much in the way when it is on the ground, so it uses them as a pair of crutches, and swings itself along between them.

It does not come to the ground very often, for its food is up in the tree tops—fruit, leaves and buds. Up in the trees the orang swings from branch to branch in a marvellous manner, for its arms are immensely strong; it can swing itself through the thickest forest as fast as a man can run below! Like the chimpanzee, it builds a sort of platform in the trees as a nest for its young ones.

Its chief enemies are the python snake in the trees, and the crocodile in the water, where the orang sometimes goes down to drink. But even these two fierce animals are not always a match for the powerful orang.

You can usually see an orang-utan at the Zoo, although they seldom live long in captivity. One orang there was very clever. There was a notice board in his cage which said: "The animals in this cage must not be fed." The orang noticed that, when the board was up, nobody gave him fruit or nuts, so, when his keeper's back was turned, he would knock the notice down and then hold out his hand for nuts and bananas to anyone passing by!

THE GIBBON.—The gibbon is another ape whose arms are very long. They are not quite so long as the orang's, and the gibbon does *not* use them as crutches. It clasps its hands behind its neck when it is walking on the ground, or else uses its arms to balance itself. Although it is not so big as the orang, it is even cleverer in the way it swings itself through the trees. In fact, its movements backwards and forwards and up and down in the trees are so very quick that anyone watching feels it is more like a big bird than an ape! The gibbons really do seem to fly from bough to bough, and so swift and light are they, that it seems they hardly touch the tree at all save with their finger tips.

Gibbons like to live together in bands of fifty or more. They have a curious habit at sunset and sunrise. They sit on the top branches of the trees and hold a sort of concert! The strongest-voiced gibbon begins the concert by barking, and after a few barks he is joined by all the others. They bark for about two hours, and can be heard two or three miles away. Then gradually the noise dies down, and the animals are quiet until the next sunrise or sunset.

BABOONS.—You can tell the difference between a baboon and an ape by looking at a baboon's face. He has a long, broad muzzle like a dog's, with the nostrils at the tip. Because of this, baboons are often called "dog-faced monkeys."

Then, if you look at his arms and legs, you will see that, unlike the apes, his arms are no longer than his legs. Perhaps you can guess the reason why? It is because the baboon does not live in the trees, but on the ground. He lives in rocky, bare places, or mountain sides, in Africa and Arabia, and as he needs to be able to run very fast instead of climbing, his limbs are made like a dog's, and, instead of having four hand-like feet, he has four feet-like hands.

The baboons live in large bands, and are very fond of posting sentinels to watch for them. If anyone appears, the sentinel barks, and off all the baboons go. They are very mischievous, and will come down in the night from the hills in South Africa and eat from the mealie fields, doing a lot of damage.

They are powerful beasts, about four and a half feet long, not counting the tail. They feed upon fruit, insects and lizards. They become very angry if man comes near them, and will hurl stones at him. A friend of mine was one day resting in a lonely valley in South Africa. Presently he was surprised to see a large stone strike the ground near him. Soon more stones came down. Thinking that the cliff overhead was crumbling, and fearing a landslide, he jumped to his feet and prepared to look for a safer place—only to see a band of baboons on the hill-top in the act of hurling more stones down at the man who had dared to come so near to their home!

You must go and see the baboons playing on Baboon Hill, a lovely place built in the Zoo. There you will see them having all sorts of games and fun, and you will want to watch them all day!

THE MANDRILL BABOON.—This is a very interesting baboon. He lives in Western Africa, but he can be seen at the Zoo, and should certainly not be missed, for he is a curious-looking creature.

On each side of his cheeks there is a large swelling, running from just below the eyes. These two swellings are bright blue. They have grooves running down them, and these are deep purple, while the line between them and the tip of the nose is bright scarlet. He has a pointed crest of upright black hair and a beard of orange yellow! On his hindquarters are two large bare patches of brilliant scarlet, to match his nose, so that you see the mandrill is certainly an odd-looking creature.

He sometimes has terrible fits of temper, in which he makes horrible noises and dreadful faces and flings himself about in a way that is very terrifying. The natives are very much afraid of the mandrill—almost as afraid of it as they are of the lion!

There is another baboon, called the drill, which is rather like a mandrill. The swellings on its face are smaller, and are not brilliantly coloured; they are black, and never change in colour. The drill is a smaller animal, and really looks rather like a young mandrill.

THE GUENONS.—There are a great many kinds of guenons, but the best known is the green monkey. I expect you have seen plenty of green monkeys, because it is the commonest monkey at every zoo or menagerie. Perhaps you have seen an organ grinder with one. He usually has a young one, for then it is gentle and playful, but when it grows up it becomes fierce and is dangerous.

Green monkeys go about in bands, led by an old male monkey, who is leader because he has fought and beaten any monkey who wished to be leader himself. Each of these bands have their own particular district, which they may not go beyond. If any band trespasses on another band's district there is a great fight!

It would be most interesting to know how the monkeys decide about the boundaries to be kept, and how they tell each other.

THE MANGABEYS.—These are queer-looking monkeys, because they have white eyelids, which show up very well indeed in their sooty-black faces.

They are very active, and live in troops among the trees in the forests of Central Africa. They feed on fruits, and when they are captured they become very tame and amusing. They are most interesting to watch at the Zoo, for they do not seem able to keep still, and they twist themselves about in all kinds of positions. They do not carry their tails behind them, as monkeys usually do, or hold them straight up in the air, but they have a funny trick of throwing them over their back so that the tip just shows above the head.

THE MACAQUES.—The macaques live in Asia, except for one kind, called the magots, who live on the Rock of Gibraltar in a band of twenty or thirty. There are a good many kinds of macaques, some of which have short tails, and some long, and some none at all! They are rather like the mangabeys, and are very active. Perhaps you can guess from the names what sort of macaques there are: the bonnet monkeys, the crab-eating macaque, the lion-tailed monkey, and the brown stump-tailed monkey. If you go to the Zoo, you will find that most of these are very well named.

THE AMERICAN MONKEYS.—The monkeys which live in America (the "New World" monkeys) are very different in some ways from the monkeys of Africa and Asia (Old World monkeys), which you have just been reading about.

Perhaps you have seen a monkey stuffing his cheek-pouches with nuts. If you have, then you were looking at an Old-World monkey of some sort, for no New-World monkey can do that; he has no cheek-pouches at all. Also, no American monkey has those bare and, sometimes, brightly-coloured patches on its hindquarters which you will find in all the monkeys of the old world, except the great apes. And, thirdly, no American monkey has a proper thumb. Its fingers are usually very long and very strong, but the thumb is either not there or so small as to be of no use.

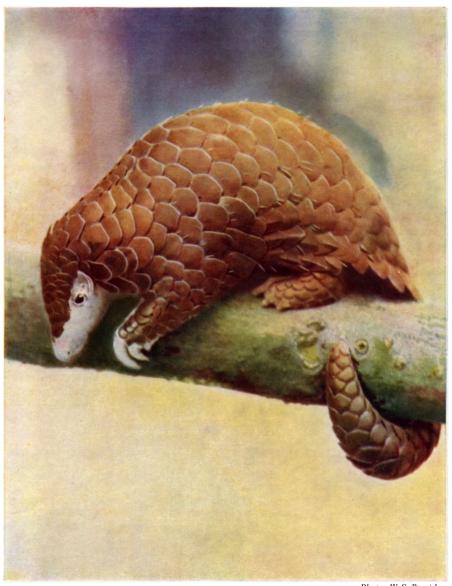


Photo: W. S. Berridge, F.Z.S.
CHINESE SCALY ANT-EATER OR PANGOLIN.

There is a curious little New-World monkey called the spider monkey. It looks rather like a big black spider when it plays about among the tree branches. Its body is very slight, and its arms and legs are long and thin, while the tail is often longer than the whole body, and is used as an extra limb. The spider monkey often swings by his tail, and is always coiling it round the branches as he goes about among the trees eating fruit and leaves. He rarely comes down to the ground except to drink. They are usually very lazy animals, and will sometimes sit for

hours without moving. When they are excited and playful, they are as active and as clever in swinging themselves about as are the gibbons.

MARMOSETS AND LEMURS.—The marmoset is a very pretty little monkey, about the size of an English squirrel. It has a black face with a white nose, and long tufts of snowy white hair upon the ears. It makes a good pet, for it is easily tamed and is gentle in its ways.

Lemurs are rather strange animals. They are never seen abroad by day, for their eyes cannot bear the sunlight. Their faces are more like those of foxes than of monkeys, and they have enormous, staring eyes.

There are many more of the monkey family which are not so well known as those I have written about. When you go to the Zoo, you must try and see those you have read of in this book, for their ways are amusing and interesting enough to keep you entertained for weeks on end.

#### CHAPTER V BIG BEARS AND LITTLE BEARS

THE POLAR BEAR.—If you go to the Mappin Terraces at the Zoo, you will see below them the place where the bears are kept. They have fine big homes, with a pool of water to swim in and pieces of rock to climb about on. One of the polar bears will sit back and wave his hand at you if you will wave your hand to him. He will wave *both* his hands if he thinks you are going to give him a bun!

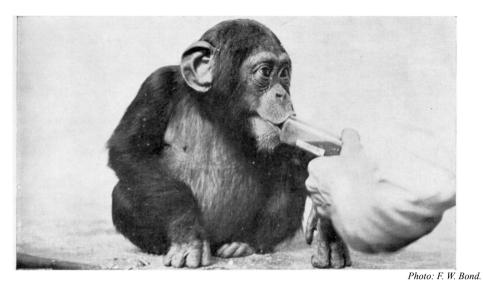
Bears are most interesting animals. The best known is the polar bear, which is found in almost all parts of the cold arctic regions. He has a lovely thick coat, usually a creamy-yellow colour. He is a very large bear and weighs a tremendous lot—sometimes 800 or 900 pounds! But, although he is so heavy, he can run very fast indeed, and could easily catch a man if he wanted to. He is not very quarrelsome, though if he is attacked he is a terrible fighter, and uses his teeth and claws in a savage way.

If you look at the polar bear you will see what great jaws he has, and what a small head on his long neck. All these things help him to swim well, for, if he had a large head like other bears, he would find it difficult to go swiftly through the water. His big paws act as paddles.

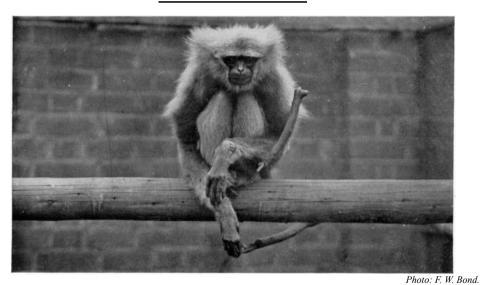
You might think that he would get very wet and cold while swimming so much, but his fur is so thick and oily that the icy water cannot get through it, and so his body beneath the fur is kept quite warm and dry. He loves to feed upon seals, but as they are difficult for him to catch in the water, he has a very good plan of his own. He finds one of their breathing holes, and lies down quietly on the ice to wait. Presently, up pops a seal to take a breath. Out shoots the bear's great paw, and the seal is dragged out of the water and eaten.

The polar bear travels easily and well on the ice, and never slips. The soles of his feet are covered with long, thick hairs, which prevent him from slipping and also keep the cold from his feet.

The baby bears have a kind of nursery under the snow, and here they lie snug and warm, and never feel cold at all. When the snow melts, the father and mother bears take the little bears out on the ice and teach them to swim and to hunt.



A CHIMPANZEE
Young Johnnie drinking cod-liver oil. "I think he enjoys it very much, don't you?"



SILVERY GIBBON
The Gibbons are very active and can swing about their cages in a wonderful manner.



POLAR BEARS (Sam and Barbara).

Photo: F. W. Bond.



Photo: F. W. Bond.

A GRIZZLY BEAR Look at his great, long claws.

Grown-up polar bears sometimes live for quite a long time in captivity. Sam and Barbara were at the London Zoo for many years. They had about twenty cubs, but none of them lived longer than three weeks. Sam ate them, and Barbara ate them. Then Barbara carried another lot into the cold air and left them to catch cold in a puddle. Another time the cubs were given

to a collie dog to mother, but even these died. Our climate is too warm for them, and they catch cold so easily that it is almost impossible to keep them for very long.

Once Barbara escaped. Sam smashed the padlock of the den door, and out Barbara went. It was six o'clock on a foggy September morning. Directly the alarm was given the keepers began looking for Barbara. It is difficult to find a white bear on a foggy morning, and it was all most thrilling. The keepers never quite knew when they were going to meet her.

At last a small army of them closed round her—but Barbara turned and charged them, and the army disappeared up trees and over fences. Then Barbara's keeper got a splendid idea. He remembered how fond she was of fat. He went and got a huge supply, and made a long trail of it leading up to her den. Barbara found it, and began eating. She ate one bit and then went on to the next, and so on. Then suddenly she looked up and found she had arrived into her den again! She heard the gate clang and angrily tried to climb back over the barrier, but as her nose and paws were rapped hard with a pole she soon gave it up.

It must have been a very exciting morning, mustn't it?

THE BROWN BEAR.—The brown bears are found in Europe and Asia, and at one time they lived in our own country too. They live in hilly wooded districts and are nearly always seen travelling about alone, except when cubs go about with their mother.

Brown bears love honey, and often rob the nests of wild bees. They do not seem to mind being stung at all. They eat roots and fruit, too, and even enjoy a feast of beetles and earwigs, when they can find them.

The brown bears at the Zoo love treacle. They will take it out of a spoon with a dreadfully impolite sucking noise, or they will lick a treacle tin round and round until there is not a scrap of treacle left!

In cold countries the brown bear goes to sleep all the winter. He eats a tremendous lot and becomes very fat. Then he goes to a cave or hollow tree and sleeps. When he wakes up in the spring he is very thin, but he soon gets back to his proper size again.

Have you ever seen a dancing bear led by a rope? He usually carries a pole and dances clumsily on his hind feet. He is almost always a brown bear who has been captured and trained to help his master earn his living.

OTHER BEARS.—There are many other bears, but of them all the grizzly bear is the most savage. He is very big and strong and lives in the Rocky Mountains of North America. He catches deer for his food when he can, or else eats roots, fruit and honey, like the brown bear. He is very fond of acorns, and some hunters say he will climb a tree and shake down hundreds on the grass!

Then there is the black bear. He also lives in North America, but he is not found so much as he used to be. The reason is that he is a very mischievous animal, and often robs the farmer of sheep and pigs and hens. The farmer shoots or traps him whenever he can. Also, as the black bear's coat is valuable, the hunters kill him whenever possible.

In the winter he goes to sleep like the brown bear. He collects about a cartload of ferns and leaves and takes them to a cave, where he makes a cosy, warm nest. Here he sleeps, warm and snug, all the winter through.

The sun bears of India and China love the hot sunshine. They have queer tongues, very long and thin. They use them for licking out honey from the nests of wild bees. They are very gentle, playful bears, and great fun to watch at the Zoo.

The sloth bear is a queer-looking bear, for it has long, shaggy hair and a long snout, which it can twist and curl about in an odd manner. It looks very funny when it walks, because it

crosses its paws over one another at every step! It loves to eat ants; it breaks open a nest and blows away the earth. Then it draws in its breath and sucks up the ants into its mouth. It makes a horrid noise when it does this, as you can well imagine.

The mother sloth bear carries her little bears about with her on her back. When they get big she can only carry one, and then the little bears have to take turns at having a pick-a-back!

The racoons, which live in America, are called "washing bears" by the Germans. You will soon see the reason if you give a biscuit to a racoon at the Zoo. He will take it over to his little pond and rinse it carefully in the water before eating it!

It is a pretty little animal, about as large as a big cat and with a head rather like a fox. Its fur is soft and thick, and because of this racoons are very much hunted.

The hunting usually takes place at night, and a number of dogs are taken to chase the racoon. At last it climbs up a tree, while the dogs sit all around and wait. Then a hunter climbs the tree too, and takes hold of the branch on which the frightened animal is hiding. He shakes it as hard as he can, until the racoon loses its balance and falls headlong to the ground, among the watching dogs.

Racoons do not mind what they eat. They love to bite off the heads of chickens, and will do great damage in a poultry yard, once they get in. They will feed on crayfish, and even oysters and crabs! Tortoises, lizards, mice, nuts, fruit—all are welcome to the racoon, so that he very seldom goes hungry!

#### CHAPTER VI CATS—GREAT AND SMALL

There is one member of the Cat Family which you know very well—and that is your own cat at home. She has many characteristics which are shared by her larger cousins, the lion and the tiger, the leopard and the puma.

All the members of the cat family have their bodies made in a very wonderful way. Look at the eyes of your cat; you will see that in daylight the pupils (the black middle part) are just narrow slits. But look at them again towards evening, and you will see that the narrow slits of black have widened a good deal; and at night you would find that the black part has spread over nearly the whole eyeball.

It is the black pupils of the eye that take in the rays of light. The Cat Family hunt at night, when it is dark, so that they need eyes which, even on the darkest night, can take in every tiny bit of light that there is. No animal can see in perfect darkness, but no matter how little light there is, it is quite enough to allow lions and tigers, cats and leopards, to see perfectly well, because of the way their eyes are made.

But lions and tigers do not only depend on sharp eyesight for hunting their prey at night. They must go softly and silently, or else they will be heard, so they have velvet pads underneath their great paws. Lift up your cat's paws. You will see why she can run so softly from room to room. She has velvet cushions underneath her paws too. And she has something else which her great cousins find very useful in hunting—she has whiskers spreading out from each side of her face. They measure, from tip to tip, exactly the width of her body.

Think how useful are whiskers like these to a lion. He must not make the least sound of rustling leaves or snapping twigs, for, if he does, the deer he is hunting will be alarmed and speed away. But as his whiskers brush against leaves and twigs, branches or rock, he knows exactly whether he can squeeze his big body through without a sound, or whether he is just a bit too big and will make a noise, and so frighten his prey. If his whiskers, brushing against the leaves, tell him that his body is too big to go on without rustling the leaves, he quickly pulls back his head and goes another way.



Photo: F. W. Bond.

LION CUB
Wouldn't you like to have him for a pet?

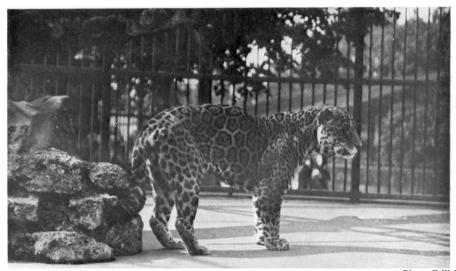


Photo: F. W. Bond.

A JAGUAR
The Jaguar comes from South America. He has a very beautiful coat.

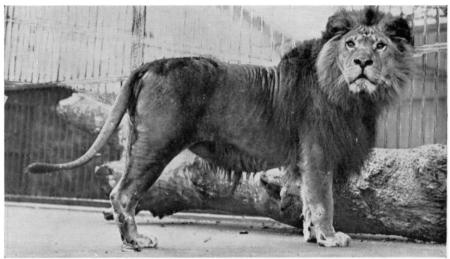


Photo: F. W. Bond.

A LION Note his powerful head and big mouth.



Photo F. W. Bond.
A SIBERIAN TIGER ("Moloch")

The stripes on his coat break up the line of his body, so that he is difficult to see in his own country.

He has very sharp claws, too, and he needs them for tearing his prey down. They must always be kept sharp, and so that he need not wear them down and make them blunt through walking on them, as a dog does, his claws are made to fit into a sheath, which protects the points. He has muscles which keep the claws pulled safely back, except when he wants to use them; then they shoot out, cruel and sharp, just as a cat's do when she scratches you angrily.

All the Cat Family have tremendously rough tongues. Perhaps you have felt how rough your cat's tongue is, if she has ever licked you. There is a reason for this. The Cat Family could not eat all the meat from the bones of their prey by means of their sharp teeth alone, but their rough, rasping tongues do what the teeth cannot do, and the bones are licked as clean as can be, and not a morsel of meat is wasted. So you will see that, with sharp eyes, long whiskers, protected claws, rough tongues and sharp teeth, the Cat Family are very well off indeed for hunting and stalking.

THE LION, handsome and tawny-maned, is the king of the Cat Family, and his kingdom is in Africa and Persia. There are also lions in India, but they have no great mane, as have the African lions, and they do not look so regal. If you go to the Zoo you will see what a powerful head the lion has, and what strong paws and teeth. His body is slender and supple, and his movements are beautiful and graceful. His hair is thick and short, light yellow or brownish, and as this is more or less the colour of the districts he lives in when he is in his native home, it is very difficult to see him there. His colouring makes it easy for him to stalk his prey, for, as he is so like his surroundings, he may not be discovered until he springs from his hiding-place and tears down his victim.

The male lion bears a noble dark-coloured mane, hanging over the breast and shoulders, and his tail has a tuft of hair at the tip. The lioness has no mane, and looks much more like a big cat than does her husband, the lion. Both are very strong, can gallop faster than a horse, and carry a bullock or buffalo for a good long way.

During the daytime the lion generally sleeps. He likes to find some comfortable spot in a thicket, or a bed of reeds by a river. When night comes, he stretches himself, leaves his bed, and goes hunting. His roar can be heard for miles, and a very terrifying sound it is. When he roars he puts his head down close to the ground, and then it is difficult to tell exactly where the sound comes from, so that listening animals, terrified, often run straight to the very spot where the lion is hiding, thinking all the time that they are running away from him.

The lion kills his prey by springing on it and killing it with one great stroke of his terrible paw; or else he may bite it in the throat, or at the back of the neck. Then he takes the body in his mouth and drags it away somewhere where he can eat it in peace. When he has eaten enough he goes to his lair to lie down and sleep, thinking to return later and finish his meal.

Sometimes jackals find the half-eaten body, and joyfully set to work to finish it. If the lion finds them there when he himself wants to eat, he is very angry, and it is said that, to punish the jackals, he will catch one and bite off all its paws.

It is often said that a lion is not so brave and courageous as he is supposed to be. Some hunters say he is rather a cowardly animal, and dislikes to face a man, preferring to slink away and escape. Travellers have related how, after killing a deer, and wishing to protect its body from the lions, they have tied two or three pieces of white rags to sticks around the deer's body. These flutter in the wind, and though lions may come prowling round and roar fiercely, they will not come near the deer nor touch it, so fearful are they of the fluttering streamers.

If a lion is wounded it is a very dangerous animal indeed to tackle, for then it is at its fiercest and bravest, and the only chance for the hunter then is to aim straight and true and kill the raging beast, for if he does not, the lion will most certainly kill *him*.

THE TIGER.—Tigers are found in all parts of Asia, from the cold stretches of Siberia to the hot tropical Indian jungles. With their bright orange fur and glossy, gleaming black stripes, the tigers are very handsome animals indeed. They are as large, if not larger, than lions, but, as their legs are shorter and they have no manes, they look rather smaller.

You would think that the bright colouring of the tiger would make it very easily seen; but really it is most difficult to see, because the bright yellow jungle leaves and bamboo stems, and the golden sunshine of the tiger's country, streaked with black shadows, have just the same colouring as the tiger's coat. If he is lurking somewhere near by in the bamboos, it is almost impossible to see him, so closely does he resemble his surroundings with his orange coat and black stripes.

The tiger is stronger and braver than the lion. He does a tremendous amount of mischief. He will steal cattle day after day, and should he have the chance of tasting the blood of man, he will become a man-eater, and watch and wait for chances to pounce upon and carry off any man, woman or child he sees. Some tigers have eaten dozens of natives and terrified whole villages for months.

Tiger hunting is tremendously thrilling. There are three or four ways of hunting. The natives usually try and drive the tiger into a small clump of jungle. They surround this with very strong netting, and then, whenever the tiger appears near it, they spear him through the meshes of the net.

Another native way of killing tigers is to climb a tree close to the half-eaten body of a bullock or deer that the tiger has killed. The natives know that the tiger will come back at night to finish eating the body. When he comes sliding up out of the shadows, they shoot him.

The natives of Oude have a curious way of catching tigers. Once they have found the path which the animal is fond of using, they spread it with big prauss leaves, each of which is smeared with a very strong glue or bird-lime. Along comes the tiger, pad-padding on the ground. He treads on a sticky leaf. It sticks to his foot. He rubs it against his face to try and get it off. It sticks there. He treads on more leaves, and finding that these, too, cling to him, he becomes angry, and the more angry he gets the more does he get himself smothered with the sticky leaves. He rubs his paws continually against his face and eyes, and soon is covered with the strong glue. At last it gets into his eyes and blinds him. Then, roaring and howling, he rubs his face against the ground, covering himself with sticky earth. This is the signal for the natives to come running up. They are not afraid of a tiger who is blind, and with their knives and spears they soon kill him and put him out of his misery.

There is another way of catching tigers, which is rather interesting. The natives fix a mirror inside a big trap. The tiger comes prowling round to find out what this strange thing is. He suddenly catches sight of himself in the glass. He bares his teeth and swings his tail, thinking he sees another tiger. His reflection does the same, and the tiger, angry and enraged, springs straight into the trap to kill the tiger he thinks he can see in there. Down drops the lid of the trap, and the tiger is caught!

Europeans use elephants when they go tiger hunting. The hunters ride in "howdahs" on the elephants' backs. They take with them, on foot, a crowd of natives, who beat drums, yell and shout, and fire off guns, trying to frighten the tiger from its hiding-place.

Sometimes it is so frightened that it is captured easily, but now and then it will spring furiously at the nearest elephant and almost reach the hunter in the howdah. Usually, however, he is ready with his gun, and kills the tiger with a well-aimed bullet.

THE LEOPARD.—The leopard is smaller than the lion or the tiger, but it is a large and powerful animal. In India the leopards are very big and finely-developed, and there they are called panthers. Leopards are also found in Africa and over the greater part of Asia.

The leopard has a lovely coat. The fur is bright yellow tinged with red, and is white on the under part of its body. The spots are black, ring-shaped, enclosing a patch of yellow. It is said

that the markings of its coat are very like the mixture of yellow sunshine and ring-shaped shadows of leaves, so that when it is in the trees or on the ground it is difficult to see.

There are black leopards, but even they have spots, for they can be clearly seen in the light, and look rather like the markings on watered silk. Black leopards are very savage and almost impossible to tame. There are two at the Zoo now at the time of writing. One, the smaller of the two, ill-treats its companion terribly, as can be seen by the bare patches on various parts of the body and tail of its unfortunate companion.

There is another leopard, sometimes called the Ounce, which lives in Central Asia. Its fur is white, clouded with grey, and marked with irregular black rosettes, larger than the spots of the ordinary leopard. Its tail is thick and bushy. As the ounce is hardly ever seen below the snow-line, it is sometimes called the snow-leopard. It feeds upon wild goats and sheep, and seldom, if ever, attacks man.

Leopards have one advantage over their cousin, the tiger, and that is they can climb trees. They crouch in the branches and wait in silence for their prey to pass underneath, when, with one powerful spring, they hurl themselves on to the back of the victim and kill it. Leopards leave no half-eaten body for jackals to share. Instead, they carry what they cannot eat up into a tree and hang it over a branch.

Leopards are more difficult to hunt than tigers. The reason is that they are much more watchful. A leopard not only looks from side to side as he goes padding silently through the jungle, but he also looks up into the trees to see if an enemy be lurking there. Unless he is very carefully hidden indeed, the hunter will get no chance of a shot.

THE JAGUAR.—The jaguar lives in Central and South America. He is very like a leopard, but the spots on his coat have one or two small patches of dark brown fur in the middle. He also has three or four bold black streaks across his chest which are never seen in the leopard. The tail is shorter, too.

The jaguar is an excellent climber, and prefers the trees to the ground. He feeds upon monkeys and birds. Then, for a change, perhaps, he will leave the trees and go down to the seashore. If he sees a turtle, he will turn it upside down so that it is quite helpless, and then he will scoop out all the flesh of the animal from between the shells by means of his long hooked claws. Sometimes he will find turtle eggs and eat them, and sometimes he will go fishing, and hook out the fish from the river with his claws. If he is dreadfully hungry, he will even eat lizards and insects.

Like most of the cats, the jaguar loves to sharpen his claws by scratching on tree trunks, and sometimes hunters have seen trees with gashes in the bark quite an inch deep and more than a yard long.

THE PUMA.—The puma, or mountain lion, is another great cat of the New World. It is found in almost all parts of the American continent. It is not so large as the jaguar, and is tawny brown, with no spots at all. The queer thing is that puma cubs are marked all over with blotches of blackish-brown, and have tails ringed with black like a tiger! But when they are six months old these markings disappear.

The puma is as good at climbing as the jaguar is, but it prefers to hunt on the ground. It hardly ever dares to attack man, and will sometimes even allow itself to be killed without trying to defend itself at all. Farmers hate pumas, for they carry off their sheep, and will leap suddenly upon horses or cattle and break their necks.

THE OCELOT.—This is one of the handsomest of the small cats, and is found in tropical America. It has a greyish coat, marked with small and large fawn-coloured streaks and spots

and blotches. It is an excellent climber and lives chiefly upon birds.

Although the ocelot is a bloodthirsty and daring animal, there was one at the Zoo, some years ago, which became quite tame and friendly with its keepers.

THE LYNX.—This is a very odd-looking animal. It has long, pointed grey ears, tufted with hair, and the fur of its body is grey, marked with spots. It has an enormous pair of bushy whiskers hanging down below its chin.

The lynx can still be found in many parts of Europe, but it is very much hunted. It is a destructive creature, and loves to kill sheep. Also, its fur is so soft and thick that the skin is worth money, so that before long, so much is it hunted, the lynx will very likely completely disappear from Europe.

THE CARACAL.—This is a very savage animal, smaller than the lynx and with jet-black ears. If you see it at the Zoo, it is sure to put back its ears and hiss and spit and snarl at you. It is a bright reddish-brown, and can climb and leap very cleverly indeed. It lives in India and Arabia, and feeds upon small deer, antelopes and birds. Sometimes it will spring up into the air and catch a bird as it flies past, and it does this so swiftly and deftly that it is difficult to follow its rapid, graceful movements.

THE WILD CAT.—The real British wild cat has its home in the north and north-west of Scotland. It lives in the most lonely mountain sides, hiding during the day in rocky caves, and prowling far and wide at night seeking for prey.

Its colour is yellowish-grey, but the markings are very varied. It has a thick, bushy tail, shorter than that of our tame cats. It is very fierce and savage, and quite untameable.

We sometimes hear of "wild" cats which are found in England, but these are not true wild cats; they are simply home-cats which, either turned away from their home or wanting to hunt on their own, have taken to the woods or the hills, and have hunted and poached until caught. The real wild cat is very rarely to be found.

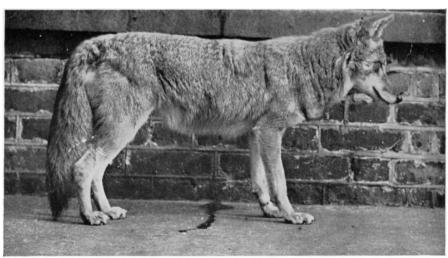


Photo: F. W. Bond.



JACKAL
He is wondering what he is going to have for dinner.



Fox Cubs
Already they look intelligent and knowing.



A STRIPED HYÆNA He looks, and is, an unpleasant animal.

# CHAPTER VII THE DOG TRIBE AND THE HYÆNAS

You have often heard the story of Red Riding Hood and the wolf, which she met in the forest. It is not such a very, very long time ago since there were wolves in England. They were feared very much, and mothers used to frighten their naughty children by telling them that the wolf would get them unless they were good.

The wolf belongs to the dog family. He is really only a very large and very savage wild dog. He lives in Asia, North America, and in some parts of Europe. He hunts with his brothers in winter time, and when he is hungry he is very fierce and savage, and will attack anything and anyone he meets.

Although wolves are very fierce when they are hungry, and hunt in packs, they are not nearly so brave when they are alone or not suffering from hunger. There is a story told in Norway about a country district in which wolves were very plentiful and had done a lot of harm. Suddenly all the wolves left the district—and you would never guess why! A telegraph wire had been put up, and this so scared the wolves that they all ran away!

The howl of a wolf is very loud and very mournful. One wolf can make such a noise that it sounds like a whole pack howling. There was once a traveller who heard the howling of one wolf, and thought that a great pack were hunting him. He hurriedly climbed up a tree, and spent the whole night there before he found out that there was only *one* wolf!

There is a Russian story about wolves which shows what terrible enemies they can be when they are hungry. A traveller was taking his wife and child and servant home through the forest in a sleigh drawn by horses. It was a cold winter's day, and when he arrived at an inn the landlord told him to stay the night there instead of going on, as wolves were about. But the traveller wanted to get home, so he had his horses changed and started off again. It was dark, and suddenly, away in the distance, the traveller heard the mournful howling of wolves! The wolves had smelt them and, being very hungry, meant to catch and kill them. The man whipped up his horses, and the terrified animals galloped like the wind. But behind galloped the wolves, faster and faster, their eyes gleaming in the darkness. At last one of the horses was cut free, and the wolves stopped to chase it and eat it. Then on they came again after the sleigh; another horse was cut free, but again the wolves came back, until they were so near the sleigh that they could almost jump on to it.

"Give me your revolver, master," said the servant. "Yonder, a mile away, are the lights of home. I will jump down and keep the wolves off whilst you go on."

In a second the brave man had jumped from the sleigh. Crack! Crack! The travellers in the sleigh heard revolver shots—and then no more. The brave servant had given up his life to save his master's family.

THE JACKALS.—Jackals are really half wolves and half foxes. They are about as big as large foxes, but have not such beautiful tails. They sometimes go about singly or in pairs, but mostly they roam in great packs over the country.

They are really animal "dustmen," for they carry away decaying flesh or dead animals and eat it. Sometimes they will follow a lion about for days, hoping he will kill some animal and feast on it; then when he goes to his cave to sleep, leaving the carcase behind, out come the jackals to eat what he has left.

The jackal is cunning, and when it is caught it sometimes pretends to be dead; then, when people are no longer looking at it, it suddenly jumps up and escapes. It has a very strange, weird cry. It gives a wailing yell, then another and another, and then three short, sharp barks. Sometimes another jackal answers, and it sounds just as if they were talking to one another.

THE FOX.—The fox we know best, of course, is our own. He is like a beautiful dog, and his lovely tail, or brush, makes a fine finish to his splendid body.

He does not always bother to make his own home, but chooses a rabbit hole, eats all the rabbits, and takes the hole as his "earth." Here his little ones are brought up, and very funny little things they are, with snub noses and charming, playful ways.

Foxes are very mischievous, and will carry away hens, ducks, geese or turkeys, if only they can find a poultry-yard which is not properly fastened. They are such a nuisance to farmers that, if it were not for the fact that fox-hunting is carried on in England, there would soon be very few foxes left! The farmers would destroy them all.

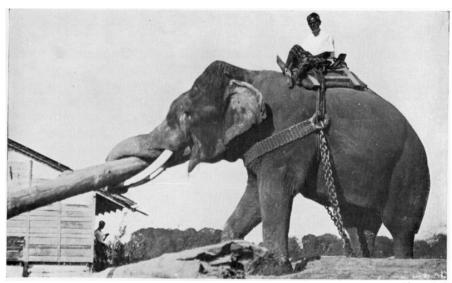


Photo: F. W. Bond.

INDIAN ELEPHANT AT WORK
A familiar sight in Burma and the East.

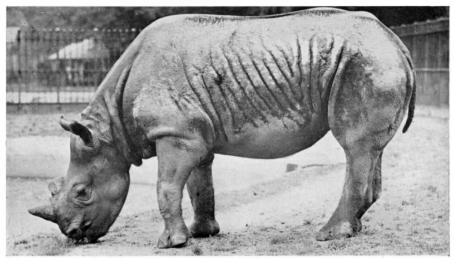


Photo: F. W. Bond.

AFRICAN RHINOCEROS

Note the tough-looking, wrinkled coat.

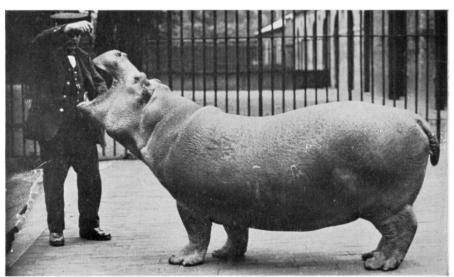


Photo: F. W. Bond.

HIPPOPOTAMUS Asking his keeper for a tit-bit.

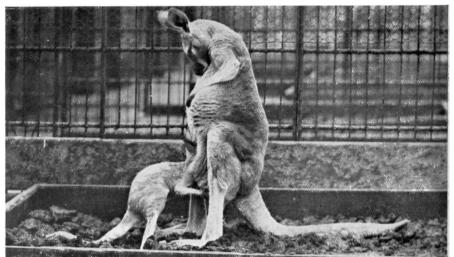


Photo: F. W. Bond.

This picture shows the pouch with a young Kangaroo about to enter it.

The fox is sometimes very clever when it is being chased by the hounds. The hounds can smell the fox easily, because it has a peculiar scent of its own. They rush along over the ground the fox has followed, and the fox hears them away in the distance and knows they are following his scent. So what do you think he sometimes does? He runs back along his trail, and then suddenly gives a tremendous jump sideways! Of course, when the hounds come up, they follow the trail and find it suddenly comes to a stop, and if they do not find out that the fox has "doubled" back, they lose him altogether. Sometimes, too, a fox will climb a tree and escape that way.

The Arctic fox is smaller than our English fox, and has short and rounded ears. In summer you will find he has a brown coat, but in winter he looks quite different, because he has changed his coat to a beautiful white! Perhaps you can guess why. It is because, when winter comes and snow is on the ground, a brown coat would show much too plainly—so he grows a white one, and then he can hide himself much better and catch his prey.

WILD DOGS: THE DINGO.—There are many kinds of wild dogs, and one of the most interesting is the dingo of Australia. It is a very fine-looking animal, as large as a collie dog, with a reddish-brown coat, pointed ears, and a fine bushy tail. It looks very gentle and tame, but really it is fierce and has a terrible temper. It is hated in Australia, for it kills sheep, and in a sheep-farming country that is a terrible crime.

HYÆNAS.—Hyænas are ugly, unpleasant-looking animals. They always look as if they are afraid of being whipped, for their sloping hindquarters give them a very cowardly appearance. Their manners are disgusting, and no one could really like a hyæna.

It is a very cowardly animal, and even if attacked it sometimes will not show fight. It is said that Arab hunters, when they find a hyæna, will not even use a weapon against it, but simply throw a handful of wet mud into its face. Then they drag it along by its hind feet and give it to their women to kill! But sometimes, like the jackal, it pretends to be dead, and, when left for a moment, springs up and runs away.

The hyænas clear up all sorts of rubbish, and are even better "animal dustmen" than the jackals, for they can eat great thick bones. Their jaws and teeth are most tremendously strong, and with one crunch they will swallow a large bone an inch thick! Small bones they swallow almost whole. Like the jackals, the hyænas steal up and finish what the lion leaves after his meal—even lions and jackals have not strong enough teeth to crunch up all bones, but hyænas can manage anything. They have been known to break up tins of preserved meat, to kill young leopards, and to seize a traveller sleeping in his tent and try to drag him by the wrist away into the open.

There are three different sorts of hyænas—the striped hyæna, the brown hyæna, and the spotted hyæna. The spotted hyæna is sometimes called the laughing hyæna, because of the peculiar sounds it makes. They are horrible sounds, like a peal of strange unearthly laughter, and whilst the hyæna laughs like this, it dances about on its hind legs, runs to and fro, and nods its head up and down as if it were quite mad.

You may sometimes see the spotted hyæna do this at the Zoo, and it is not a pleasant sight to watch.

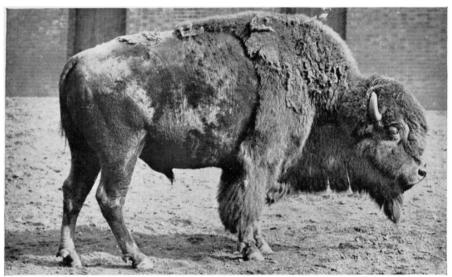


Photo: F. W. Bond.

AN AMERICAN BISON See what a powerful head he has.

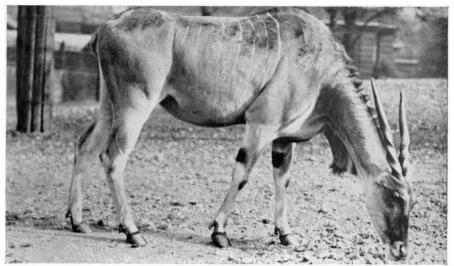


Photo: F. W. Bond.

### ELAND

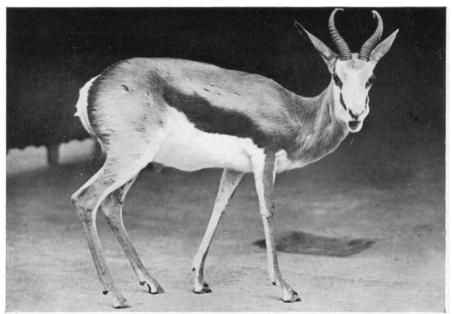


Photo: F. W. Bond.

Springbuck
A dainty little animal from South Africa.



WALLICH DEER
Shedding the velvet from his horns.

#### CHAPTER VIII SOME HORNED AND HOOFED ANIMALS

You are sure to have heard of the famous bison of North America. They used to roam over the prairies in millions. Great herds would wander together, and there is a story of one herd which covered a stretch of land fifty miles long and twenty-five miles wide! But now only a few hundred bison are left in the world, and most of these are kept under special protection in a big park in America, called Yellowstone Park.

The great herds were destroyed by Indians and white men for the sake of their meat and their hides. When the first transcontinental railway line was made, it cut the huge herd of North American bison into two, and when they began to be shot by the hundred the herds rapidly grew smaller and less powerful. Their great strength used to lie in their immense numbers. A herd of galloping bison was a thing to be feared, for it overrode every living thing and trampled it to death. Their hoofs sounded like thunder. But bison are stupid animals, for, once an alarm was raised, the herd stampeded, each bison following blindly on the heels of the next; and if the foremost bison plunged over a cliff or precipice, the whole herd followed, and thousands would be destroyed at once. The Indians used this foolishness of the bison many a time and, by driving them over a cliff to death, found themselves provided with more than enough meat for weeks.

You can usually see bison at the Zoo. They are covered with a thick, warm coat of long, shaggy hair, and this makes them look bigger than they really are; but, in spite of this great hairy coat, a bison can travel tremendously fast. When it gallops it puts its head close to the ground and its tail up in the air.

The bison and the whole of his family are ruminants, that is, they chew their food twice over. This is how it is done. A bison has four stomachs, and it uses them all. First, the bison eats as much as will fill the first two stomachs, which are very large. Then it sits down to digest this food. The second stomach is honeycombed, and directly the half-chewed food reaches this stomach it is pressed into little round balls. These balls the bison brings back again to its mouth and chews over again; then, when the food is at last properly chewed, it passes through a tube straight to the third stomach. There it is softened, and at last, in the fourth stomach, it melts away altogether, and helps to feed all the cells of the animal's body. Perhaps you can think of the reason for this curious way of eating. It is because animals such as bison, deer, antelopes, wild sheep and goats, never know how long they may be able to eat the grass undisturbed—and it is very useful to be able to swallow a great deal of food quickly without chewing it properly and then, when disturbed, gallop away to a quiet place, bring the half-chewed green food back to the mouth, and chew it slowly and with enjoyment! You must often have seen our own English cows lying down "chewing the cud" in our green fields.

There is another animal, smaller than the bison, but much more powerful and dangerous, called the buffalo. It lives in Africa south of the equator. It is about as large as a bullock, and has a pair of heavy, curved, sharply-pointed horns, sometimes three feet in length. They are extremely dangerous when attacking, for they use their horns in a very deadly manner.

Indian buffalo are very different both in appearance and character. They are easily tamed and are used to draw ploughs and carts.

The yak lives in Tibet, and looks something like an ox with masses of hair on the tail, legs and flanks. He lives among the mountains and climbs to great heights, for he is very surefooted and active. Sometimes yaks are tamed, and, like buffaloes, are used as beasts of burden.

WILD GOATS: THE IBEX AND THE CHAMOIS.—The ibex is one of the wild goats. He also lives high up in the mountains, wandering about in small herds. These herds always set a sentinel to watch for them whenever they feed or rest. Their two-toed feet help them to get a sure hold on the rocks and mountain sides as they leap and run and scramble up and down the rough slopes.

Like all goats, the ibex has a long beard beneath its chin, and the long horns grow upwards and backwards from its head.

I wonder if you have ever used a very soft piece of leather, called "chamois leather," for polishing something. It comes from the skin of the pretty little chamois, which lives among the snow-clad mountains of Europe. It is not very big—about two feet high—and has a pair of short black horns springing upright from its forehead and curving sharply backwards at the tip.

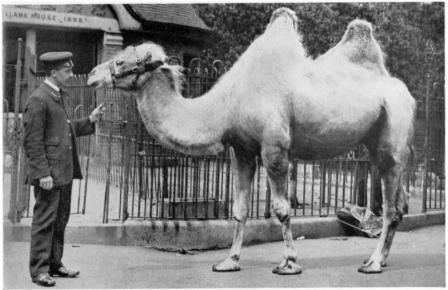
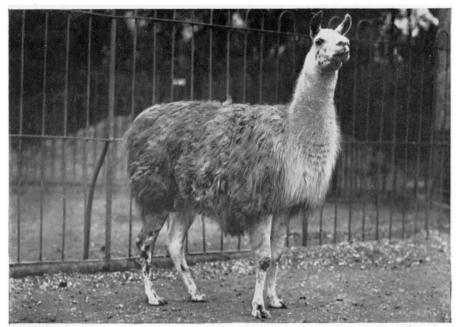


Photo: F. W. Bond.

A BACTRIAN CAMEL



LLAMA

Photo: F. W. Bond.

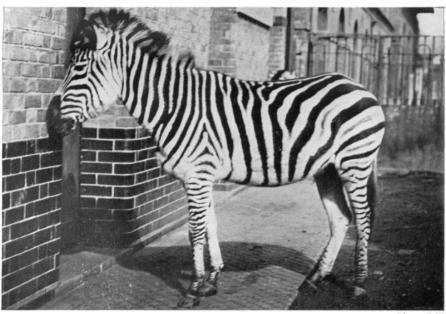
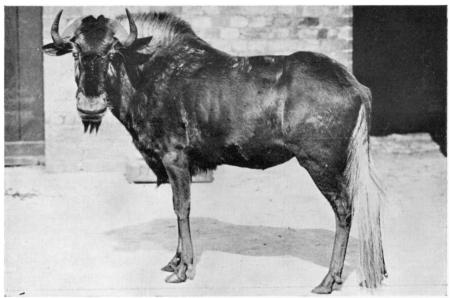


Photo: F. W. Bond.

CHAPMAN'S ZEBRA



THE WHITE-TAILED GNU

Photo: F. W. Bond.

It is a very active little animal, and skips, jumps and leaps up and down the steepest cliffs, never slipping and never hurting itself. It finds a foothold on the tiniest ledge of rock, perhaps no bigger than a five-shilling piece, and can spring down from a great height, land on its feet, and go bounding off as if it had done the most ordinary thing in the world. It is very sharp-sighted, so that hunters find it very difficult to shoot this active little animal. If it sees or hears anything warning it of danger, it makes a shrill whistling cry, and all the other fifteen or twenty members of the little herd at once take to their heels and are out of sight in an instant.

ANTELOPES: THE ELAND.—The eland is the largest of all the antelopes, and lives in Africa. Because of its tender flesh and valuable skin, it has been so much hunted that now there is a danger that, like the bison, there will soon be only a few left.

It is a magnificent animal with horns two feet long, twisted like a corkscrew. It is a pale fawn, with fine, clean-cut legs, on which it runs very swiftly indeed. It lives in wooded plains and goes about in large herds. These hide among the trees in the daytime, and at night come out into the open country to eat the grass and drink. When they cannot find water to drink, as sometimes happens in a very dry district, they feed upon melons, and quench their thirst in that way.

THE SPRINGBOK AND THE GNU.—The springbok is the most graceful of all the antelopes. It was given the name of springbok because of its queer habit of suddenly leaping high into the air when running along at top speed.

Gnus are quite the opposite of the graceful little springboks. They look ungraceful and awkward, with their great broad heads and high shoulders. On their powerful heads they carry big curved horns. It would be almost safer to go into the lion's cage at the Zoo rather than the gnu's. He would lower his battering ram of a head, and butt you against the side of his stall in half an instant!

Gnus are very active animals. When they are frightened or excited, they prance about in an extraordinary manner, paw the ground, snort, toss their flowing manes, and whisk their tails. Sometimes they will chase each other round and round in circles, and a very funny sight it is to watch them doing this.

DEER.—In many ways deer are like antelopes. There is a great difference between the horns of these two animals, however. The horns of the antelope, and also of oxen and goats, are hollow, but in the deer they are solid. An antelope keeps its first pair of horns all its life. A deer throws its horns or antlers off every year, and grows new ones in their place in two or three months. His horns are much more like bone than are the horns of an antelope.

These antlers grow in a curious way. Soon after the old antlers fall off, the knobs or "burrs" on which they stood grow very red and inflamed as the blood rises to the skin. Soon the swelling rises and becomes a soft, pulpy mass covered with a mossy coat of hair, called "velvet." This mass goes on growing, and then the antlers develop from it and branch out. When the antlers are fully grown, the "velvet" peels off, and the stag helps itself to get rid of it by rubbing its antlers against trees. If you touch the "burrs" on a deer's head when the antlers are growing, you will be surprised to feel how hot they are.

Whilst the antlers are growing the deer hides himself away in the woods, for he knows he has lost his weapons. When they are grown, the stags use them for fighting each other when they choose their mates. It sometimes happens that the antlers of a pair of fighters interlock, and then there is nothing but death for the pair, for they cannot feed themselves, and so are slowly starved.

There are a great many kinds of deer, but I expect the one most people know the best is the one Santa Claus is supposed to use to pull his sleigh along—the reindeer. It lives in Northern Europe and Asia, and also North America. In winter and spring time the herds live in the forests, but in summer time they are so tormented by gad-flies that they leave the forests and climb up into the cold hills, where the flies cannot follow them. Thousands of reindeer go to the hills together, and a traveller who has seen them says that the great mass of antlered deer looks just like a forest of leafless trees moving along.

In Lapland and Siberia the people keep reindeer just as we keep cattle, and use them to draw their sleighs. In the summer the reindeer can get plenty of food, but in winter, when the ground is ice-bound and covered with snow, they search for a white lichen called reindeer moss, and live on that. Very often they have to scrape away the snow with their hoofs before they can find the lichen buried beneath it.



Drawn by L. R. Brightwell.

#### AUSTRALIAN SEA-HORSES.

THE ELK.—The elk, or, as it is called in Canada, the moose, lives in the same parts as the reindeer. It is much larger than the reindeer, and is the biggest of the deer family. It has such enormous antlers that it always appears to me marvellous that it can carry them, and when it is among trees it seems as if surely its great antlers would continually be caught in the branches;

but, as a matter of fact, it can hold its head back, and so throw the antlers on to its broad shoulders and go along quite comfortably.

There were once two small boys at the Zoo who came up to look at a wapiti stag (wapiti is Indian for elk). The stag was rubbing his antlers up and down on the palings, for it was the time of year when they began to loosen ready for shedding. The two small boys each seized hold of an antler for fun. The wapiti angrily threw back his head and, crack! both his antlers were unexpectedly left in the hands of the astonished boys! You can guess what happened next. Directly they saw what they had got, they fled from the keeper, who was angrily running towards them, and quickly disappeared out of the Zoo, taking with them their unexpected presents!

BRITISH DEER.—There are three kinds of British deer, some of which you may perhaps have seen in one of our great parks, such as Richmond or Bushey Park. These are the red deer, the fallow deer, and the roebuck.

Red deer may be seen wild on Exmoor, and are sometimes seen in our parks. They are graceful-looking creatures, and the stags have fine antlers.

Fallow deer are not so big. They are also kept in our parks, and sometimes live there together with the red deer.

The roebuck is quite small and has horns nearly upright, with very little branching.

There are many kinds of deer to be found in the world, but the ones you have read about are the best known and the most interesting. If you go to the splendid Mappin Terraces at the Zoo, you will see many of the animals written of in this chapter. You will then see for yourself how surefooted and nimble they are, as they come leaping and bounding down the steep ways of the terrace, taking only a second to come right from the top to the bottom!

### CHAPTER IX SOME MONARCHS OF THE WILD

THE ELEPHANT.—Most children who go to the Zoo have ridden on an elephant's back, and been swayed from side to side as the huge animal walked slowly along. It is the giant of the land-animals, and is enormously heavy and powerful. It is a queer-looking animal, too, with its great swinging trunk and pillar-like legs.

Elephants live in India and in Africa, and they are very much alike in both countries. The African ones are larger, and they have bigger ears than the Indian elephants; but they are not so easily tamed nor so gentle as their Indian brothers. The Indian elephant is trained to do all sorts of heavy work. He piles up great logs of teakwood, and drags them from place to place for his native masters. Sometimes he is used for riding purposes, and a big "howdah," with seats, is strapped on to his back. The driver, called a "mahout," sits on his back, and guides him with a spiked hook; and sometimes, as you have already read, elephants are used for hunting tigers, but as they are very much afraid of these fierce animals they must have a long and careful training beforehand.

It seems astonishing that so huge and so powerful a beast should be so easily tamed and gentle. To see a great elephant pacing down the Elephant's Walk at the Zoo, carrying a crowd of children on his back, swinging his trunk from side to side, and asking buns from strangers, is rather a queer sight when you remember that in his native forests he can be very fierce and savage, and can uproot a tree by using his enormous strength.

The trunk of an elephant is like a very useful hand. It is so strong that it can tear down great branches from the trees, and yet it is so sensitive that it can pick up even a monkey-nut from the ground. I expect you have seen an elephant feeding itself. It takes up the food with the tip at the end of its trunk, and pokes it into its mouth. Have you seen it drink? It fills its trunk with water and then squirts it down its throat! If the weather is very hot, it gives itself a shower bath by squirting the water over its back! It can also smell with this wonderful trunk, and it breathes through it too. It is so valuable to it that, if any danger is about, the elephant at once thinks of its trunk and curls it up out of harm's way.



Photo: F. W. Bond.

AFRICAN ELEPHANT Look at his great ears.

The African elephant's trunk is a little different from the Indian's. It has two little finger-like things at the end of it, with which it picks up food, while the Indian elephant's trunk has

only one.

Elephants are mainly hunted for their ivory tusks, which are very valuable. These sometimes grow to an enormous size—eight, nine, or even ten feet long. They are used as weapons, and for uprooting young trees. The elephant lives on grass, leaves, young shoots and fruit, and it is when he cannot reach what he wants that he uses his tusks for pulling the tree up by its roots, and then strips it of the food he needs.

Elephants usually live in herds. Even a small herd can do a tremendous amount of damage, especially when the elephants are frightened and stampede, for they are so heavy and so big that everything is crushed down beneath their great feet as they run. But when they go wandering slowly through the forest, hunters say that it is difficult to hear them, for they go so silently; and if they keep quite still, it is difficult even to see them. Sometimes an ill-tempered elephant will leave the herd and go and live by himself. He is called a "rogue elephant," and he becomes very fierce and savage. He will run out and attack any passer-by, and kill him if he can.

Elephants live to be very old. They are not fully grown until they are twenty-five years old. It takes years to train an elephant, and the most successful trainers are the ones who are kind to these great animals. An elephant will do anything for one who has been kind to him, but he never forgets an act of cruelty or injustice. He remembers it and stores it away in his clever mind until, one day, he gets a chance of having his revenge. He may wait for years, but he never forgets.

The elephants at the Zoo, although they have been well trained, and are tame and gentle enough, some of them, to be allowed to carry children, are not always well-behaved. But if once they misbehave themselves badly, they are never given another chance; it is too dangerous to risk.

An elephant can earn a great deal of money by carrying children during the warm weather. It costs such a lot to keep big animals that the Zoo folk are very glad when any of them can earn their own living. But some time ago there was an elephant who went on strike; it was Lukhi, an Indian elephant. She was taken out after the winter and saddled ready to carry her load of passengers; but she found that a few things had been changed during the winter. The bears' den had been altered, and the elephant's walk widened and fresh gravel put down. Then, to her disgust, the office where tickets for elephant rides are sold had been put down at the other end of the walk.

Lukhi couldn't bear it. She turned and bolted back to her own house. She quite forgot about the big saddle strapped on to her back, and as she went down through the tunnel the saddle smashed against the roof and made great, long marks all along the tunnel as she tore through. You can still see the marks, although the roof has been repainted now. It was a very good thing that there was no one on the elephant's back at the time. Anyway, Lukhi will not be given a second chance.

Another elephant, Indarini, thought she couldn't bear the new iron mounting ladders. She wanted the old wooden ones that she had always been used to. She wouldn't stand still, and wouldn't obey her keeper, so she was marched off to the elephant house. Then it was thought that if only some one could be fetched who could speak to her in Hindu, the language she had been trained in, perhaps she would be obedient, and earn her living properly again. So a message was sent to the East for an elephant trainer. He came. He was an expert elephant hunter, called Syed Ali. He was introduced to Indarini, and he walked all round her, taking a good look at her. Then he smacked her tail, patted, stroked and fed her, and then commanded

her to lie down and let him mount her neck. After that he made her walk up to the iron mounting ladders she so much disliked, and in a week he had her back at work as good and as obedient as ever!

Since then Indarini has helped to train another elephant, Ranee, given by the Prince of Wales

Did you know that elephants are spring-cleaned every year? They are! During the winter little cracks and chapped places come in their thick hides. When spring time comes the keepers take long-handled brushes and a pail of neat's-foot oil, and they brush the huge animals all over with this, just as you have seen a bill-sticker paste over the advertisements he sticks on hoardings. This keeps the elephants' coats in good condition and gives them a good start for the summer.

THE RHINOCEROS.—Another huge creature is the rhinoceros. It is found in India, Africa and Asia, and has a great, awkward-looking, heavy body about ten feet long.

The Indian rhinoceros has a horn upon its nose, about a foot long and very strong. It uses this as a weapon, and will rush at a mounted hunter with lowered head and then strike upwards into the horse's body with terrible force.

Its hide falls into folds over its body, making it look as if it had on a coat belonging to a bigger brother! Under these thick folds is thinner and tenderer skin. Flies and insects creep in these folds and sting and bite the rhinoceros terribly, making it almost mad with irritation. It rushes into the swamps and takes a mud-bath. When it comes out of the water it is caked all over with mud, which soon dries in the hot sun and makes a coat for the rhinoceros through which the flies cannot creep. As long as it stands still it is all right, but directly it moves the mud-coat cracks, and then the flies attack the rhinoceros again.

A rhinoceros is a rather timid animal unless it is wounded or cornered. Then it is a dangerous enemy, and charges again and again at the hunters, furiously angry, striking fiercely with its horn and its tusks.

The African rhinoceroses have no folds of skin such as the Indian ones have, and they have two horns instead of one. The common African rhinoceros makes itself a sort of house by breaking down bushes and low-growing tree branches, and clearing a space of about twenty feet across. Here it lies during the hot daytime, and goes down to the river or marshes at night.

Although the rhinoceros is such a clumsy-looking, heavy animal, it can run very fast indeed. There is a story about one that came into a hunter's camp unexpectedly. It charged at a lady there, and she, having no gun, took her sunshade and opened it in the face of the savage animal. It stopped dead, turned, and galloped away as fast as the swiftest horse!

Like the elephant, the rhinoceros is spring-cleaned at the Zoo—but he will not let the keepers do it properly! One man feeds him with biscuits and tries to keep him quiet and occupied, while another one dabs at his coat with a brush, hoping he will not get into a temper and charge him suddenly!

One old rhinoceros at the Zoo used to get into terrible rages. When he was in one of his tempers he used to go and grind down his horn on a big oaken beam. He ground it so hard that he made the wood smoke, and there was a sound like thunder and a smell like the shoeing of horses. Then he would bang his lower jaw down on to his stone trough and shake the floor of the Elephant House! Sometimes he would get angry with the walls of his cage and charge at *them*. There would be a tremendous crash, and the rhinoceros would turn head over heels, and yet never seemed to hurt himself at all!

THE HIPPOPOTAMUS.—This is another monster, awkward and ungainly, eleven or twelve feet long. His great body nearly touches the ground when he waddles along. His mouth is tremendous, and when he opens it, it really seems as if he were splitting his head in two right down to his neck! His teeth and tusks are strong and powerful, and are arranged in such a way that they can cut down grass or plants just as a sharp scythe does.

He lives in Africa, in rivers and lakes. His long name really means "river-horse," for he spends most of his time in the water. He likes to sink his body down into the river and leave just his nostrils out of the water, so that he can breathe. He can stay down in the water for three or four minutes, but after that he comes up to the surface for breath again. He can walk easily at the bottom of the river bed, and here he finds a good deal of his food—river plants and roots.

Sometimes a herd of twenty or thirty hippos raids a plantation and eats a great deal, but they do far more damage by trampling down the crops with their great feet than they do by eating.

A mother hippopotamus carries her baby on her back when she is in the water, and a very funny sight it must be. A good many years ago a hunter took a baby hippo from its mother and, after a great deal of trouble, brought it to England. It was the first hippo ever brought to our Zoo, and it grew up there, and lived in its house for twenty-nine years.

There was another hippo at the Zoo who played a very silly trick on himself. He used to sink down to the bottom of his pool and get up to some sort of mischief there which the keepers could not see. At last, one day, when he opened his mouth for buns, it was noticed that he had one of his huge teeth missing! The keepers felt sure he had lost it through something he did down at the bottom of his pool, so the water was run off—and what do you think the foolish animal had done? He had bitten a piece of concrete from the steps that went down into his pool, and in doing it had worn his tooth right away! But as a hippo's teeth never stop growing, his lost tooth soon reappeared, and in a few months' time his tusk was just as good as ever.

THE WILD BOAR.—Long ago, wild boars lived in the forests of England. The king and his nobles hunted them, and were very fond of this sport. But when cities were built and forests cut down, many wild animals began to disappear, so much were they hunted, and now there are no boars left in England. They are still found in Africa and Asia and some parts of Europe. It is very dangerous to hunt wild boars, for they are so brave and so fearless that, even if they are wounded to death, they will still fight to their very last breath. Their tusks are sharp and very powerful so that they can give a most terrible wound, and rip up the body of a horse at a single stroke.

Wild boars can run very fast, and need a very swift horse to overtake them. They feed on roots and plants, and on animal food, too, when they can get it, and do a great deal of damage in India by trampling down crops and tearing up shoots. Their snouts are flattened to a disc at the end, and this helps them to root about comfortably in the ground. Their skin is thick and protected by bristles, so that they can press through forest undergrowth without being torn or held back.

Our own pigs are relations of the wild boars, and perhaps descended from tamed boars. They have lost their tusks and sharpest teeth, but their skin is as thick as ever and still grows bristles, though not so many as the wild boars have. Because they have lost their weapons and been tamed for so long, they have lost all trace of fierceness, and would be greatly scorned by their brave relations, the wild boars, if ever they met!

THE KANGAROO.—The biggest animal in Australia is the kangaroo. It is rather like an enormous hare to look at, but it cannot run on all fours, because its front legs are so much smaller that the back ones. When it wants to move from place to place it takes enormous jumps. Its long, strong tail helps to balance its body as it leaps, and also supports it when it sits upright.

It can leap along very quickly indeed, and can only be run to earth by very swift and powerful dogs. When it is run down, it turns to face its enemies bravely, and uses the terrible claws on its hind feet to protect itself. If a dog comes too near, the kangaroo will kick out suddenly and rip the dog so that it dies almost at once.

Sometimes when it is being hunted, the kangaroo wades in to a river, and waits there. Then when the dogs come swimming up, it seizes them one after another, and holds them beneath the water until they are drowned. For although its front legs are small, they are strong and powerful.

The mother kangaroo has a pouch on the lower part of her body, and in this she keeps her baby kangaroo until it is about eight months old, and can look after itself. It is a queer and amusing sight to see the head of a little "Joey," as baby kangaroos are called, suddenly pop out of its mother's pouch, and look around. If "Joey" is playing outside when danger is near, the mother will leap up to him, take hold of him as she leaps, stuff him into her pouch, and be out of sight in a few seconds.

Kangaroos usually live in herds or droves. Sometimes there are only a dozen animals in a drove, sometimes over a hundred. Male kangaroos or "boomers" often live alone, like rogue elephants, for the greater part of the year.

There are many different kinds of kangaroos. The smaller ones are called wallabies. Wallabies are divided into "large wallabies" and "small wallabies." The large wallabies are sometimes called "bush kangaroos," because they live in the bushy scrub of Australia. They all have the power of jumping on their strong hind legs, and have pouches on the lower parts of their body. They are most interesting animals, and very amusing to watch at the Zoo, especially when they sit up on their hind legs and box with each other!

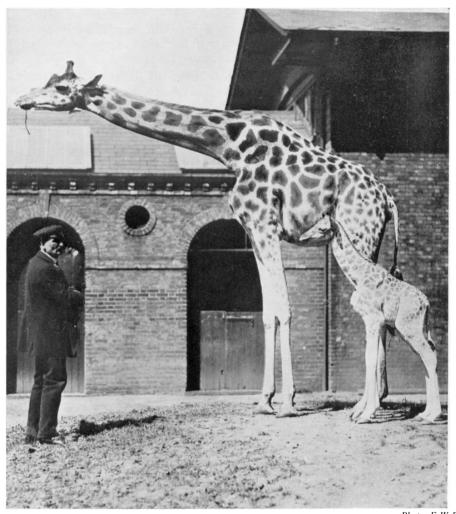


Photo: F. W. Bond.

MOTHER AND BABY
A fine female Giraffe with her child at the Zoo.

## CHAPTER X THE GIRAFFE AND HIS COUSINS

I expect, when you saw a giraffe for the first time, you thought, "Dear me! What a very tall animal!" And he is a tall animal, for a fully-grown male may be either eighteen or nineteen feet high! He is the tallest of all the animals now living, and if you stood one elephant on top of another one, the giraffe would look over the top of both and blink his great eyes at you.

It is his long neck which makes him so tall. If you see a giraffe feeding at the Zoo, you will notice that his leafy food is placed very high up. In his own forests in Africa he feeds on leaves and tender shoots, and so he has to have a neck which will allow him to reach up to the tall forest trees. He picks the leaves with his tongue, which is very long and slender. He can coil it round the stalk of a leaf and pull it off in that way. If you happen to be a girl, and go to the Zoo wearing a hat with a wreath of flowers round it, don't stand too near the giraffe's cage. His tongue may suddenly shoot out and pull the flowers off your hat with a jerk!

The giraffe has very long legs, and can run very fast indeed, as fast as a very swift horse. But these legs get rather in the way when the giraffe wants to put its head down to the ground to eat grass or to drink water. It has to straddle its front legs outwards as far as it can, and it looks very awkward when it is doing this. It is said that the giraffe can go for a very long time without water—perhaps for some months—but that is probably because it can get enough moisture from the leaves and tender shoots it feeds upon.

A giraffe has two small horns standing upright on its head. When it is young these horns lie flat. It can close its nostrils up tightly to prevent the sand blowing up them.

It is a very graceful animal to watch in its small paddock at the Zoo. It moves slowly and turns its head gracefully from side to side as it looks at you. It has enormous eyes, dark and gentle, which seem to look at you wonderingly. It is not so graceful when it gallops, for it sets off lumberingly and awkwardly. Its hind legs sprawl widely outwards, and its long neck goes rocking up and down like a clockwork toy, and so does its tail.

If you look at a giraffe's light-brown coat, splashed all over with dark-brown spots, you would think that surely he must be very easy to see among the trees of the forest, and so must be easy to hunt; but hunters say that when giraffes stand in the sunlight and shadow, beneath the moving leaves of trees, it is almost impossible to see them. Their spotted coat is an excellent protection.

Although giraffes look so gentle-eyed, they can be very fierce. Look in the giraffe's stall at the Zoo, and you will see a small piece of plate glass fixed over a hole knocked in the wooden wainscot. That hole was made by a giraffe. He suddenly lowered his head one day, swung his neck round, and gave a sidelong, hammering blow at his keeper—but missed him by an inch! Instead, his horned head struck the wood and gave the giraffe a nasty surprise.

THE CAMEL.—The camel—another tall animal—is most interesting for all sorts of reasons. You have often heard it called the "ship of the desert," and you can easily tell from that name that it travels very well across the great stretches of desert in Africa and Asia. Its feet, its hump, and the way it can manage to go for days without water are all very useful indeed to this "ship of the desert."

It has great spreading feet, and you can guess the reason for these. If it had small, hard hoofs, such as horses have, they would sink down into the soft sand as it walked and tire it out completely very soon. But its two toes on each foot are joined together underneath by a tough leatherlike sole, so that its feet do not sink into the sand at all, and it can travel along easily and comfortably.

Camels can live for several weeks upon very little food. A handful of dates or a mouthful of dry thorns plucked from a desert shrub is perhaps all the camel will get in a day. This is very little for any animal to eat, especially when it has to travel forty or fifty miles a day with a heavy load on its back. But the camel has a big hump, and it is this wonderful hump which makes it able to travel well on so little food.

The camel's hump is made almost entirely of fat, and as the animal goes on day after day with very little to eat, the fat from the hump passes, little by little, into the other parts of the camel's body, and so feeds it just as well as if the camel had been fed by its master! But gradually, as the camel journeys on for days, the hump is used up, and by the time it reaches the end of the journey the hump is very nearly gone, and only a loose bag of empty skin is left. The camel can then do no more work, for it is tired out and has no hump to feed on. It is turned loose for some weeks, given an entire rest, and allowed to feed well. Gradually the hump fills out again, and the camel is ready to travel once more.

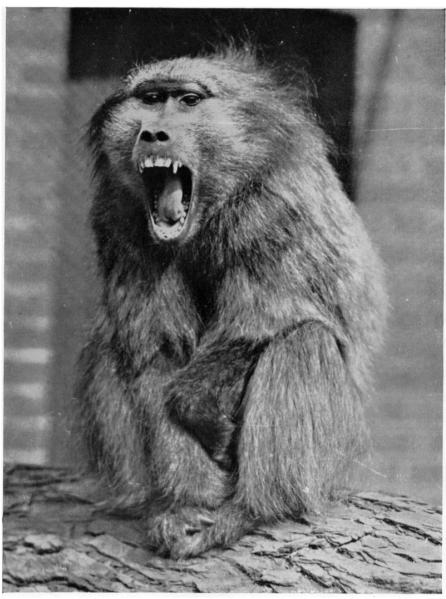


Photo: F. W. Bond.

#### CHACMA BABOON

In the deserts, as you know, there is very little water. The camel has not only to do without food, but very often without water; but, as it can carry its own water about inside its body, it does not mind so much as other animals would.

The camel is a "ruminating" animal, like the oxen and goats, and "chews the cud." But in the camel's stomach are a number of deep cells, which can be opened or closed just as the animal wishes. In these the camel stores up water. When it can take a good long drink of water, it fills up all these cells, storing quite a gallon and a half of water. Then when it finds itself thirsty on its travels, and can find no pool of water to drink, it simply opens some of the water cells, and out flows the stored-up water, and the camel's body uses it just as if the animal had drunk water in the ordinary way through its mouth and throat.

Like the giraffe, the camel can close up its nostrils when it likes, to keep out the sand. It also has hard flesh on its legs and breast, so that it can kneel down comfortably.

There are two kinds of camels; one is the Arabian one-humped camel, and the other is the Bactrian two-humped camel. The Bactrian camel is very bad tempered; it hates being loaded, and it hates being unloaded, because it does not like being made to kneel down. It grumbles and gurgles and moves its ill-tempered head about as if it would like to bite—and very often it does.

The Bactrian camel of Central Asia is more strongly built than its Arabian brother, but it is not so tall. Its hair is long and shaggy, and it can scramble about for hours on stony, hilly ground. Its thick coat protects it from the cold in the hilly districts.

Camels used for riding on are called dromedaries, and can go at nine or ten miles an hour. Ordinary camels go much more slowly, at two or three miles an hour. The difference between these two breeds is rather like the difference between a horse used for hunting and a carthorse. It is not very pleasant to ride on a camel, because it moves both the legs on one side of its body at once, and so travels along with a curious swaying motion which makes some people feel exactly as if they were on a ship in a very rough sea!

LLAMAS.—The llama is rather like the camel, but it has no hump and is a good deal smaller. It is found in South America, and as it is used for carrying loads across high mountains, just as the camel is used for carrying loads across the desert, the llama is sometimes called the "American camel." Its feet are not so broad and cushion-like, for it does not travel across loose sand. Its coat is thick and woolly, and sometimes nearly reaches to the ground.

Llamas are sometimes used for riding, but they are obstinate and self-willed. If they think they need a rest, they lie down—and no amount of beating or coaxing will make them get up again until they want to. They have a very nasty habit of spitting, too. A llama will sometimes turn round and spit straight into his rider's face! That is his way of saying that he is getting tired of carrying him! The llamas at the Zoo have this nasty habit, too, so it is really better not to go too near to them, in case they take a dislike to you, and show this dislike suddenly and unmistakably!

THE ZEBRA.—The zebra is a beautiful animal, with its glossy black-streaked coat and neat shape. It is rather like a horse or donkey, but it is wild, and lives in Africa in large herds.

Zebras can be tamed, but not very easily. They become very tired if ridden for long. There was once a gentleman, however, who taught three zebras to run in harness with a pony and draw his carriage through the London streets; but they never became good tempered and were always ready to bite.

Their stripes, which look so bright and staring at the Zoo, protect them just as much as spots protect the giraffe. At night time it is possible to stand so near a zebra that you can hear its breathing and yet not be able to see it. The black and white markings of its coat blend well with the moonlight or starlight, and the black shadows of the plains or woods. This is very useful to the zebra, for it has a great enemy—the lion. Lions like to catch a zebra, for the flesh is tender, and they lie in wait for them by the water-pools or rivers where the zebras come to

drink at night. They spring on to the helpless zebras and drag them away into the bush. In the morning there is nothing left but a heap of bones, which the jackals soon finish up.

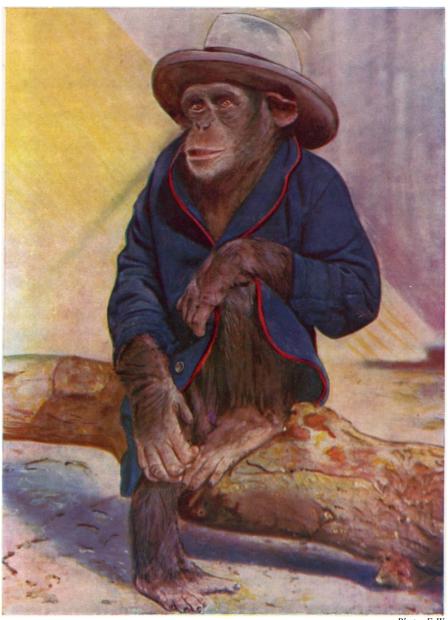


Photo: F. W. Bond.

CHIMPANZEE.

### CHAPTER XI LOVERS OF THE WATER

SEALS.—There are some people who think that all animals who live in the sea must be some kind of fish, but that idea, as I dare say you know, is quite wrong. No animal written of in this chapter, except the shark, is a fish.

Fish are cold-blooded creatures, which breathe by means of gills instead of lungs. They breathe in air from the water itself, which always contains air; but sea animals, such as the whale and sea-lion, come up to the surface of the water and breathe air just as we do. Fish have scales covering their bodies, fins to balance themselves properly in the water, and their tails help them to swim. Sea animals which do not belong to the fish family have no fins, do not use their tails to swim with, and have their bodies covered with fur, not scales.

Although the seal lives in very cold water, it is warm-blooded. Perhaps you wonder how it can keep itself warm and dry when it lives always in such cold surroundings. Well, it has two fur coats, which are always kept well oiled, so that the seal is dressed in an excellent, warm, oilskin jacket! It has thousands of little holes in its skin, all opening into tiny bags of oil, and this oil is always oozing out on to the fur. The outer jacket of fur is made of long strong hairs, rather like bristles. The inner coat is made of soft, close hairs. If you have seen a lady's sealskin jacket, you will know what the seal's inner coat is like.

But the seal has something else besides these to keep it warm; it has a layer of fat beneath the skin. This layer is two or three inches thick, and keeps it even warmer than the fur coats.

No water can get into a seal's nostrils and ears because, whenever it dives and the water presses on to them, they close themselves, so that not even a tiny drop of water can get in. Its teeth are very sharp-pointed, and when once a seal has caught a fish, it cannot slip or slide away, for the seal's teeth hold it in too tight a grip.

You may perhaps have seen seals from some place on the seashore of Britain. They are amusing to watch in the sea, for they roll about and poke their heads up out of the water and look round just as if they were waiting for some one. Fishermen hate them, for they eat so many fish. Sometimes seals will swim into a fisherman's net, eat the fish there, and then swim out again!

You may see seals in the sea-lions' pond at the Zoo. They are very graceful in the water and swim beautifully. Perhaps one will come near enough for you to see his eyes; they are as soft and deep as a gazelle's.

Seals can be tamed if they are caught young and treated kindly. There is a tale told of one seal which was so tame that it would lie indoors in front of the fire just like a cat! The owner sometimes tried to make it go back to its proper home in the sea, and several times took it out in a boat and threw it overboard. But the seal swam after him and cried so unhappily that the man could not bear to leave it, and took it back home again after all!

SEA-LIONS.—You might think that an animal called a sea-lion would look like a lion—but it doesn't. Another name for this animal is "hair-seal," because, unlike the seal, it has no second coat of soft fur beneath the outer coat of long hair.

Sea-lions come from the coasts of South America, and are some of the cleverest and most amusing animals at the Zoo. They have a fine pond, with a little rocky island in the middle and a high stone wall all round. They spend a great deal of their time swimming round and

round the pond, sometimes underneath the water, sometimes racing along the surface swiftly and gracefully. A sea-lion swimming is one of the most beautiful sights to see. It goes along so easily and so deftly, turning and curving, shining and glistening in the sun. If it is not swimming, it may be basking in the warm sunshine; then you will see his brown, shining skin, dog-like head, stumpy tail, and four broad flippers. If it is feeding time, you will hear him bark, and you will see how very clever he is at catching the fish his keeper throws to him. Sometimes the sea-lions bark so loudly and so continuously at night that people living near by have complained that they could not sleep at all because of the dreadful noise.

They are very clever animals, and can be taught to perform all sorts of amusing tricks, which they seem to enjoy thoroughly. One sea-lion in a travelling circus was taught to balance an upright pole with a fish on the top, on the tip of his nose! He would waddle across the stage, balancing the pole, and then suddenly jerk the pole off his nose and catch the fish as it fell down from the top!

Another sea-lion living in the Zoo would climb up and down a ladder, fire off a gun, and kiss its keeper!

There was once a sea-lion who thought he would like a walk round the Zoo, so he climbed over his wall and over the railings and set off round the gardens. He scrambled over the flower beds and the grass, and suddenly arrived at the deep pool belonging to the polar bears. He thought the pool looked rather nice even if it did have bears in it, so he took a header and dived in.

Alas! the bears did not like such a sudden visitor, and they attacked him. Before the keepers could rescue him he was so badly bitten that he died.

Sea-lions look very queer when they are on land, because they find it so awkward to walk with four flippers instead of four feet; but they manage very well, and gallop along quite fast, though clumsily. They soon get out of breath and tired with this slow way of getting along—and, splash! into the water they dive again and swim round and across the pool in two seconds!

THE WALRUS.—You have heard of the walrus who talked with the carpenter in "Alice in Wonderland," and played a trick upon the stupid oysters? You might think that such a queerlooking animal really belonged only to a fairy story; but the walrus is a very real animal, strange-looking and tusked. Two of his teeth grow downwards into strong tusks, sometimes as long as two feet.

The walrus lives in the Atlantic and Pacific Oceans, usually within the Arctic Circle. It is a very big animal, sometimes twelve or thirteen feet long and weighing about a ton. Its tusks are put to all sorts of uses. It defends itself with them, striking both sideways and downwards and making nasty wounds. It uses them to raise itself from the water on to the ice, for it digs its tusks into the ice, and so levers itself up. It also uses them to dig in sandy mud for shell fish and to cut off lumps of flesh from any dead animal it finds.

"Walrus" is a curious name, and really comes from the name the animal was first known by—"whale-horse." People said the name quickly, till gradually it became "walrus," and that is now what every one calls this strange-looking animal.

THE SEA-ELEPHANT.—This animal is known as the sea-elephant for two reasons; one is that it has a curious trunk, and the other is that it grows to such a huge size—sometimes twenty feet long! It has coarse fur, which is of no value to the hunter; but its skin makes splendid leather, and for this reason it has been so much hunted, that in districts in the Antarctic Ocean, where it was once found in great numbers, very few can now be seen at all.

THE WHALE.—To look at a whale, you might perhaps think that it was a fish—but it is not. It is warm-blooded and breathes by its nostrils and lungs, just as the seals do. The baby whales live on their mother's milk, a thing that fishes never do, for they are born as eggs and are left to face life for themselves right from the beginning.

If you look at a whale's body, you will see that its tail, instead of being set upright like a fish's tail, is set crosswise. There is really only one thing about a whale that is fish-like, and that is the shape of its body.

A whale never leaves the sea to go on land. If it happens to be thrown on shore by a storm, it is quite helpless, and has to lie there until it dies. It cannot possibly make its way back to the sea, for it can neither flop along like the seals nor gallop clumsily like the sea-lions.

Perhaps you have heard of whales "spouting." They have a very curious way of breathing; they take in a great deal of air at the surface of the sea and then sink below the water for an hour or so. When the good air is all used up and the whale wants more, it rises to the surface again. It blows out the used air through the "blow-holes" (nostrils), and just as in cold weather we can see our own breath, so does the moist, warm breath of the whale become visible in the cold air of the places where it lives. As the whale is enormous, it makes a great noise when "spouting," and sends the "spouts" up to a good height.

Whales, like seals, are protected from the cold by a coat of fat, called "blubber," beneath their skin. This is a very thick coat, and keeps the whale perfectly warm even when it is swimming among floating ice.

There are two kinds of whales—one kind has teeth, and the other has whalebone in the mouth instead of teeth. This is not really bone, but a kind of horny material which hangs down in the whale's mouth in long, fringed plates, something like a brush. This brush lets the water through like a sieve, but catches all the tiny fish on which the whale feeds. Its throat is so small that it can eat nothing but the very smallest fish, although its mouth, of course, is enormous. If a whale tried to swallow even such a small fish as a herring, it would choke itself! It waits till it reaches a shoal of millions and millions of jelly fish or shrimps. Then it opens its huge mouth and swims through the shoal, taking in thousands and thousands at a gulp!

The Greenland whale is one of the best-known whales, and from it we get most of our whalebone. It is fifty or sixty feet long when it is grown, and is a very valuable animal when caught by the whalers, for its blubber and whalebone together may be worth as much as three or four thousand pounds. But big whales are becoming rarer and rarer, so much have they been hunted, and now that other things are being used instead of whalebone, whaling is gradually being given up.

PORPOISES AND DOLPHINS.—Porpoises, or sea-hogs, may often be seen tumbling and gambolling on the surface of the sea round about our own coasts. They swim in a curious way, first of all leaping out of the sea, and then diving underneath it. People used to think that a shoal of porpoises all in a line together, wriggling in and out, was one big sea-serpent!

Dolphins, too, are occasionally seen off our southern coasts. Like the porpoises, they will sometimes follow a sailing ship, gambolling and playing about behind it in an amusing way.

THE SHARK.—The shark is quite different from the other animals in this chapter, for it is a true fish, cold-blooded, with fins and an upright tail. It breathes the air in the water through its mouth and gills. Its teeth are three-corner shaped, with edges that cut just like a saw, and it is not a pleasant enemy for a diver or a swimmer to meet, for with one snap of its cruel mouth it can bite a man's arm or leg off.

THE BEAVER.—The beaver is a clever and most interesting lover of the water. Unlike the other animals in this chapter, it is not to be found in the sea, being a fresh-water animal. It belongs to northern parts of Europe, Asia and America.

Most of its life is spent in the water, and in order to prevent the rivers from drying up in the summer months it builds great dams across them.

First of all, the beavers gnaw through the stems of trees until they fall; then with their sharp teeth they cut them up into logs and pile them into position in the river, heaping stones and mud upon them. They fill up all the gaps and holes with mud, and soon the dam is so big that the beavers have a quiet, deep pool behind it.

When the dam is made, the beavers make their homes or "lodges." A lodge is a kind of hut made by piling up clay-plastered logs and digging out the earth beneath them. They are entered by many underground passages, which open from the river bank, below the surface of the water, straight into the river, so that the beavers can enter and leave their home without showing themselves at all.

Beavers are excellent swimmers, for the toes of their hind feet are webbed. They use their broad, flat tail as a rudder, and race through the water swiftly and gracefully.

OTTERS.—The otter is another lover of the fresh water, although there is one kind which lives in the sea. The fresh-water otter lives in the rivers and streams, and can sometimes be seen in Britain. Like the beaver, it is specially formed for living in the water and has its toes webbed so that it can use its feet like paddles. Its body is long and almost snake-like, and its tail is so flat and broad that it acts like a rudder, as the beaver's does. It has two outer coats, just as the seals have, so that, although it may look dripping wet, the animal is kept quite dry.

The otter makes its home under the spreading roots of a big tree by the stream. Here it makes a cosy nest among the reeds and rushes and brings up its little ones, who, as soon as they are old enough, are taken out by their mothers and taught to swim and to catch fish.

# CHAPTER XII SNAKES

I do not think you will spend a very long time in the Reptile House at the Zoo. Modern and up-to-date though the Reptile House is, the inmates are not very pleasant. Snakes, crocodiles and alligators are evil looking, and the tortoises are so sleepy and motionless that one soon tires of watching them. Only the jerky little lizards move quickly, rather like small clockwork toys wound up!

Behind the thick glass the big and little snakes lie, with bright, staring eyes that can never be shut, for they have no eyelids. Some of them are beautiful in their colouring. When they move they are fascinating to watch. They move in such a curious, gliding, stealthy way, coiling and uncoiling, slipping and sliding this way and that. No feet and no hands! How can they get along as they do?

A snake is made in a curious way. All the bones are joined together by ball-and-socket joints. Your limbs are joined to your body by similar joints, and that means you can move them in any direction you like—forwards, backwards, sideways, upwards, downwards! You have seen how pliable and sinuous a snake's body is, and this is partly because its bones are fixed together by these ball-and-socket joints.

All the ribs of a snake (sometimes nearly three hundred pairs!) are loose and jointed to the spine in this way. The scales on the under part of the body are joined to the ends of the ribs, and act as feet. They take a firm hold of the ground; then the ribs move, and the scales are moved forward, too, and so the snake goes along without feet, gliding, curving and twisting itself in any direction it likes.

Some people will tell you that snakes sting. They are quite wrong. No snakes sting, because none possess stings. But they bite, and it is their bite which makes them so dangerous. What many people think is a snake's sting is simply its forked tongue. This black quivering tongue is used for many purposes. The snake shoots it out of its mouth, when any one comes near, to warn them not to tread on it. We might not see the snake lying coiled up on leaves or sand, for it is so like its surroundings; but our eyes are caught at once by the sight of something moving, even though it may be such a small thing as a snake's tongue. Animals see it, too, and step aside. The snake also uses its tongue to feel things with. When it has caught something to swallow it runs its tongue over it to see what size and shape it is and what difficulties there may be in the swallowing.

There are poisonous and non-poisonous snakes. We have one poisonous snake in Britain, and that is the viper, or adder. It is found in warm, sunny places on heaths or moors, and, unless it is injured or disturbed, it will not do harm, for it dislikes movement once it has settled itself down comfortably in the sun. It can be recognised by the zig-zaggy markings on its back, and it is usually about two feet long. It is often muddled up with the harmless grass snake, and this is a pity, because the mistake usually results in the innocent grass snake being killed. Grass snakes are longer than adders, usually about four feet in length when fully grown.

The bite of a snake is dangerous because of the poison which is forced into the wound. If you have ever seen an adder with its mouth open, you will have noticed two long fangs curving downwards and backwards from the upper jaw. When the mouth is shut, these lie back

against the mouth roof, but when it is opened, the fangs spring erect, ready for striking. Each sharply-pointed fang has a small hole near the tip, and this hole runs up the fang into a small bag of poison at the top end. When the snake strikes with its fangs, the bag is squeezed and the poison runs straight down the fang and into the wound. It depends on what sort of snake it is whether the poison is very deadly or not.

Some snakes have their fangs taken away in a curious manner. They are held tightly and are made to drive their fangs into a piece of cloth. This is jerked roughly away and the fangs are dragged out; but as new fangs grow again very quickly, the snake soon becomes dangerous once more.

It is sometimes said that because a snake's teeth are spiky and all point backwards, it cannot disgorge anything from its mouth, even if it finds its prey too big to swallow. But this is not true, for a snake can disgorge its food and swallow it in a more convenient position if it wishes to. It has jaws which can be opened very widely indeed, so that it almost looks as if the snake is splitting in half!

Snakes cast their scaly skins in a most interesting way. Our grass snake's skin can sometimes be found inside out, but perfect even to the eye coverings. When it is moulting time, the grass snake's skin separates at the edge of the jaws. The snake rubs against the ground until it has made the skin loose behind its head. Then it glides out of the rest of it, turning it inside out like a glove finger!



Photo: F. W. Bond.

A WARY TIGER

This Tiger's travelling case has been brought to the open door of his cage. He does not seem to be in a hurry to enter his new home.

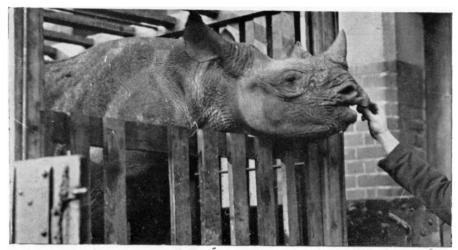


Photo: F. W. Bond.

AN ARRIVAL AT THE ZOO
Here you see an African Rhinoceros arriving at the Zoo in his case. He will be glad when he is placed in roomier quarters.

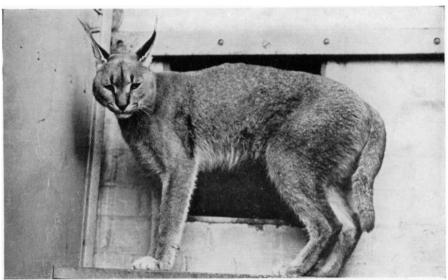


Photo: F. W. Bond.

A CARACAL Note his finely pointed ears.

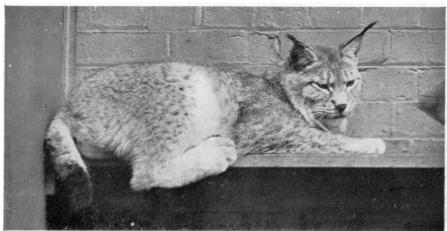


Photo: F. W. Bond.

LYNX
Although he looks so sleepy, his eyes are as sharp as an eagle's.

There are many well-known poisonous snakes whose bite is very deadly, and often fatal. The rattlesnake of America is one of these. It is four to seven feet long, and eats squirrels, rats and birds. It will not usually strike unless first attacked or trodden on. If any one comes near, it gives a warning. This warning is a curious rattling noise, which sounds rather like dry oats shaking in the wind. The snake makes it by shaking a number of hollow horny rings at the end of its tail. If you are wise you will pay attention to that "rattle," and step quickly out of harm's way!

Many snakes lay eggs, but the rattlesnake does not. Young rattlesnakes are born alive, and can look after themselves as soon as they are born. They have no rattle at first, but this gradually grows as they change their skins and become larger. Like most snakes, the rattlesnake sleeps during the winter, and has no need of food.

The Indian cobra has a very poisonous bite. It has a curious way of swelling its neck, or "hood," when it is angry and about to strike, which it will do for the smallest reason. Many years ago, at the Zoo, a family of Indian cobras lived happily behind the thick glass in the Reptile House. One day the keeper counted them, and found one snake missing. It was not nice to think that a venomous cobra might have escaped, but what else could be thought? However, week by week the family grew less, and then it was discovered that one of the snakes was a hamadryad, or "King cobra," and, because he could not bear to live with ordinary common cobras, he ate them up!

A king cobra can not only bite, but he can spit. He can send a spray of poison ten or fifteen feet, and hit just whatever he is aiming at. The keepers have to wear motor goggles when they move this snake from one cage to another.

The boa constrictor of South America kills his prey in a different way. He does not bite with poisoned fangs, but uses his powerful body to squeeze his victim to death. He grows to a good length, and likes to wind his ten feet of striped body round the trunk of a tree and there await any small passing animals, which he will at once seize with his teeth and then squeeze to death. Like the rattlesnake, young boa constrictors are born alive and not hatched from eggs.

There is a huge snake living in the East Indies, called the python, which sometimes grows as long as twenty or thirty feet! The anaconda of tropical America also grows to this tremendous length, and both these snakes, like the boa constrictor, kill their prey by squeezing them to death, and not by biting. The anacondas are born alive, but the pythons lay eggs, and hatch them by coiling their great bodies all around them until the soft-skinned eggs split and the baby pythons wriggle out.

The snakes at the Zoo are fed once a week, but I have never been to see them fed. I do not think I should like to see a snake swallowing a duck or a goat whole, and watch the animal slowly going down its neck and body. I think it would be a horrid sight, don't you?



Photo: F. W. Bond.

#### THE PORCUPINE

He would not be a pleasant person to sit upon. Other animals give the porcupine a wide berth as his sharp quills break off and remain in the wounds they inflict, giving great pain to the victim and sometimes even causing its death.

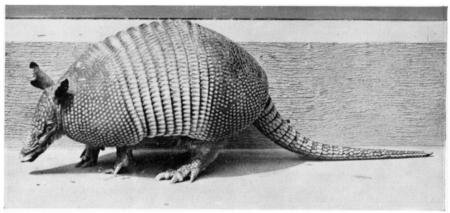


Photo: F. W. Bond.
THE ARMADILLO, WITH HIS COAT OF ARMOUR

Few of his enemies are able to hurt him, so strong is his armour plating.



Photo: F. W. Bond.

CROCODILE

Note the cruel teeth and powerful jaws.



Photo: F. W. Bond.

THE GREAT ANT-EATER
The photograph gives an excellent idea of this queer creature showing his long slender tongue in use.

## CHAPTER XIII ARMOURED ANIMALS

THE HEDGEHOG.—Many animals have weapons of some sort for attack or defence. Teeth, claws, poisonous fangs, hoofs, all these are powerful weapons, but some animals possess armour, too, strong and tough, like the crocodile's coat, or prickly and dangerous, like the porcupine's bristles. These armoured animals are wonderfully made, and their soft bodies are excellently protected.

Perhaps one of the first armoured animals which comes into our mind is one we may have seen ourselves, curled up at the bottom of a ditch, or running in our garden. The hedgehog, or hedge-pig, is a curious little animal. You could never mistake him, for we have no other British animal at all like him, dressed as he is in a sharp, prickly coat.

He is an insect eater like his cousin, the mole. He will creep from his hiding place in the evening and hunt for beetles, snails, slugs and worms. He loves birds' eggs, too, and gamekeepers are often very much annoyed to find their partridge nests robbed of eggs, and only the empty shells strewn round to show that a thief has been at work. Sometimes a hedgehog will eat small birds and frogs, but probably the food he likes best is earthworms. There is a story of a man who kept a hedgehog as a pet, and filled a jam jar full of worms each day for it to eat. At night time the hedgehog would come sniffing along, tip over the jar, and in about an hour and a half eat every single worm in it!

The hedgehog can raise or lower his spines as he likes. He raises them directly an enemy comes near him, and rolls himself into a tight prickly ball. You can guess that no animal likes to attack a nasty prickly ball, for it only means a bleeding mouth and paws. A dog who has once attacked a hedgehog will not go near one again, but keeps at a safe distance.

If you can imagine pins stuck through a piece of elastic, then you can perhaps picture how a hedgehog moves his spines. He has a very powerful muscle beneath his skin. When he pulls this in one direction his prickles stand up; when he pulls it in the other, they lie down! It is very simple and very clever. His spines are very springy and elastic, too, and when he falls from any height he does not hurt himself, for he simply bounces on his spines!

Young hedgehogs look more like little birds than hedgehogs, for their tiny, soft white spikes look rather like growing feathers. They are born blind and deaf, and at first they cannot roll themselves up at all. It is a quaint sight to see a mother hedgehog with her three or four funny little babies.

In the autumn the hedgehog thinks it is time to prepare for his winter sleep. So he finds some warm, well-hidden place and makes a cosy nest for himself with leaves and moss. Here he sleeps all through the winter, not troubling about food, and only occasionally waking up on an extra warm day. When he decides to wake up properly in the spring time, he has a most tremendous appetite, and goes scurrying off on his short legs to find something to eat.

The hedgehog is afraid of very few enemies. The rat will sometimes win in a fight, but not always. The prickly little animal is not even afraid of the poisonous adder. It will sometimes disturb the adder, and make it so angry that it raises itself to strike at this disturber of the peace. Then, quick as lightning, the hedgehog rolls itself into a ball, and the adder finds itself firmly spiked on the sharp prickles, and usually dies a painful death. Then the hedgehog unrolls and, fastening its sharp little teeth into the adder, begins to enjoy a feast.

THE PORCUPINE.—You might think that the porcupine, with his armour of bristling spines, was a cousin of the prickly hedgehog—but he is not. He does not belong to the insect eaters; he is a rodent or gnawing animal, and lives on roots, leaves and bark. His name means "spiny pig," and he is called that because of his spikes, and because he makes a pig-like grunting noise. Sometimes, when he is asleep, he snores, and then he sounds very like a contented pig!

The common porcupine lives in Southern Europe and in Africa, and he is about two feet long, so that he is a good deal bigger than a hedgehog. He has very fine quills. Perhaps you have seen penholders or tooth picks made of porcupine quills. He has two kinds of quills—one kind is long and slender and bends easily, and under these long quills grow the second kind—very much stiffer ones—and these are his real weapons. When he attacks an enemy, he runs backwards on to him, so that his quills, which point towards the back, will stick into his foe. The stiff under-quills are loosely fastened to the porcupine's skin, and some of these break off and stick into the other animal's body. There they gradually work their way in till they pierce a vital part, and the animal dies.

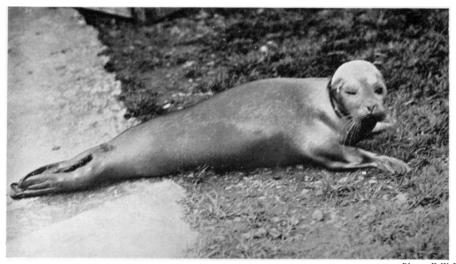
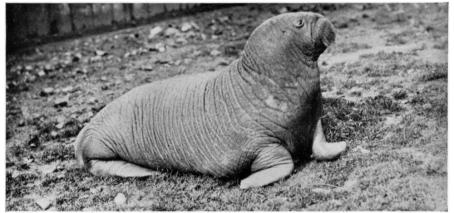


Photo: F. W. Bond.

COMMON SEAL His smooth, slippery body is beautifully made for swimming.



A Walrus—Four or Five Months Old.

Photo: F. W. Bond.

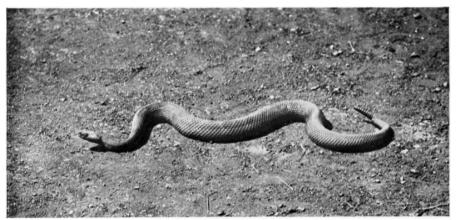


Photo: F. W. Bond.

RATTLESNAKE
The rattle can be seen at the tip of his tail.

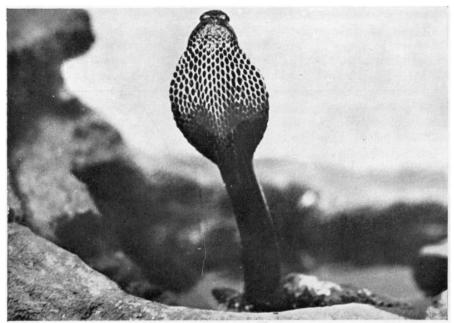


Photo: F. W. Bond.

#### INDIAN COBRA

Hunters have sometimes found lions and tigers, thin and lame, who have attacked a porcupine and perhaps got a quill run into their foot or mouth. They could not get rid of it, and as the place got worse and worse the wretched animals became lame, and fell ill because they were not able to hunt their food as usual. So you can see that the porcupine, although small, is a dangerous enemy. But it is not really fond of fighting, and prefers a peaceful life.

THE ARMADILLO.—Armadilloes are very curious animals living in South America. Their bodies are covered in armour made of bony plates growing in the skin. These are fastened together by bony rings, and when an armadillo rolls itself into a ball not a gap is left anywhere.

You might think that with such bony armour the armadillo would be clumsy and slow, but it is not, for it can run quite fast. It can dig, too, for it has large, strong claws on its front feet, and so fast can it dig a hole in which to bury itself that it really looks as if it is sinking into the ground by magic!

THE TORTOISE AND THE TURTLE.—Both tortoise and turtle belong to the Reptile family, and, like the snakes, they are cold-blooded and lay eggs. They are curious animals, slow and lazy, fond of sleeping, and live to be a great age. The keeper at the Zoo will tell fabulous tales of the age of some of his charges. He will tell you of tortoises not only a hundred years old, but *two* hundred, and perhaps will spin you the story of the great tortoise which died some years ago at the fabled age of five hundred years!

The tortoise is not a native of Britain, but it is sometimes sold here as a pet, and kept in gardens. However, it is not really a very good pet to keep, for it is sure to eat the things you particularly do not want it to eat, and it also has an annoying habit of completely vanishing.

The armour of the hawksbill turtle is thick and strong, and when it is polished and made into "tortoiseshell" brushes and combs, it is very beautiful. This curious shell-armour of the

tortoises and turtles is made of their flattened backbone joints and ribs.

The turtles, who rarely leave the sea except to lay their eggs, have flippers instead of the curious stumpy legs of the tortoise. These help them to swim, and also are used to dig holes in the sand. In these holes they lay their eggs in neat rows, cover them over with sand, and leave them for the sun to hatch.

Seaweed is the chief food of the turtles, and their jaws are covered with horn so that they can grind it well, for they have no teeth. The natives catch them by turning them over on their backs, which makes them quite helpless. Their huge shells are used for many things—roofing huts, baths for the children, and even boats!

CROCODILES AND ALLIGATORS.—Crocodiles are found in India and in many streams of Africa, especially the Nile. Alligators, which are very like crocodiles, live in South America. Both belong to the Reptile family and lay eggs about the size of a goose egg. These eggs are laid in a sandy bed beside the river, and are hatched out by the sun.

Both crocodiles and alligators are amphibious; they can live on water or on land, but they are most at home in the water. They are slow and clumsy on land, but in the water they are quick and always watching for a chance of a meal.

A full-grown crocodile grows to a tremendous length—perhaps twenty feet—and as it is very fierce and always hungry, you can guess it is a dangerous animal to meet. It has a long, pointed head and snout, and a mouth full of strong, sharp teeth. It wears a tough armour of skin and hard scales, through which even a bullet can hardly pierce. It has short legs and clawed feet, and swims by means of its long and powerful tail.

The alligator has a shorter and broader head and more uneven teeth than the crocodile. Like its African cousin, it is always hungry, and will eat fish, animals, or human beings, if it can get them. It drags down its prey beneath the water, drowns it, and then tears it to pieces. It is able to close up its eyes, nostrils and throat when it is under water, so that not a drop can get in.

When you look at a crocodile or alligator at the Zoo, watch for it to open its mouth. You will notice something queer; it has no tongue. This gives its mouth a strange and wicked look, and, indeed, crocodiles and alligators are not pleasant creatures.

In their native rivers they will lie without moving in the water, looking like a floating brown log; but if any animal wanders near to drink, that log moves suddenly, opens a great mouth, and drags the terrified animal below the water. A favourite waiting place is by a ford—a shallow place where a river can be crossed on foot—and here many men, women and children have been eaten by lurking crocodiles or alligators.

Once a traveller killed a crocodile and cut it open, and what do you think he found inside it? Here are some of the things, and they will show you what a man-eating monster it must have been: eleven heavy brass arm rings, three wire armlets, one bead necklace, fourteen arm and leg bones of various animals, eighteen stones, and some porcupine quills! This is difficult to believe, but it is quite true.

ANT-EATERS.—The pangolins, or scaly ant-eaters, are cousins of the armadillos. Their heads, bodies and tails are covered with oval, pointed scales, overlapping like tiles on a house roof. Like the armadillos, they coil themselves up into a ball when they are frightened, and it is quite impossible to unroll them.

Pangolins feed on ants. They break down the nests, and lick up the insects with their long tongues.

There is another ant-eater called the "great ant-eater," living in tropical America. It is not armoured like the pangolins, for it has hair instead of scales; but it has very strong, curved claws on its front feet, which it uses in tearing open the nests of ants. It sometimes uses these great claws on an enemy, and they make a very serious wound.

Its head is very queer. It is drawn out into a sort of long, narrow beak. It has a worm-like, very long and very sticky tongue, so that when it puts it out, and wriggles it to and fro, ants and other insects stick to it in hundreds. It also has a strange tail. It is enormous, with very long hair, and looks almost as big as the animal itself!

### CHAPTER XIV BIRD LIFE AT THE ZOO

THE EAGLE.—There are so very many interesting and beautiful birds in the world that it is difficult to know which to write about, so I shall choose birds which you are likely to seek for yourself when you go to the Zoo. Many of them you cannot see under the best conditions—the eagles, for instance. How can any one see the real splendour and power of an eagle when it is cooped up in a cage? Mountains and the blue sky are the proper background for a bird like that.

You may see golden eagles at the Zoo. They are very strong and courageous birds, and can be found in Britain, away up in the Highlands of Scotland. A golden eagle will attack wolves and stags, and sometimes even man himself, when it is fiercely hungry. It will kill smaller birds and animals, and sheep, too, taking them up to its eyrie or nest to feed its young ones. The eyrie is made of branches of trees and is lined with heather and leaves. When the young ones hatch, the parents care for them until they are able to fly away and look after themselves.

Eagles fly upwards in circles, each circle being wider than the last. They will fly tremendously high, and as they have very sharp eyesight, they can sight their prey from an amazing distance. Then down they drop like a stone, with wings folded close, straight on to the back of their quarry—perhaps a sheep. They use their strong curved talons to seize and to kill, and then carry the sheep up to the mountain top. The curved beak is not used to kill, but simply to tear the flesh from the bones. The talons alone are powerful enough to do any killing.

You would think that all smaller birds would be terrified of the eagle, wouldn't you; but the cheeky little brown sparrows at the Zoo are not in the least afraid. They will actually build their nests of feathers and hay at the sides of the eagle's cage! But once a pair of sparrows were punished for their cheekiness. They found a hollow in the golden eagle's perch, and into their pert little heads came the idea that it would be a grand place in which to build their nest! So very busily they set about it; but the golden eagle simply couldn't stand that, and one day he tore the nest all to pieces, and the cheeky sparrows had to go and nest somewhere a little safer!

THE VULTURES.—You remember how the jackals and hyænas acted as "dustmen," don't you, and ate the decaying flesh of dead animals and crunched up the bones? Well, in just the same way the vultures, with their queer-looking bald heads and hooked beaks, rid the hills, plains and deserts of decaying animal flesh which, if left, would poison the air. The vultures are the "dustmen" of the bird world.

Like the eagles, they have talons, but these are not so strong, and most vultures cannot carry their prey as the eagles can. When feeding their young they carry food to them by means of their crops.

The condor is the biggest of the vultures. His spread of wing is tremendous, and if you catch him sunning his wings at the Zoo you will see they measure ten to twelve feet. He has a frill of snowy down round his neck, but he is not a nice-looking bird. He would look better in his native home in South America, flying high up in the air, above the cloud-hidden ridges of the Andes.

The condor is strong enough to carry its prey, if it is a lamb or kid of small size. When a horse or cow is old and feeble, it will swoop down upon it, and if the terrified animal is too weak to fight, the condor will soon kill it with its cruel beak and claws.

THE OWLS.—Owls are peculiar-looking birds. They have rather a cat-like look about them, and just as a cat will sit and blink haughty eyes at you, as if you were a mere insect, so do the owls sit and take no notice of you. They can twist their heads so far round that an owl, sitting with its back to you, can turn its head so that it looks at you with both eyes as if it were facing you.

Owls are night birds. They need keen eyesight in order that they may see their prey and catch it. Mice, small birds, ducklings and young rabbits are all enjoyed by owls. Their flight is wonderful. With their big wings they can swoop down as silently and as softly as a cloud racing over the sky.

Look at the eyes of the owls in the Zoo. They are beautiful—liquid, clear and deep. The dark-brown Ural owl has strangely gentle, deep-as-night eyes. The naked-footed owlet has brilliant eyes of light yellow, so bright and staring that they do not look real. But now go to the great eagle owl, and you will see a pair of really glorious eyes—eyes of glowing orange, big and round, with black pupils in the middle. If you see his eyes gleaming at you from the dimness of his house at the back of the cage, they look like twin lamps burning steadily in the darkness

THE OSTRICH.—This is another great, strong bird, but its strength is quite different from that of the eagle or vulture. It is a very big bird, six feet or more in height, and has a very long neck. Its wings are weak and small, and cannot be used for flying. Instead, the ostrich can run tremendously fast on its long and powerful legs, and is so strong that it can carry two men on its back. It can also kick as hard as any horse with its two-toed feet. It is found in most parts of Africa, and goes about in flocks, sometimes mixing with zebras and other animals. It eats twigs and leaves, grass and seeds.

Ostriches are kept on ostrich farms in South Africa for the sake of the lovely feathers that grow in the wings of the male birds. On the imitation ostrich farm at the Wembley Exhibition these precious feathers of the ostriches were carefully wrapped up in cloth so that they should not be spoilt—and very funny the huge birds looked. I don't think they can have liked it very much. It does not hurt them to have the feathers cut off—the stumps drop out, and then other feathers begin to grow in their place.

They have many enemies in their native country—lions, cheetahs, and wild dogs—and as they are rather stupid creatures, they often fall a prey to the cleverer animals that hunt them.

Ostriches swallow many curious things, for, like all birds, they have no teeth, and they need something hard and gritty to help them to grind up their food inside them. They will swallow not only grit and gravel, but all sorts of other things—coins, bits of iron and glass, fragments of brick, and even keys!

An ostrich can make quite a number of noises; it will hiss when it is attacked or hurt, it will sometimes cackle, and it can also make a noise almost exactly like a lion roaring, so like that it is difficult to tell which creature is sending its cry through the night, lion or ostrich!

The ostrich has several cousins in other lands. They differ from him in shape, but they are all alike in that none of them can fly. The rhea lives in South America, the emu in Australia. The emu has hairy-looking feathers and very small wings. Then there is the cassowary, living in north-east Australia and New Guinea, and the kiwi in New Zealand. Some of these you will find at the Zoo, but you will see that the ostrich is by far the biggest and the strongest.

FLAMINGOES.—Here are some more birds with very long legs—the graceful and beautiful flamingoes. But, unlike the ostriches, the flamingoes do not use their legs for running purposes, but for wading in streams and lagoons as they seek worms or small fishes.

The flamingo's feet are webbed like those of a goose, but it very rarely swims. It is found in most warm countries, and it is a beautiful sight to see a flock of these great rosy-hued birds flying through the sky like pink sunset clouds or standing together, still and graceful, on their long, thin legs.

As they stand in Three Island Pond at the Zoo, you can watch them. Their beaks are curiously curved; they are bent sharply downward at about the middle of their length. As they put down their heads to the water they twist their long neck round until the upper part is downwards, and this is the part that goes into the mud.

Flamingoes love to stand on one leg, tuck their long neck over their shoulder, and lay it cosily upon the soft down of their back. This is their favourite position, and very comfortable and lazy it looks.

Once there came a gale and blew through the Zoo gardens. It scurried the flamingoes off their feet and gave them the lift they wanted in order to fly—and there were all the Zoo's precious flamingoes sailing over Regent's Park, astonished and delighted to be able to use their wings again! It took a long time to recapture them, but at last all but one were brought safe home again to Three Island Pond.

THE PELICAN.—This long-necked, big-bodied bird lives in the warm countries of the world. It has short legs and webbed feet. Its feathers are white, with a few black ones, and its large strong wings help the heavy pelican to fly very well. It can also swim powerfully, and catches fish for its food by means of its long flat bill, which is hooked at the tip.

The lower part of its long bill is really a large pouch or bag of skin. You would not notice it easily if it were empty, for then it is small and wrinkled up; but when the pelican has had a good meal of fish, the pouch becomes very big and swollen, for the bird does not swallow its food at once, but stores it up in this very useful bag.

THE PARROTS.—The Zoo has a wonderful collection of all sorts of parrots, cockatoos and parakeets. They are usually gorgeously coloured, easily tamed, and are most amusing.

Parrots have peculiar beaks. The lower part is much shorter than the upper, which is curved right over the lower portion. They use their beak as a third foot in climbing. They have four toes on each foot, two turned forwards and two backwards. And they have, as I daresay you found out directly you went near the parrot house, very loud and screeching voices!

Most parrots are intelligent, and many kinds can be taught to talk. The best talkers are usually the red-tailed grey parrots of Africa, and these can be made to say the most amusing things. Unfortunately, when many parrots are kept together, as at the Zoo, the talkers seem to lose their "talk," and simply screech and scream instead.

In their hot native countries parrots are found in large flocks. They live on flowers and buds, leaves, fruits, and insects. They will sometimes hold their food in one foot when eating it, a rare habit among birds.

There is one parrot, called the Kea, which has forgotten its flower and fruit food, and has become a flesh-eating bird. This is so curious that it is worth telling you about.

The kea lived in New Zealand long before white men went there. It lived on fruit and seeds and was quite harmless. Then came the white men, bringing with them flocks of white woolly sheep, for sheep farming. The sheep grew more and more in number, until the flocks numbered thousands.

When the sheep were killed for meat, the skins were hung up in the sun. The inquisitive, prying keas flew down and pecked at the fat left inside the skin. They liked the taste—and that started them on their bad ways.

Suddenly they began to attack the living sheep, and farmers, much to their astonishment, saw flocks of keas fly down and settle on the backs of their sheep. They tore away the wool with their sharp, strong beaks and got down to the living flesh.

It made no difference if the frightened sheep ran away, for the keas simply spread out their wings to balance themselves, and went on with their horrible work.

And now the New Zealand Government offers five shillings to any one killing a kea, and, because of their wicked ways, these parrots will soon be almost completely destroyed, although not so very many years ago they were innocent, fruit-loving birds.

THE PENGUIN.—The penguin is one of the queerest-looking, funniest birds there are. He stands bolt upright like a little man, and looks at you with knowing eyes. He lives in regions where there is much ice and snow, but he can also be found in Australia, New Zealand, and South Africa.

The king penguins have beautiful grey, velvety-looking feathers. Their heads are black with orange-yellow markings at the sides and on the throat, and their breasts are yellow-white. Emperor penguins are just as handsome, but they are bigger, and sometimes grow as tall as four feet high.

You will see that the penguin has webbed feet, and that will show you he is a swimming bird. His wings are very small and weak, and hang down beside the body. He cannot fly with them. He uses them to help him balance himself when he shuffles about awkwardly on land, for his feet are so far back on his body that he finds it difficult to walk as other birds do. He also uses his flipper-like wings for something else—he uses them for swimming. A penguin is marvellous to watch when he is in the water. His feet and his wings are used to guide him and to send him along, and he turns and twists, darts and dives beneath the water as if he were some sort of bird-like fish. He lives on the fish he catches, and has an enormous appetite. Sometimes, when he is really quite full, he does a little dance on the shore, shakes down all the fish he has eaten, and decides that there is really room for one more! And one more goes in.

The hen penguin scoops out a hole in the beach and lays her one egg there. She does not sit on it, but puts it on her flat webbed feet, and then stoops herself over it until it is warmly hidden beneath a fold of her skin and feathers.

Once a penguin at the Zoo laid an egg. All the other penguins were very much interested. They kept waddling round the proud father and mother, trying to see the egg. After a time they thought that *they* would like to nurse the egg for a little while, and they tried to take it. The father and mother were not going to allow this, and they flapped the robbers off. But, alas! the egg at last was broken. The poor mother penguin was very upset—and what do you think she did? She carefully cuddled a piece of the broken shell against her feathers for quite a long time afterwards!

THE PEACOCK.—If you want to see one of the most beautiful sights in the world, go and stand opposite the cage of the peafowl and wait for the peacock to spread his wonderful, wonderful tail, with its hundred gleaming eyes in the burnished feathers.

The peahen is a dowdy-looking bird beside the peacock. She has no glorious colouring and no splendid tail. She does not have a very good time, because her mate is bad-tempered

and pecks. But perhaps she can forgive this when she looks at the gorgeous colours of her husband's tail.

Peafowl come from India and the lands near by. They belong to the beautifully-coloured Pheasant family, and are its most splendid members. They have scaly legs, small heads, and harsh voices. It is a curious thing that such a beautiful bird should have such an ugly voice. Beauty should go with beauty, and a bird as lovely as the peacock should have a glorious voice!

Peacocks moult each year, and drop off their splendid tail feathers. These grow again, longer than before, and soon the bird is strutting about once more, proud and haughty, its small shining head, with its queer little crest of feathers, held high in the air. It is graceful even when its tail is closed and sweeps the ground, but when it suddenly faces you and slowly spreads out the shimmering loveliness of its gleaming tail before you, it is more than graceful; it is wonderful—and the peacock knows it!

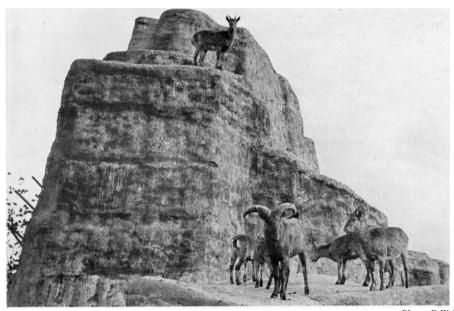


Photo: F. W. Bond.

CAUCASIAN IBEX ON THE MAPPIN TERRACE



Photo: F. W. Bond.

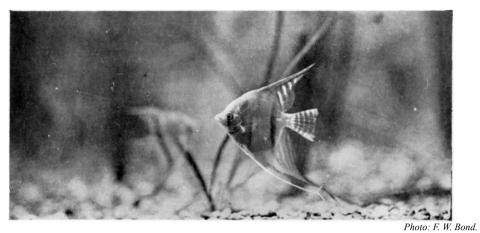
FEEDING TIME
Sea-lion about to catch a fish thrown by the keeper.



Photo: F. W. Bond.

#### THE OCTOPUS

An awkward customer to tackle. Sailors tell many tales of the strength of its powerful arms. Note the suckers on the inner sides of these arms which enable it to take a tight grip of any object which it has seized.



ANGEL-FISH
A beautiful fish, he is like a living arrow-head darting through the water.

# CHAPTER XV THE AQUARIUM

The new Aquarium at the Zoo is a wonderful place. It is built underneath the Mappin Terraces, and is a long, crescent-shaped hall, with tanks on each side. Water-creatures are more easily killed by sudden changes from heat to cold than are land creatures, so aquaria are usually built underground, where the temperature is not likely to change so much. The new Zoo Aquarium took a year to build, and cost nearly £55,000. The Zoo folk determined to have an aquarium which would be really successful and up to date, and they have certainly managed it. Perhaps you would like to know a little about the building and working of the Aquarium—where the water comes from, and how the fish are fed, and so on.

The Aquarium hall is dark, so that you can better see the fish in the tanks. These are clearly lighted by either daylight or electricity, and you can see everything in them as distinctly as possible. There are sea-water and fresh-water tanks. The sea water was brought from the Bay of Biscay in steamers to London. Then it was put on barges and carried up the Regent's Canal to the Zoo. Underneath the Aquarium a space was dug to make reservoirs—places to hold water—and into these reservoirs, through a hose 650 feet long, the water was pumped. The sea water will last for a good many years because it is used over and over again.

When the water is to be put into the tanks, it is pumped from the big underground reservoirs to smaller reservoirs up in the peaks of the Mappin Terrace hills. From there it runs down into the tanks. After it leaves the tanks, used and dirty, it runs through sand which filters it and makes it clean and good again. Then it flows into the underground reservoirs, ready to be used once more. Of course, fish need air in the water, and so compressed air is pumped into each tank for the fish to breathe. You can see it coming in like a trail of silvery bubbles. Many of the fish love these bubbles and go and lie just above them.

If any of the pipes which carry the water became rusty, the water passing through them might harm the fish, so each pipe is carefully lined with enamel, which, as I daresay you know, does not rust. The underground reservoirs, to which the pipes lead, are very big—the sea-water reservoirs can hold 120,000 gallons, and the fresh-water ones can hold 60,000 gallons. You can perhaps guess what a lot of care and trouble went to the planning and the building of this new Aquarium.

The tanks are built of slate or concrete, and are made to look as much like the bed of the sea or rivers as possible, by having rockwork, sand, shells and seaweed put in. The glass through which you look was perhaps one of the most expensive things used in building the Aquarium—it is so clear and perfect that you would never guess it was more than an inch thick in front of some of the tanks.

There are nearly a hundred tanks, some of them very big ones, in the Aquarium. Each tank has to be carefully watched in case any stale food or dead creatures should poison the water. These have to be picked out as soon as possible, and for this purpose a large passage, called the "service passage," runs behind the tanks, from which the cleaning and feeding can be done. And now you can perhaps see why the Aquarium cost such a lot of money to erect—building, lighting, heating, filtering, cleaning, feeding—all these things cost a great deal, and will go on costing a great deal; but it is certainly worth it all, for now the Zoo has an aquarium of which it can be really proud.

SOME AQUATIC CREATURES—The Aquarium is full of interesting and beautiful creatures. Seaweeds, anemones, fishes, shell-fish, crabs, lobsters, turtles, salamanders, all are there. There is not space to write of each of them, but some are so interesting that they cannot be left out of this book.

In the lobby of the Aquarium, just before you go through the turnstiles, you will probably see a tank full of gold fish. Perhaps you have kept gold fish yourself, and wondered at their lovely red-gold colour. It is interesting to know that gold fish first came from a silvery-grey fish. Some of these silver fish as they grew, turned from silver to gold. These were taken and kept separate. The eggs of these gold fishes hatched into little silver fishes; and some of them, when they were six months old, turned gold, too! Many of them never changed, but remained silver all their lives. In Japan, rearing gold fish is quite an important industry, and the Japanese have bred many beautiful and fanciful kinds, some of which you may see in the Aquarium.

The common eel is another interesting creature. The baby eel is born in the deepest part of the Atlantic Ocean in the Sargasso Sea. It is not like a grown-up eel, it is flat, and ribbon-shaped, and very transparent. It rises to the surface of the sea, and drifts in the current of the Gulf Stream away to the coasts of Europe. When it arrives, it has become different in shape, and is shorter and rounder. It finds a river, and in the spring time swims up it. It is called an elver then, and it stays in the fresh water for some years, until it is a grown eel. Then down the river it comes again into the sea, a silvery eel, 3 feet long. It never leaves the sea again after that, and sooner or later it goes back to the Sargasso Sea where it was born, to lay its eggs. When these hatch, the little elvers drift off to Europe again, as their fathers and grandfathers and great-grandfathers did before them.

You will see the big conger eels in a large tank of their own. These eels grow to a great size, sometimes to nine or ten feet. They are often caught off our own shores, especially where the coast is rocky, as in Cornwall. They swim about and find their food mostly at night—in the day time they hide in holes and cracks of the rocks. In their tank you will see a number of pipes put here and there, and the conger eels get inside these, and lie there quite still. There were four in one piece of pipe when I last went to the Aquarium, and one large eel looked most ridiculous, for the pipe was much too short for it, and its tail and head stuck out at either end in a most comical manner.

There is a very curious fish which you have often had for your breakfast or dinner—the sole. It is a "flat-fish," and if you have seen it lying with the other fish on a fishmonger's slab you will have noticed how different in shape it is. Its eyes are both on one side of its body, its mouth is crooked, it is very flat, and has one side white and one side dark in colour. You can see the reason for this if you look at the tank containing flat-fish.

At first you will say, "Oh, but there *aren't* any flat-fish! All the fish are ordinary-shaped fish!" But look at the sandy bottom of the tank. There you will see, after a moment's search, pairs of eyes sticking up out of the sand. Perhaps you will see a mouth too! These belong to the flat-fish, and now you can see the reason for their queer shape. They lie flat on the bed of the sea, their white side underneath, their dark, sandy-coloured side uppermost, and there they wait until some small creature comes unwarily by, and then they snap him up for food. It is so difficult to see these flat-fish that their enemies find it hard to discover them.

When it first begins life, a flat-fish is much the same boat-like shape as an ordinary fish. It often goes to lie down on the sandy bed of the sea, and stays there longer and longer each time. At last it stays there practically always, and its body begins to change. It lies on its left side and gradually its head twists round so that the left eye is on the same side as the right one.

The body becomes very much flattened from side to side, and the left side becomes white—it is now a flat-fish, and behaves like one. Watch one in the tank. It suddenly decides to move to a better place. With a queer, wriggling movement it swims through the water and finds another settling place. Flop! It lies down flat, wriggles its fins, and sends sand all over its back to hide itself—and there it is, just a large pair of eyes and nothing else!

There are various kinds of crabs in the tanks—not the sort of crabs you would be pleased to see in a pool in which you were paddling. Great big edible crabs and curious spider crabs are shown. These creatures are encased in hard armour, and are fitted with powerful pincerlike claws. The spiny spider crab usually lets seaweed grow over its shell so as to hide itself well, and sometimes when seaweed has *not* grown on its back, the crab will take some and put it on its shell itself with its great claws.

The most interesting of the crabs is the hermit crab. You can see a great many at the Aquarium, and you will want to watch them for a long time. Hermits were people who wanted to live alone, and tried to find a cave in which to dwell in peace. A hermit crab is so called because it finds an empty whelk-shell, just big enough to take it in comfortably, and there it lives, like a hermit, alone and safe. It is not like an ordinary crab, for it has no armour, and its body is soft. It would be eaten at once if it did not find some sort of armour to wear. So it crawls backwards into a strong whelk-shell and lives there with just its legs poking out. When it wants to move about, out come its long legs, and the hermit crab drags its funny house about with it! Sometimes one will want to change its shell, and if it finds another whelk-shell that it likes better, but which has a crab already inside it, it will use all its power to drag the other poor crab out of it by the legs.

Another well-armoured creature is the lobster. You will be surprised at the number of legs, claws, feelers, whiskers and jaws it has. It must be quite difficult to remember what to do with each pair. Look at its eyes. They are set on long, movable stalks, which can be turned in any direction.

When the lobster wants to change its coat, it does it very thoroughly indeed. Its shell never grows in size, so that, as the lobster's body inside grows, the shell becomes too tight a fit. The lobster takes off the whole of its shell, even to the claws. Of course this means that its soft body is unprotected for a time, and the lobster has to find a hole quickly, and stay there until its new armour has hardened and grown, before it can safely face the world again. In the rockwork of the tank, you will see a number of holes made ready for any shell-less lobster to hide inside. It only takes about half an hour for a lobster to strip off its shell, but the new armour takes a long time to grow—about three weeks, and sometimes more.

You have heard of the octopus, and perhaps read about this queer creature. It has a large bag-like body, with eight long, snaky arms. Each arm has two rows of suckers along the inner side. Its mouth is like the beak of a parrot, and has two horny jaws, strong enough to bite right through the shells of crabs on which it feeds. Its eyes are large and unfish-like. It swims quickly backwards, not forwards, and when it is alarmed it sends out a black inky fluid which clouds the water, and prevents any enemy from seeing where it has gone. When it is excited, it is queer to see it change very quickly to all sorts of colours—pink to yellow, yellow to brown, brown to black. It is a very interesting creature with its eight long arms, horny beak and curious ink gland.

The green turtles in their large tank are always very lively. They look a little like great beetles as they swim heavily about here and there, going up to the surface to breathe now and again. Their flippers take them along powerfully, but they do not look as if they were

swimming, they look as if they were flying through the water by flapping their flippers as birds flap their wings. You will see the hawksbill turtle too, and notice his lovely shell, from which tortoise-shell is obtained.

The tiny Siamese fighting fish are most interesting to watch. In Siam these fish are placed in tanks to fight in public, and are watched by crowds of people, who lay wagers on the result, just as people in England bet on horse racing. Fighting fish are usually grey-brown in colour, but when fighting, they change to most brilliant colours—purple, red, green and blue.

The angel fish are very beautiful and very well named. They seem too fairy-like to be real. They are bright silver with broad dark bands which sometimes vanish completely and then reappear again. The fins are very large and stretch far above and below the deep body. In shape the angel fish is rather like a very graceful arrowhead, and as it glides through the water, waving its dainty fins and long whiskers, it looks as if it must surely have come from a fish fairy land, and not from the River Amazon.

There are so many, many queer and beautiful fish to tell about, that I should want a whole book to write of them all. There are the catfish with their long whiskers; the rainbow trout with their beautiful colouring; the perch, looking like a football team, with their striped bodies; and the tiny zebra fish banded in black and white like the graceful animal they are named after. Then there are all the different cichlid, with their vivid, brilliant colours, gleaming like bits of a broken rainbow, or as if they were set with a thousand precious stones. There are the big salamanders, resting against the rocks, and the small mouth-breeders, whose eggs are carried in the mouths of the females until they hatch for fear the fathers should eat them. There is the curious twitching fish, which twitches the whole of its body every time it breathes.

And besides all these, there are star fish which can throw off their arms if they wish to; sea-worms which shoot out lovely feathery plumes at one end, and look just like a feather brush; sea anemones which open and shut as if by magic, and are beautiful and fascinating to watch; and a hundred other big and little water creatures, all living their tiny, interesting lives, in the Zoo Aquarium.

There is just one more creature I must tell you about—the one that perhaps you will think is nearly the most interesting of all. It lives in a tank with the curious snake-like pipe fish, and it is called the sea-horse. It is not much like a real horse, but it is surprisingly like the "knight" on a chess board. It is a small creature with a horse-like head and a queer little fin on its back, which vibrates just like a tiny electric fan, and sends it along through the water. It has a long, curving tail, and this it uses when it wants to hold on to seaweed. It curls it neatly round a stem, and there it stays, quite upright, until it wants to go to some other place, when it starts its little electric motor again and glides off to another piece of seaweed, holding its queer, small body straight and upright. Sometimes two will go off together, holding on to each other's tails to keep near to one another. They seem very fond of going about in pairs, and one will sometimes twist its tail round another's neck or put its head close to the other's head as if it were going to kiss. They are the queerest, most delightful little creatures, and you will love to watch them. The fathers have each a pouch on the lower surface of their body, and in this pouch the eggs are kept for safety. Even when the baby sea-horses are big enough to swim about and look after themselves, they will come back to their father's pouch and hide inside if danger is about.

How do you think these sea-horses are brought to the Zoo when another supply is wanted? By aeroplane! Dr. Vevers, the superintendent of the Zoo, meets them in Paris and flies with them to England. When he lifted up the lid of the barrel once to have a look at his charges, he saw that they were all in a cluster linking tails so as to ease any jolts or jerks that might come!

I have not told you one half of the wonders of the new Aquarium, but perhaps you have read enough to want to go and see the rest for yourself. Lions and tigers, elephants and camels are all very thrilling and exciting, but I think you will find that among the tiny creatures in the Aquarium tanks are some which are just as interesting and exciting in their ways as any big animal outside.

## CHAPTER XVI FAMOUS ANIMALS

If you have ever had a toy elephant, I expect you called him Jumbo. It is a sort of general pet name for a toy elephant, just as Dobbin is a pet name for a horse. But perhaps you don't know that there was once a *real* elephant called Jumbo, and it was he who gave the jolly name of Jumbo to all toy elephants afterwards.

Jumbo lived many years ago, in the middle of last century. He came to the Zoo in 1865, a young African elephant, four feet high, dirty and unwell. He was given to a keeper called Scott to be looked after, and Scott soon got him clean and healthy. He grew and grew and grew, until he was eleven feet high. He was very clever and very playful, and every one loved him. When he was strong enough, a howdah was made for him, and he began carrying children round the Gardens. He did this for sixteen years. He had a wife called Alice, a fine African elephant like himself, and he loved her very much. Then, as sometimes happens with elephants when they are about twenty years old, he became restless and troublesome. He would charge at the walls of his stall, splinter the wood and drive his tusks through the iron plates that strengthened his house. No one except his keeper dared go near him. When Scott took him out into the Gardens, Jumbo quietened down and was very peaceful. But it was dangerous to have an elephant about as strong and as big as Jumbo who might lose his temper any moment and kill some one. So the Zoo decided to sell him.

Mr. Barnum, a great American showman, wrote to the Zoo and asked if he could buy Jumbo for £2,000. He sent over a trainer, called Elephant Bill, to fetch Jumbo. But Jumbo wouldn't go! He would *not* step into the travelling box put ready for him, and he wouldn't listen to Elephant Bill's coaxing. For days and days this went on, and every one became interested and excited about it. A song was written all about Jumbo and Alice, and he was put into the papers as an interesting piece of news. After about five weeks, his old keeper, Scott, managed to get him safely into the travelling box, and at last he was put on board ship and taken away to America.



GRIFFON VULTURE
A good photograph showing the great spread of the vulture's wings.

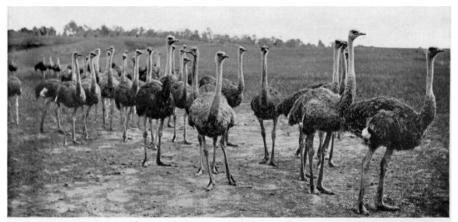
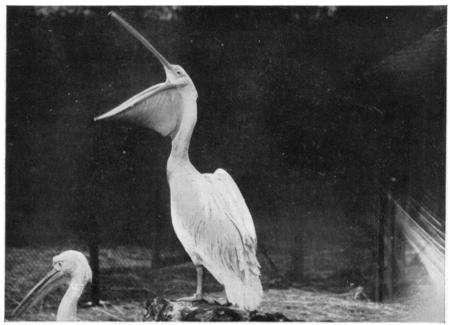
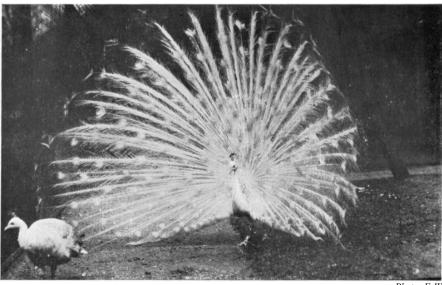


Photo: F. W. Bond.
ON AN OSTRICH FARM IN NEW ZEALAND



WHITE PELICAN

Photo: F. W. Bond.



PEACOCK SPREADING HIS TAIL

Photo: F. W. Bond.

Mr. Barnum was very glad to get him, and he showed him for three years. Jumbo was a great success, and took to his new life well. Then there came a sad day. The travelling show was journeying across a wild part of the country, through which ran a railway line. Suddenly

there came an express train thundering down the line. Jumbo didn't like it. Perhaps if he had been an Indian elephant, he would have got out of the way—but African elephants are wilder, and Jumbo hated the train and wanted to fight it. So he charged full speed ahead at it, and, of course, the engine won the battle, and that was the end of poor old Jumbo.

Perhaps you wonder what became of Jumbo's wife, Alice. She went to Mr. Barnum too, but she was burnt when a big fire broke out two years after Jumbo's death. Another great elephant, Jingo, was sold by the Zoo to Mr. Bostock, a showman—but poor Jingo became homesick on the journey out, and he pined away on board ship and died.

Some years ago there lived a marvellous chimpanzee called Consul. He was so clever that he earned a large amount of money at circuses and other shows. He could do almost anything! He was brought up with an ordinary family when he was very young, and he did everything he saw them do. He sat up at table, and he went to sleep in his own little bed at night. He could sign his own name, Consul, and he could type it on a typewriter, too.

Thousands of people went to see him perform at exhibitions. He used to come on the stage fully dressed, and sit down at a table, which was ready laid for a meal. He rang the bell and a waiter brought him something to eat and drink. He ate with his knife and fork, and poured his drink out of the bottle into his glass. Then when he had finished, he rang the bell again and the waiter brought him a cigarette and matches. He lighted his cigarette and smoked it. Then he went over to a bed in the corner, and undressed himself carefully, even to unlacing his boots. He got into bed, and pretended to go to sleep. Then he got up again, as if it were morning. He did a few exercises, washed himself, cleaned his teeth, and dressed. Then he got on a tricycle and rode off, clapping his hands as if to say, "Am I not a clever chimpanzee!"

And you can quite well imagine that every one else clapped him too, and thought what a marvellous ape he was.

Orang-utans as well as chimpanzees are clever apes, and there have been some well-known ones at the Zoo. There was one which died a little while ago called Sandy. He could smoke a pipe and loved it. He taught himself a queer new way of drinking—he took a long straw with a good ear on the end of it, and waved it about in the water till it was thoroughly soaked. Then he would put it into his mouth and suck it until it was dry—then into the water it went again to be soaked!

Another orang, Jacob, used to live in the cage next to Sandy. One night he smashed the glass of his window and escaped. He thought he would go and live in the trees for a change, as he used to do when he was very young—so he climbed up into a tall tree and built himself a nest of branches! He was caught and put in his cage again, but the nest was left up in the tree as a curiosity.

Mickey, a chimpanzee who died in 1924, at the Zoo, was another ape well known to visitors. He was a cripple and could not walk properly. He had to use his arms as crutches and swing himself along between them. He used to get into dreadful tempers, and then he would try to make as much noise as ever he could. He would hit out at every piece of iron that would make a clanging noise and tear round his cage as if he were mad. At the end, he would stand on an iron trap-door in his cage, and jump up and down on it till it rattled again and again and made a terrific noise.

Once he escaped. The keepers did not particularly want to try to force him back again, for though he was a cripple he was very strong. So they hit on an excellent plan. Two of the keepers went into his cage and began shouting at one another. Mickey, who was further down the ape house, trying to pick a quarrel with Sandy, heard them, and was curious to know what

they were doing. He went up and looked between the bars to see. Then the keepers danced and yelled, and squared their fists at one another, pretending to fight. "Oho! A fight! This is a sight worth watching!" thought Mickey, and sidled quietly into his cage to sit down and watch. But that was all he saw of the fight! For the keepers slipped out and slam! went the door on the angry chimpanzee!

There was another orang called Sandy Junior, who has just died. He lived in a cage which was partly in the open air and partly in the sheltered monkey house. There was always a crowd round his cage, and it was not surprising, for he was a most amusing animal. He was very solemn about all his tricks. He loved to have a paper parcel given him, with some tit-bit wrapped up inside. He would carefully unwrap it, throw the paper away and eat the fruit. Then he looked round for more. He knew how to kiss, but *I* shouldn't like to have kissed him. He was very clever at twisting the rope in his cage in such a way that it made a swing for him. He would sit and swing in it, and look solemnly down at all the people watching him. Sometimes he covered himself up in paper, and would not move!

He did a very curious and impolite thing some time ago. A friend of his brought him a bag of meal-worms. Sandy took the bag and opened it. Then he emptied all the meal-worms into his mouth at once! But he didn't eat them. He just sat there and thought. "What would be the funniest thing to do with them?" he wondered. And what do you think he did? You would never guess! He went to the gate of his cage, and put his mouth to the keyhole—then he blew all those meal-worms one by one out of his mouth and through the keyhole!

The Zoo once had a very clever monkey called Jenny, who was a great pet on board a ship before she was given to the Zoo. She could smoke a pipe and drink out of a glass. She had a very great friend—a chicken! This chicken lived with Jenny in her cage, and went with her wherever she went. Jenny would often pick it up and nurse it in her arms. Then, if any one happened to say, "Throw it overboard!" she would remember her life aboard ship and throw the chicken smartly away from her!

Two famous Polar bears that you have perhaps seen yourself were Sam and Barbara. Barbara died a little while ago, and Sam was shot some time later, as he was so old and so lonely. He and Barbara used to have some lovely games together, and were most amusing to watch. There used to be another Polar bear called Sam, and he had a very bad trick of collecting umbrellas!

This habit began when some one poked him with an umbrella when he was asleep. Sam was angry, grabbed the umbrella and broke it into bits. Then he thought he would like a few more umbrellas, to amuse himself with. So he planned an excellent trick. He placed a bit of fish on a ledge above his head, and then, when any visitor came along, he whined and pretended he couldn't reach that nice little piece of fish! The kind visitor, if she had an umbrella, would reach over and poke at the fish to send it down to the bear. That was Sam's chance! He rose on his hind legs, snatched the umbrella and crumpled it into a shapeless bundle! Nobody knows how many umbrellas he smashed up during the time he lived at the Zoo!

There is an interesting animal now at the Zoo, given by Ranji, the famous cricketer. Its parents were a lion and a tiger, so that it is half and half. It is known as a liger, or a tigon, and looks rather like a tigress, with just a bit of mane.

Juja and Toto are two well-known Zoo lions, and Rajah and Rani are two fine tigers. Rajah is very tame—he will let any one stroke him through the bars! His great golden-green eyes blink at you as if they were the eyes of a large tame cat!

Of the animals who used to be at the Zoo, one of the funniest was a walrus who lived in the small pond by the Fellows' Tea Pavilion. He was called Old Bill, and was as tame and playful as a puppy. When he first came to the Zoo he used to eat twenty pounds of fish each day, and soon progressed to fifty—and even then he was not full-grown. He used to cry just like a child when he was hungry.

Old Bill was not fond of ladies, but he loved his keeper and followed him about like a dog. Before he came to the Zoo he used to live in the sea, and would come out of the water directly he heard his master calling him. The thing he loved most was to have a broom given him to play with. It was most comical to watch him.

There are many clever playful animals at the Zoo which you will find out for yourself if you are lucky enough to be able to go fairly often. Some of them will be remembered, like Jumbo, long after they are dead. Sandy Junior will—and when you are grown up, and people talk of old Sandy Junior, perhaps you will be able to say: "Oh, Sandy Junior! Yes, I saw him years ago! He unwrapped a paper parcel I gave him and peeled the bananas inside!"

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# TRANSCRIBER NOTES

Mis-spelled words and printer errors have been fixed.

Illustrations have been relocated due to using a non-page layout.

[The end of *The Zoo Book* by Enid Blyton]