

# THE ZOOLOGICAL GARDENS.

BY THE REV. J. G. WOOD, M.A., F.L.S., ETC.

## ELEPHANTS AND THEIR KIN.

IN the family which we are about to examine are included many animals with which we have been familiar from childhood, though our information respecting them has not always been of the most accurate description. This family includes the Elephant, Rhinoceros, Hippopotamus, Hyrax, Tapir, and all the Swine, and forms a part of the order which Cuvier called the Pachydermata, on account of their thick hides. By Cuvier's system the horse was grouped with the before-mentioned animals; but the arrangement in use at the British Museum excludes all the horse tribe, and, I think, rightly.

We will begin with the typical animal, the ELEPHANT.

Only a single specimen of this magnificent animal is now to be found in the Zoological Gardens, and this individual belongs to the Asiatic species (*Elephas Indicus*). The African elephant is never captured and tamed in these days, and all those animals which have been exhibited in England have been brought from Asia, or are, at all events, of Asiatic parentage.

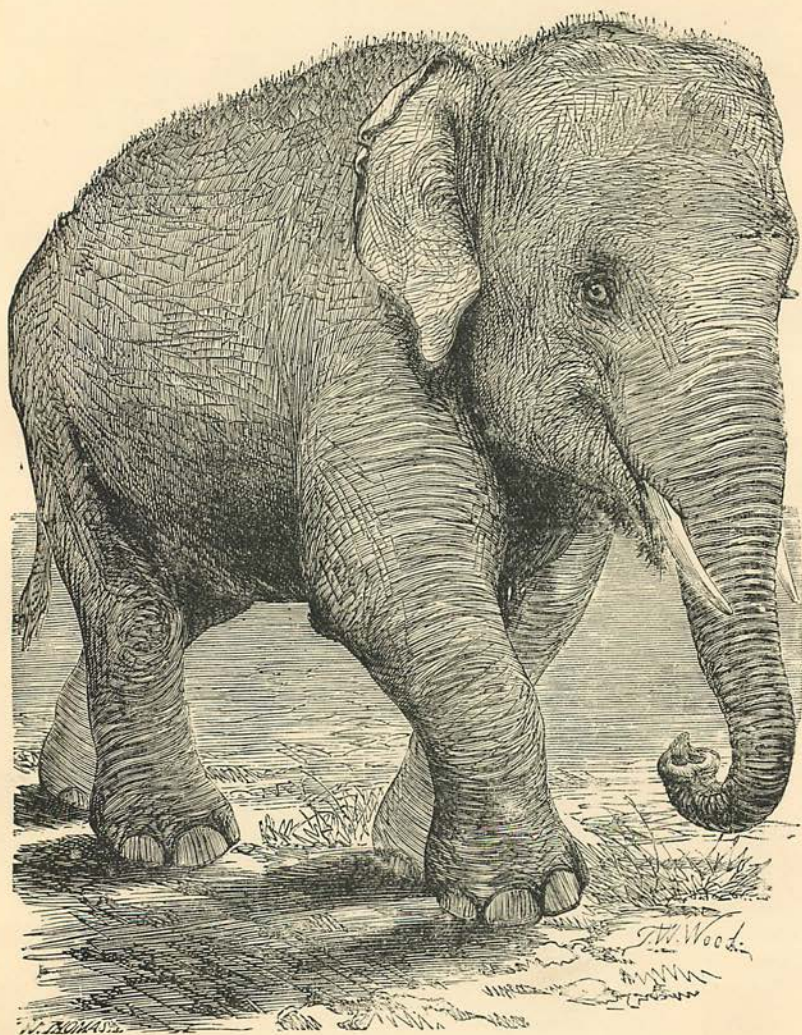
Why the African species should not be captured and tamed I do not know. The natives certainly stand in considerable awe of the animal, and are extremely cautious in attacking it. Still, in the days of ancient Greece and Rome, Elephants were brought from Africa, subjected to discipline, and proved to be as docile in disposition and quite as apt scholars as those which were brought from Asia. I cannot but lament that herds of so useful an animal should be allowed to wander in the wide forests unmolested, except for the sake of their flesh and ivory, and their vast muscular powers suffered to be wasted in idle wanderings.

The natives certainly would never achieve their capture of their own accord; but, if urged and guided by Europeans skilled in the Elephant lore of Asia, they might succeed in taking as many elephants as they liked, and reducing them to subjection. Bonds and hunger have a wonderful effect in subduing the vast quadruped on one continent, and I really can see no reason why they should not be equally potent on the other.

To distinguish the African from the Asiatic species is a very easy task. The general outline of the animal is quite sufficient for this purpose, as the back of the African Elephant slopes from the head to the tail, while that of the Asiatic species is rather arched in the middle.

The chief external mark of distinction lies, however, in the ears. As the observer may perceive by watching the elephant "Chunee" at the Zoological Gardens, the ears are flat, irregular, and neither rise above the neck nor hang below the throat. But the ears of the African species are of enormous size, their upper edges projecting well above the nape of the neck, and their lower portions hanging below the throat. So large, indeed, are their ears, that a native has been seen to shelter himself from a rain-storm by creeping under the ear of a newly-killed elephant.

There are many other structural differences in the two animals, but as they belong to the science of comparative anatomy they need not be discussed in these pages.



THE ASIATIC ELEPHANT (*Elephas Indicus*).



## THE ZOOLOGICAL GARDENS.

As the Elephant in the Zoological Gardens is allowed to take a daily promenade about three P.M., visitors are enabled to watch the mode of walking adopted by the animal. Some little misconception seems to exist as to the peculiar gait of the elephant, the popular idea being that it moves the legs of each side simultaneously, and so communicates to the body the peculiar sway which renders the act of riding on its back so unpleasant to a novice, and sometimes affects the rider with dizziness and nausea.

If, however, the creature be carefully watched as it walks along, the movement will be seen to be as follows:—First it makes a step with the right hind leg, and, as soon as the foot touches the ground, the right fore foot is raised and swung forwards. When both the feet of the right side are planted, those of the left side are moved in a similar manner.

This mode of progression causes a rocking movement of the houdah, which is not very unlike that of a boat on a rolling sea, and often produces similar unpleasant effects. The driver, who sits astride the neck of the animal, has certainly the best place, for the movement is not nearly so violent in that spot.

The houdah is a very good place for noting the aspect of the animal as viewed from above, and the appearance of the round, cocoa-nut-looking head, with its short, stiff, bristly hairs, and the flapping ears at the sides, is peculiarly quaint. The little intelligent eyes can occasionally be seen to advantage as their light yellow irides gleam in the sunbeams. The small tuft of long yellowish hairs which projects from the ears ought also to be noticed.

The Elephant is a restless being. You never seem to see it perfectly quiet. Sometimes it paces slowly in its house, and sometimes it stands in one spot, rocking itself from side to side, as if for exercise.

The skin of this animal is exceedingly rough and harsh to the touch, and when the Elephant scratches itself, as it is much in the habit of doing, the sound is like that of a very hard scrubbing-brush rubbed upon a rough brick wall. In spite of the apparent clumsiness of the limbs, the Elephant can use them as well as many a more active animal. It can scratch itself with the hind feet with perfect ease, and never seems quite easy about the state of its person. Sometimes it scratches itself with its hind feet, sometimes it rubs one fore foot against another. Then it will become suddenly anxious about the soles of its feet, lift them successively, and examine them carefully with the end of the trunk.

The hunter is greatly indebted to this restlessness for his success in discovering these animals. In spite of its enormous dimensions, an Elephant can hide itself as effectually as a mouse, and when it is standing among the dense brushwood it can hardly be seen, even by a practised eye. But the ever-restless nature of the animal is sure to betray it if the hunter is possessed of sufficient patience; for, though the Elephant is a peculiarly wary beast, and tests very fully all the hunter's resources, it finds half-an-hour of perfect quietude too much for its endurance.

The silence with which a troop of these animals can move is really wonderful. A pig makes ten times as much noise as an Elephant, unless, indeed, the latter animal be alarmed, and should make one of its headlong rushes through the forest. In that case the Elephant makes noise enough, for the branches are snapped off the trees, making reports as if a company of riflemen were firing a running volley, and the smaller trunks are broken away by the impetuous rush of the huge beast. These rushes, however, never last very long, and as soon as the Elephant thinks



## THE ZOOLOGICAL GARDENS.

that it has placed itself out of the reach of immediate danger, it falls into its usual quiet, sweeping, silent step; and while the inexperienced hunter fancies, from the sudden cessation of noise, that the animal is within a hundred yards of him, it is at a distance of a mile or two, quietly making its way into another part of the country.

If the reader can manage to examine the interior of the Elephant's foot, he will see how this strange quietude of step is obtained. Externally the foot looks like a great, flat, solid mass of horny substance, which could not be used without being set heavily on the ground. When, however, he views it in the interior, he will see how marvellous is its structure. It is framed of thousands of separate layers of horny substance, each acting like a separate spring, and formed, indeed, exactly on the principle with which we are familiar in the springs of carriages. The united action of all these layers gives to the foot a wonderful elasticity, and, bulk for bulk, the Elephant treads as noiselessly as the cat.

Some such structure is evidently necessary in order to guard the animal from receiving an unpleasant jar at every footstep, for its weight is enormous in proportion to its height.

The young observer should be careful to notice the curious formation of the legs. In order to enable them to support the huge bulk of the animal, they are almost perpendicular, like four wooden posts. The extremely short lower joint of the fore leg should also be observed; and it will be noticed that the movement of the hind leg is very peculiar, owing to the extreme shortness of that portion of the leg, and the consequent throwing forward of the knee-joint. When the Elephant kneels down for the purpose of receiving the houdah, the hind legs bend forwards like those of man, and the fore legs are pushed out straight in front. Conventional artists always commit a blunder in their drawings of the Elephant by making the ankle-joints of its hind legs like those of the horse, and sadly offend the eye of a naturalist. They also *will* draw the tusks as if they grew out of the lower jaw, instead of showing them projecting from their great sockets along the sides of the head.

The vast bulk of the Elephant is very deceptive, causing the height of the animal to be very generally overstated. Chuneé is just seven feet and a-half in height, and an animal that measures between eight and nine feet is a large specimen. We hear much of Elephants measuring sixteen and even twenty feet in height. The former of these measurements I greatly doubt, and the latter I totally disbelieve. An Elephant of twenty feet in height would be as big as a two-storied house. One of ten feet is of very rare occurrence, and as every additional foot adds enormously to the general bulk, an Elephant that measured twenty feet in height would be a monster which we could only find in the kingdom of Brobdingnag.

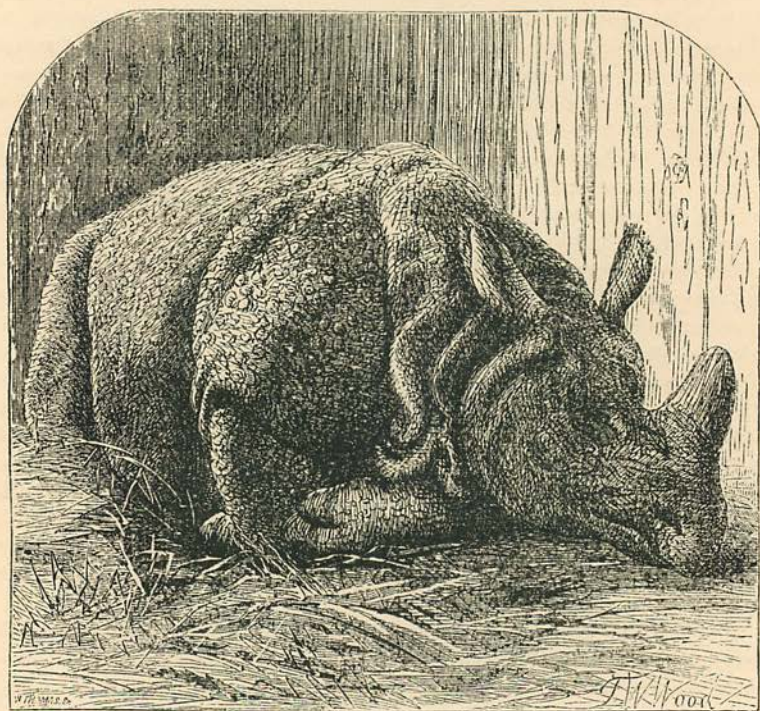
The young observer should take notice of the wonderful proboscis. He will have excellent opportunities for doing so, as the animal is always ready to hold it out for biscuit, fruit, or sweetmeat. The curious finger-like appendage at the tip should be examined, and the successive cross ridges of the trunk noted. There are few more wonderful organs in nature than the trunk of the Elephant. Formed by a development of the snout, and pierced throughout its whole length by the nostrils, it affords a wondrous combination of gigantic power with perfect flexibility. There are no bones to give it strength, and it is made up of a vast number of



## THE ZOOLOGICAL GARDENS.

muscles, which enable its owner to sway it in any direction, to extend or contract it at will, to strike with it as a weapon, to pick up small objects as with a finger and thumb, to put food into its mouth, and to pour liquids down its throat.

I intentionally use the word liquids, instead of water, because the Elephant is a notable proof that the lower animals do not drink water because they prefer it to fermented liquids, but because they can get nothing better to drink. The cow, the horse, and the ass are extremely fond of ale, and, if permitted to do so, will



"Bot," the Asiatic Rhinoceros (*Rhinoceros unicornis*)

intoxicate themselves as thoroughly as any human drunkard. The horse will take brandy-and-water with great satisfaction, and, when tired, is apparently all the better for such a draught.

And the Elephant is passionately fond of all fermented or distilled liquids, preferring the latter whenever it can get them. It will uncork a bottle of stout, and empty the contents in a very ingenious manner; grasping the open neck of the bottle in the end of the trunk, holding it high in the air so as to permit the liquid to flow into the trunk, replacing the bottle carefully on the ground, and then blowing the beer down its throat with a mighty puff and great splashing. Spirits, however, are the favourite drink of the Elephant, and in India, when a peculiarly difficult or unpleasant task is set to an Elephant, the keeper can always persuade him to undertake it by promising a bottle of arrack, a rough, fiery spirit made in that country.



## THE ZOOLOGICAL GARDENS.

Of sweetmeats the Elephant is as fond as a child, and any one who wishes to insinuate himself into the good graces of the animal can do so by taking a few lumps of sugar or the coarsest sweetmeats that are sold in the shops, and giving some to the Elephant at every visit. The creature very soon learns to distinguish its benefactor, and he may calculate upon a pleased recognition whenever he comes within its sight.

We now pass to the RHINOCEROS. A fine and tolerably tame specimen is now in the Gardens, and has lived there for fourteen years. This is the ASIATIC ONE-HORNED RHINOCEROS (*Rhinoceros unicornis*), a species which is better known to the public than those which come from Africa.

Several species of Rhinoceros are still in existence. In Asia there are the animal just mentioned, which may be known by its single horn and the enormous folds of skin upon its body and round its limbs; the JAVANESE RHINOCEROS (*Rhinoceros Javanus*), known by its single horn and the comparatively smooth skin of the neck; and the SUMATRAN RHINOCEROS (*Rhinoceros Sumatrensis*), known by the single horn and the want of folds upon the body.

In Africa four species are known. The first is the BORELE, or RHINASTER, (*Rhinoceros bicornis*). This animal has two horns, the hinder horn being very thick and stumpy. The next species is that which is known by the name of KEITLOA (*Rhinoceros Keitloa*), also with two horns, but having the hinder horn equal to, or even longer than, that over the snout. These two species are blackish brown in colour. The other two species are whitish in colour. One of them is called MUCHUCO, or MOHOHOHO (*Rhinoceros sims*), having two horns, which are arranged like those of the Borele, and the other is known by the name of KOBABOBA (*Rhinoceros Oswellii*). This curious animal is remarkable for the enormous length and comparatively straight form of the front horn and the manner in which it projects forwards, so that when the animal runs, the tip of the horn often touches the ground. In old specimens the end of the horn is often rubbed away by the friction.

I am rather particular in mentioning the marks of distinction between the species, because they are often confused together. The characteristic marks are, however, so clear and definite that no one can mistake one species for another after he has once learned to distinguish them.

They are all very surly-looking beasts, and their character does not belie their looks. If taken when very young, they can be tamed and even domesticated in some degree. But they do not seem to be particularly intellectual in their character, and are great, blundering beasts, often playful, but unconscious of their strength, and working no small mischief in their gambols.

The most conspicuous point in the Rhinoceros is the curious weapon which is called, for the sake of convenience, a horn, but in reality is only a projection from the skin. It is not fixed to the bone like the horns of the deer, nor set upon a core like those of the oxen, but adheres only to the thick skin, and can be removed by means of a sharp knife. If the reader will look carefully at the horn towards its base, he will see that it breaks up into a multitude of fibres, and a section of the horn betrays the fact that the weapon is made up of these fibres laid longitudinally and compressed together into a solid mass.

In the Indian Rhinoceros the horn is never of very great length; seldom, indeed,



## THE ZOOLOGICAL GARDENS.

exceeding in height its diameter at the base. It cannot, therefore, be made into weapons, like the larger horn of the African species, and is mostly manufactured into drinking-cups and whip-handles.

Formerly the cups made of Rhinoceros horn were held in very great esteem, being thought to possess the property of detecting poison. Whenever a poisonous liquid was placed in the cup, it was said to boil over and to run down the sides, and, therefore, these cups were in great demand among potentates who went in fear of poison!

It is not improbable that this effect may have been seen, but that it was produced by the secret introduction of a little mixed acid and alkali in powder, which would hardly be perceived within the cup, but which would cause a great effervescence when the liquid was poured into it.

This poison-detecting reputation was undoubtedly a useful one, as it would have the effect of deterring the would-be poisoner from attempting his evil project. Even the shavings of the horn were eagerly sought after, and were placed in drinking-vessels in order to insure the innocence of the liquid contained in them.

The skin of the Rhinoceros ought to be carefully examined, and if the reader will take the trouble to gather some grass and offer it to the creature, he will be able to examine leisurely the wonderful armour with which it is protected. The thick, massive hide hangs in heavy folds, which can be lifted by the hand without much trouble. Inside the folds the skin is quite soft, and on a sunshiny summer day the contrast between the hot, dry skin of the back and the cool, moist skin within the folds is really curious. The creature is very vulnerable within these folds, and the mosquitoes and other stinging insects cause it great misery. In order to baffle its puny but formidable tormentors it rolls in the mud and covers itself with a thick earthen plaster which even the sharp proboscis of the mosquito cannot penetrate.

Sometimes it happens in Sumatra that the animal waits too long, or sinks too deeply in the mud, and is in consequence unable to extricate himself. When the natives discover one of these imbedded animals they assemble in great numbers, each man bringing a bundle of dry wood and leaves with him. They then heap these combustibles over the animal, set fire to them, and keep up the supply of fuel until the flesh is sufficiently cooked to be eatable. It seems a cruel plan, and to a certain degree is so. But the cruelty is in reality not so great as might be supposed, for the smoke and vapour of the burning materials would have the effect of smothering the animal in a very short space of time.

The exterior of the skin is gnarled and knotted like the bark of an old oak tree, and is covered with tubercles of different dimensions, some being as large as a penny, and covered with smaller tubercles, while others are not larger than split peas. The largest specimens of these projections are to be found on the skin that hangs over the hind quarters, and they become smaller until they assume their least dimensions on the fore quarters. The ridge of the tail is rather curious, extending for some distance over the back, and being very conspicuous. The tail itself is large and rounded at the base, and towards the tip it is flattened considerably, having a quantity of stiff hair upon its edges.

In spite of the heavy and clumsy aspect of the animal, its tread is by no means heavy, owing to the structure of the hoofs, which are furnished with spring plates like those which have already been described when treating of the elephant. The



## THE ZOOLOGICAL GARDENS.

peculiar overhanging upper lip can be well studied by offering the animal a bunch of grass or a leafy branch. It protrudes this lip much as an elephant protrudes the proboscis, grasps the leaves within it, and so conveys them into its mouth.

This specimen has thriven well during its long sojourn in the gardens, and is tolerably tame with its keeper, who calls it by the name of "Bet." It is, however, liable to sudden fits of bad temper, and more than once the keeper has been obliged to save himself by retreating behind an ingenious wooden barrier which enables him to pass just beyond reach of the animal's head, and permits him to ascend a ladder and pass out by another door.

The eye of the Rhinoceros is not nearly so attractive as that of the elephant, its dull, sombre brown iris, overhung with the languid eyelid, affording a great contrast to the clear, round, intelligent eye of the elephant.

There is much more to be said of the Rhinoceros, but as space is valuable we must pass to the next animal on our list.

For the first time since Natural History became a science, Europeans have an opportunity of studying the HIPPOPOTAMUS as he is, and not as he was supposed to be.

My readers are probably aware that there are two fine specimens of this animal now in the Gardens, one of which is about thirteen and the other about nine years of age. Some of us may remember the extraordinary excitement which was caused by the arrival of the animal, and may have heard the story of the very unceremonious manner in which Abbas Pasha, on learning that the Queen of England would like a Hippopotamus, sent for the Governor of Nubia, sent him back again, after an audience of five minutes, to send the commander of the Nubian army; sent him back again, after an audience of similar brevity, with orders to go and fetch a young Hippopotamus, and so obtained the animal and forwarded it to England.

I have watched the animal at intervals during his stay of thirteen years, and find, from reference to my notes, that his temper does not at all improve as he grows older.

He is a huge beast, morose and tetchy, and has broken his teeth to pieces by his custom of biting the iron bars of his inclosure whenever he tries to get at some obnoxious individual. Almost every individual is obnoxious to one or the other of the animals, and if one takes a dislike the other is pretty sure to follow suit.

In order to protect the bars against the rushing attacks of the Hippopotamus a series of stout wooden beams have been arranged so as to form barriers and take off the force of the animal's charge. The creatures have a wonderful detestation of all workmen, and cannot endure a man in his working clothes to pass near their inclosure. They even objected to some photographers, and made such a turmoil that the work could not be conducted. Quite lately the male animal made one of his rushes, and broke off a piece of tooth weighing about half a pound.

It is a sad pity that he should be so unchancy a beast, for the teeth are among the most singular peculiarities of the Hippopotamus, and it is much matter of regret that they should be injured.

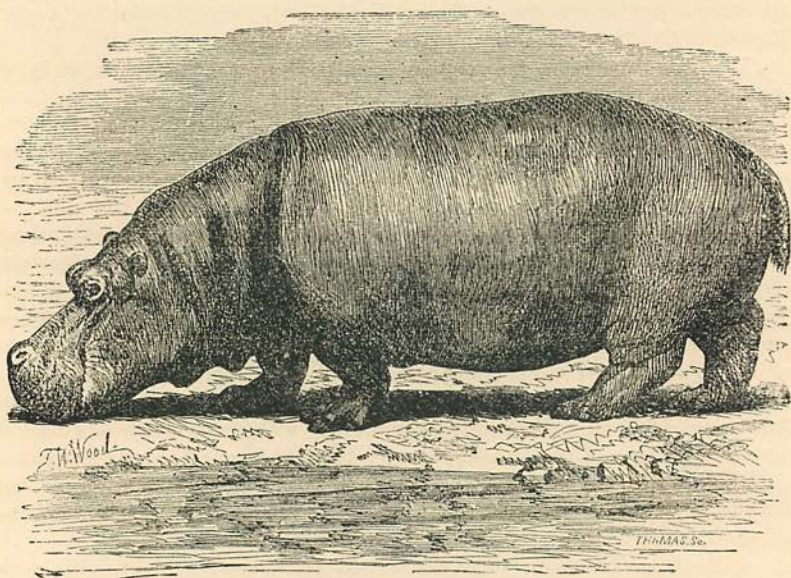
Both the animals have taken a great dislike to certain individuals, and never fail to charge them when they come within sight. They were both quietly reposing when I paid my last visit to them, but the keeper told me that the male had "been carrying on dreadful" all the morning.



## THE ZOOLOGICAL GARDENS.

In its wild state the Hippopotamus is occasionally a dangerous animal, particularly to men in boats. Though it will mostly get out of the way, it will sometimes attack the boat with blind fury, either swimming under it and knocking it out of the water, or making a regular charge, and snapping at the men in the boat with its huge mouth. The chisel-edged teeth with which its jaws are armed make it a most terrible assailant, and Mr. Petherick has seen a man cut completely in two by a Hippopotamus that pulled him out of a boat. It never seems to attack a large boat, reserving itself for the smaller craft.

The natives make much use of the Hippopotamus, employing its thick hide for



The Hippopotamus, or River Horse.

whips, selling its teeth to Europeans, and eating its flesh. The fat of the Hippopotamus takes salt nearly as readily as that of the hog, and is called Sea-cow bacon.

There are several methods of catching this huge beast. Sometimes a pitfall is dug in its track, into which the animal falls, and from which it never escapes alive. Sometimes a poisoned spear is used, the weapon being inserted into a log of wood, and suspended by a line over the path which the Hippopotamus frequents. As the animal passes it loosens a catch, liberates the log, and receives the envenomed spike in its back.

The most sportsmanlike weapon is the harpoon. This is a very ingenious instrument, made of a long and thick shaft, some ten feet in length and four inches in diameter, into which is loosely fitted a barbed iron point. A rope composed of many loose strands connects the head with the shaft. To the head of the shaft is fastened a long and tough line.

Arming themselves with a harpoon or two and a goodly supply of spears, a party of hunters set off on a raft, and guide it to the place where the expected prey



## THE ZOOLOGICAL GARDENS.

are floating and plunging. As soon as they come within reach of a Hippopotamus, the harpooner raises his weapon and drives the iron head into the body of the animal. The startled Hippopotamus dives at once, and by its struggles shakes off the shaft, which floats and acts as a buoy.

The animal cannot bite the connecting line asunder, for the teeth only pass between the loose strands and meet no resistance. The poor beast has now no chance for life. Time is of no value to his assailants, who are willing to wait as long as the creature struggles, and every time that it shows itself above the surface of the water a shower of spears is hurled into its body. It often turns upon its assailants, and sometimes retaliates with fatal effect; but in that country human life is nearly as unimportant as time, and the surviving hunters persevere until the Hippopotamus succumbs under loss of blood and exhaustion.

To kill a Hippopotamus is not an easy task, even to a man who is armed with a heavy rifle. As may be seen by watching the animals in the Zoological Gardens, the nostrils and eyes are the only parts of their body which they expose to the hunter's aim, and unless he succeeds in hitting the eye or the nose he has but little chance of securing the prey. A bullet in the eye is instantaneously fatal, but a wound in the nose has the effect of preventing the animal from remaining below the surface of the water, and so gives the hunter opportunity to find a deadly spot wherein to plant his bullet. The new shell bullets will probably be effectual in killing this huge animal.

In order to enable the Hippopotamus to withstand the action of the water, a peculiar oily secretion exudes plentifully from multitudinous pores, and is conducted by tiny channels that traverse the skin in all directions, like the marks on "crackle" china. This oily secretion is dark-coloured, tenacious, and of a rather glutinous character.

The walk of the Hippopotamus is rather peculiar, for the legs are set so widely apart that each pair makes a separate path through the vegetation, and any one may tell where a Hippopotamus has been by the double track left by its feet. Owing to the peculiarity of its gait and the voracity of its appetite, the Hippopotamus is at all times an unpleasant neighbour to those who cultivate land near the rivers which it frequents. It is very fond of the green and growing crops, and makes sad havoc among them.

The natatory powers of this animal are really wonderful, for the round, tub-like body and short, stout legs seem but ill adapted for the skill which it displays. It can dash through the water with astonishing speed, leaping, as it were, along, the body projecting half out of the water at every spring. It can lie asleep for hours together, its nostrils and eyes just projecting above the surface, and it can dive for a very long period, being able to rise or sink at will, probably by expanding or contracting the body. As it rises to the surface it often makes a loud, snorting noise, throwing a column of spray from each nostril to a height of eight or ten feet, and often uttering its trumpet-like cry, which makes the hearer tremble for the drum of his ears, and causes the animal's house to quiver as if a piece of artillery had been fired near it.

At present no offspring have been born from the pair now in the Gardens. The female has long ago usurped the mastery, and makes her mate do exactly as she chooses. She is the more watchful of the two, and is generally the first to spy out an obnoxious individual and to initiate the charge at him.



## THE BOYS OF BYGONE DAYS.

opportunities like these wherein to prove their devotedness, for the days of chivalry have passed away for ever. For all that, heroes are still to be met with, even amid the drudgery of modern town life; and examples of heroism are all the more noble when they come to light from the depths of obscurity. There are the weak to be protected, the timid to be defended from oppression by cowardly bullies; there are innumerable ways in which lads can lighten the cares of over-worked mothers by giving up a little of their own time and pleasures; and it may be truly said that there is scarce a boy but has opportunities come in his way, if he will but look for them, of displaying the true spirit of self-sacrifice and heroism.

---

## THE ZOOLOGICAL GARDENS.

BY THE REV. J. G. WOOD, M.A., F.L.S., ETC.

---

### ELEPHANTS AND THEIR KIN.

THE animal to which our attention is now drawn affords a remarkable instance of the value of scientific knowledge.

I have always held that the true object of the zoologist is to study the life rather than the dead bodies of animals, and to learn, by examination of their mode of living, the part which they play in the great drama of the universe. The museum and the cabinet are but ancillary to the field, the forest, and the waters; and the stuffed skin and mounted skeleton, however admirably they may be prepared, can give but little insight into the true nature of the living being. The student of zoology—*i.e.*, the science of life—looks to the spirit which animates the various beings rather than to the material form that is but the exponent of their inner nature, and only values the outward structure as far as it explains the nature which necessitates their presence.

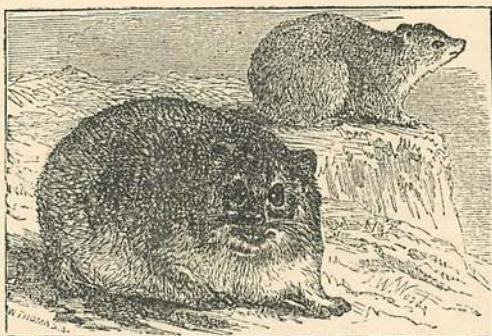
Holding these opinions, therefore, I must not be misunderstood if I write feelingly of the very great value of that branch of zoology to which the name of "science" is popularly and inappropriately restricted. I say "inappropriately," because the man who has studied the living history of an animal, and is acquainted with its birth, life, and death, surely possesses as much true science as the man who has learned the number and shape of its teeth, the colour of its fur, the proportions of the cervical to the lumbar vertebrae, and sundry other details of a similar character.

Putting, however, that question aside for the present, and accepting, under protest, the term "science," I must take the present opportunity of mentioning the great debt of gratitude which we owe to those whose genius leads them to study these dry bones of Natural History. These scientific details are, in very fact, the skeleton which gives strength and durability to the structure, and without which the beautiful study of zoology would be as weak and purposeless as a quail deprived of its bones.



## THE ZOOLOGICAL GARDENS.

Without this branch of science there would be no system, no order, and no possibility of identifying the creatures which are described. Most of my readers have probably perused the works of travellers who give the most interesting accounts of the birds and beasts which they have watched, but have only mentioned the local names by which those creatures were known in their native country. In spite of the interest which attaches itself to the accounts, a feeling of disappointment mars the pleasure of the reader, because he finds himself at a loss to identify the particular being which is described. And in the very frequent instances where the same creature receives different names in different countries, the difficulty is more than doubled. Even in the British fauna the same inconvenience exists, and the necessity for a systematic index is proved. The little birds, especially those which belong to the group of finches, are called by a wonderful variety of names, according to the locality in which they are found; while as to the insects, many of them have no popular names at all, and others receive a different title in every county.



Klip-daas, or Rock Rabbit (*Hyrax Capensis*).

The extreme value of systematic zoology is well proved by the KLIP-DAAS, or ROCK RABBIT (*Hyrax Capensis*) of Southern Africa.

If the reader will enter the house devoted in the Gardens to small mammalia, and look on the left hand of the door, he will see several insignificant-looking animals, something like rabbits, sitting together in a corner of the cage. If one of them should be alarmed, or if the keeper should by chance make his appearance, one of these little animals will suddenly make a great leap, dart along the wires with the agility of a squirrel, and sit on a little wire platform.

As it peers over the edge of the little stage it looks just like one of the rodents, with its rounded head and full eyes, something like those of the guinea-pig, its fur-clad body, and its sharp incisor teeth gleaming whitely between the parted lips. The edges of the incisor teeth are chisel-shaped, like those of the rabbit and other rodents, and the whole look of the animal is such that the older naturalists had ranked it among the rodents. But when the light of comparative anatomy is thrown upon the animal its position is at once changed, and, instead of being related to the rats and rabbits, it is found to belong to the elephant tribe.

If the reader will watch carefully the little creature as it stands on the platform, he will see that the incisor teeth, instead of resembling those of the rabbit, are formed like those of the hippopotamus, and, like them, are chisel-edged, and capable



of cutting vegetable substances of some toughness. Let the feet be examined, and they will at once lose the character of "paws," and assume that of *hoofs*. Indeed, the spread toes of the Klip-daas bear a very close resemblance to the feet of the rhinoceros. It is true that the horny hoofs do not extend so far over the toes as in the large elephantidæ, but they are, nevertheless, as truly hoofs as the corresponding parts in the elephant, rhinoceros, or hippopotamus.

The Klip-daas is always to be found among the rocks, and displays wonderful agility in skipping about among the craggy precipices. It seems strange that a member of the family to which belong such huge and unwieldy creatures as the elephant and the hippopotamus should be active, lively, and small, but it is not more strange than that a kangaroo should be able to climb a tree.

As the flesh of the Klip-daas is very delicate and tender, the animal is sadly persecuted by the hunters and colonists, and often falls a victim to the poisoned arrow of the Bosjesman. When captured alive it can easily be tamed, though it is apt to fall into sad fits of passion, and snaps with its teeth and strikes with its paws with wonderful vigour. Another species, the DAMAN, or SYRIAN HYRAX (*Hyrax Syriacus*), is the animal which is often mentioned in the Scriptures under the name of "coney." The solitary and rock-loving habits of the animal will explain to the reader the reason why it was so frequently selected as a type of desolation. A third species, the АШИКОКО (*Hyrax Abyssinicus*), resides in the country from which it takes its specific name.

The thick coat of fur may, perhaps, be thought to afford another point of difference between the Hyrax and the rest of the animals to which it is allied. This distinction is, however, rather an apparent than a real one, for it must be remembered that, in the elder days of the world, even the great elephants of that time were clothed with a triple suit of hair—a close, short wool coming next the skin, then a coat of longer and harsher hair which acted as a penthouse to throw off the rain, and, lastly, a large quantity of very long and very coarse hairs. Specimens of the wool and both kinds of hair may be seen in the splendid museum belonging to the College of Surgeons.

The reader will remember that our list of animals in the Zoological Gardens is not arranged exactly according to scientific rules, though, at a future day, a re-arrangement will probably be made. We therefore proceed to the animals which present so many points of affinity to the elephants, namely, the Tapirs.

These animals are remarkably valuable to the comparative anatomist and the geologist. They exhibit the transitional state between the true elephants and the swine, and are, moreover, the representatives of many extinct animals whose remains are plentiful, and whose form has been well made out.

There is something very horse-like—perhaps I should say ass-like—about the Tapir, owing to the peculiar carriage of the head and neck, and the short, "hogged" mane, so that it appears to be much more deserving of the title of Hippopotamus, *i. e.*, River Horse, than the broad-headed, round-bodied animal which bears that name. In its natural state the Tapir is an aquatic animal, delighting to live near rivers, and never seeming quite happy unless within the near vicinity of water. It can swim with perfect ease and much power, and prefers to be among the thick underwood, or in the water, during the hot part of the day.



## THE ZOOLOGICAL GARDENS.

The chief point of interest in the Tapir is the remarkable upper lip, which is developed into a snout of some length and considerable flexibility, much resembling, though on a small scale, the proboscis of the elephant. The nostrils are pierced at the extremity of the snout, and extend through its whole length. If the reader will provide himself with a little bunch of grass, and offer it to the animal, he will see the powers of the snout well developed. The Tapir, on seeing the tempting morsel, comes to the side of the den, protrudes the snout to a surprising length, and wraps it round the herbage. With a movement very like that employed by the elephant while eating, the food is inserted into the mouth, and the animal immediately asks for a further supply.

The skin of the Tapir is tough and flexible, so that a pistol ball will scarcely penetrate into the body, and, when dressed, is made into many useful articles. The covers of the poison quivers used by the Macoushie Indians are mostly made of this substance, though I have one which is formed of peccary hide, with the hair still adhering to the skin. The jaguar is a terrible enemy to the Tapir, and seems to like no food so well as that which is supplied by this animal.

It is a solitary animal, and has a great talent at hiding itself, so that an inexperienced hunter has great difficulty in finding it. Frequently, however, when the traveller is proceeding quietly along the river side, he will be startled by the sudden charge of a Tapir, which has been alarmed by his approach, and rushes from its concealment in a hurry, crashing through the reeds as it makes its way to the river. Though perfectly harmless to man, it is destructive to the crops, because it breaks down the fences by the weight of its body, and when it has thus gained admission into an inclosure it will trample down far more maize than it eats.

When taken young it is soon tamed, but seldom attains its full size, often dying before it has reached adult age, and always being rather dwarfed in stature. A full-grown American Tapir is about the size of a large donkey, but weighs considerably more than that animal, on account of the massiveness of the body and the stoutness of the legs.

In the Zoological Gardens are some specimens of the AMERICAN TAPIR (*Tapirus terrestris*). This animal is known to the natives by the titles of MBOREBI and DANTE, and other names by which it is distinguished are ANTA and PINCHAQUE. Another species of the same genus is the MALAYAN TAPIR (*Tapirus Malayanus*), the native names of which are KUDA-AYER and TENNU. This animal is remarkable for its colouring, the whole of the hinder parts being white, just as if a sheet had been thrown over them. The young is striped in a very peculiar manner, and is in colour quite unlike its parent.

The Tapirs at the Zoological Gardens assume rather curious attitudes. Being very fond of water, and finding in the pen no place wherein they can bathe, they content themselves with paddling in the trough from which they drink, and splashing the water about the floor. When tired of paddling they retreat and sit down on their haunches, looking more like fossil animals than creatures of the present day. They are rather quick-tempered, and when they ask for food and do not get it they utter a series of impatient squeaks not unlike the cries of a small pig.

The flesh of the Tapir is by no means remarkable for its excellence, being tough and stringy. The Macoushie Indians are in the habit of killing the Tapir with a



## THE ZOOLOGICAL GARDENS.

weapon which, although made entirely of wood, is more efficacious than the leaden bullet or the steel-pointed spear. This is the terrible poisoned arrow, the barbs of which are armed with the celebrated Wourali poison. One of these arrows in my possession is about four feet in length, and its head measuring about six inches. The head is movable, and fits quite loosely into a socket, so that when the animal dashes off, on feeling the smart, the barbed head remains in the wound, and the shaft falls to the ground. I purposely refrain from further mention of this remarkable weapon, and postpone its consideration to a future paper.

We now turn to the true SWINE, animals which may at once be known by their general shape, and by the truncated snout with the nostrils at the tip.



The Babirusa, or Hog-deer (*Babirusa Alfurus*).

In the same pen with the Tapirs may be seen the remarkable animal which is known by the name of BABIRUSSA (*Babirusa Alfurus*). The word Babirusa signifies Hog-deer, and is given to the animal on account of its shape, which is lighter and more elegant than that of the typical swine. It is a native of Malacca, and by no means uncommon.

The chief point of interest in the Babirusa is the structure of the teeth and jaws. We all know how the tusks of the ordinary boar project from the under jaw, and become most formidable weapons, capable of ripping up a horse or killing a human being as effectually as the horns of a bull. But the Babirusa possesses, in addition to these weapons, a supplementary pair of tusks, which take their origin, not in the lower, but in the upper, jaw.

Had we not seen specimens of the animal, and had been told that a certain member of the Suinæ possessed tusks in both jaws, we should certainly have presumed that one pair would be directed downwards, as is the case with the teeth of the upper jaw. But, when we come to examine the animal, we find a most singular conformation of the jaw. The sockets of the upper pair of tusks are curved



## THE ZOOLOGICAL GARDENS.

upwards, and the teeth which issue from them are necessarily obliged to follow the curve. They do not project on each side of the lip, as is the case with the lower tusks, but pass through a pair of holes in the skin.

The length of these tusks is so great, and their curve is so sharp, that they cannot be employed as weapons of offence, their tips often reaching to the skin of the forehead. Their precise use is rather a mystery, but it is suggested that they may possibly be of service in guarding the eyes when the animal rushes through the underwood. This suggestion, however, is scarcely admissible, because all the Suinæ are in the habit of dashing through brushwood, and would, therefore, need the assistance of such defences quite as much as the Babirussa. The tusks of the lower jaw are rather formidable, and, though the animal is not generally thought to be ferocious or savage, I have found that all who have been brought into collision with it have been impressed with a thorough sense of its prowess.

The Babirussa is fond of concealing itself under grass, hay, straw, or other substances, and in its native country is thus enabled to lie concealed. The visitor to the Zoological Gardens can easily see the Babirussa perform this manoeuvre. When it finds that it can procure no more food, it retires to the heap of straw in the corner of the pen, and backs into it, wriggling about until it is quite covered. When it is satisfied with its concealment it sinks down with a contented grunt, and lies so perfectly hidden that no one can see it. Sometimes it is rudely disturbed by one of the tapirs, which persists in walking over the concealed animal, and then sitting on it—a proceeding which elicits many angry growls, and occasions much heaving of the straw and the final dislodgment of the tapir.

The colour of this remarkable animal is greyish-brown, and the whole surface has a peculiarly smooth and glossy aspect. A fine skull of an adult male is placed near the pen, so that visitors may have an opportunity of studying the peculiar conformation of the jaws. As is the case with all the swine, the female is devoid of tusks, these weapons being exclusively the property of the adult male. If, however, she can use her teeth as well as the wild sow of India, she may be quite as formidable a foe as her mate, the long and powerful jaws seizing a considerable portion of a leg or arm, and the teeth inflicting a very severe bite. The specimen in the Zoological Gardens is not quite full-grown. It was obtained by exchange from the collection at Rotterdam. It is placed in the Eland House because it would not be able to endure the more exposed situation of the Swine House.

If we now bend our steps to the tunnel, pass under the road, and proceed to the Swine House, we shall find a row of pens tenanted by several species of the Suinæ.

There is, as we might expect, an example of the European WILD BOAR (*Sus scrofa*), the original stock from which all our infinite varieties of domestic swine have sprung. This specimen came from the South of France, and was presented by A. Shoolbred, Esq.

From our English forests the true Wild Boar has been long driven, on account of its ferocity and the consequent danger to population. There are still, however, many who are anxious that the old breed should be restored, and that sportsmen who find fox-hunting too tame and commonplace a recreation may diversify their amusement by a little "pig-sticking," as our Indian friends call boar-spearing.



## THE ZOOLOGICAL GARDENS.

I was about to dismiss the Wild Boar with a remark to the effect that, as we are all familiar with pigs, there is no need of further description. But, on second thoughts, I cannot but feel that the generality of Englishmen know very little about the pig as he really is. We do not do him justice in our deeds or by our words. Borrowing the ideas of early traditions and different religions, we make use of the word "pig" as a term of reproach. An Oriental can never be more deeply affronted than by being called a pig, and even the French are in the habit of using the word "*cochon*" as a term of reproach, irrespective of the character of the person to whom it is applied.

Among us, when we use the word "pig" as a term of reproach, we mean to imply that the individual to whom we apply it is gluttonous in appetite and dirty in habits. It is true that the generality of domestic pigs are both gluttonous and dirty, but these failings are attributable to circumstances, and not to temperament. The poor beast cannot help himself. If we shut him in a limited space, and leave him wholly to himself, it is difficult to conceive how he should ever be clean. The cleanest Englishman living, if incarcerated in a dungeon, and left wholly to himself, without water and without the means of purifying his prison, would soon be as dirty as any pig, and probably far more offensive. But, in his native state, the pig is by no means a dirty animal; and, indeed, I do not know of any animal to which such an epithet can be rightly applied. Even in captivity he enjoys a good wash most thoroughly, and grunts with delight when the pail and scrubbing-brush come into operation.

As to the gluttony, the pig is certainly a being of large appetite, and, if he cannot obtain quantity and quality alike, he will prefer the former. What is he to do? He does not prefer bad to good food, but when he has no alternative he must take what he can get. Give him the choice, and you will soon see whether the pig is not as dainty an animal as a pet dog or cat. In the wild condition he is mightily fastidious, and with his sensitive nose digs up and carefully examines the fresh roots and tubers before he thinks of eating them. Piggy manages his snout with wonderful adroitness, turning over, sniffing at, and testing everything eatable, and never taking anything on trust.

We call the pig a fat and lazy animal.

It is true that the *Suinæ* are so constituted that they make fat with very great rapidity, as, indeed, is fortunate for mankind, to whom the pig is useful in so many ways. But, in its wild state, when it has plenty of fresh air and continual exercise, it is by no means a fat animal, but, on the contrary, is lean, spare, and flat-sided. Indeed, unless a pig be kept in a state of involuntary quietude, and supplied with large quantities of food, it never becomes fat. See, for example, Sir F. Head's graphic account of the swine in the "Bubbles of the Brunnen," how he was struck by their universal lankiness and slab-sidedness, if we may coin a word. Or, even if we look nearer home, and go among the Hampshire hogs before they are penned up and fattened, we shall form a more correct judgment of the animals than by merely looking at them when shut up in sties.

The activity of a Wild Boar in good condition is perfectly wonderful, and never fails to astound those who see the animal for the first time, and whose only ideas of pigs have been connected with sties and roast pork. Experienced hunters say that the fiery courage and rapid charge of the Boar are quicker and more deadly than the leap and blow of the tiger; and the natives would at any time rather



## THE ZOOLOGICAL GARDENS.

meet the latter than the former animal. The stroke is as quick as lightning, and the spring of the animal is sure to take by surprise those who are not accustomed to it. The endurance of the Wild Boar is as remarkable as its speed and dash, for it will conquer most horses when it gets upon rough ground, going away at a pace that seems to be almost incredible, and rushing up and down hill with equal ease.

As to sagacity, the swine are by no means wanting. They possess as much capacity as other animals, and, when they have the chance, will develop it as well. We know that an animal which can be trained to point game must be possessed of considerable mental powers, and we think highly of the pointer because it is



The Red River Hog (*Potamochoerus penicillatus*).

capable of learning so difficult and complicated a task. But we forge that the pig has proved itself quite as good a pointer as the dog, and that it responds to the endeavours of the teacher as well as any animal.

So, when we next see a pig wallowing in filth, or greedily devouring a troughful of repulsive food, let us lay the blame on the right shoulders, and, instead of abusing the pig as a dirty and gluttonous animal, remember that the owner is to blame for neglecting to clean the sty and to give the animal its proper nutriment.

Close to the wild boar may be seen a fine specimen of the RED RIVER HOG of Western Africa. The scientific name of this animal is *Potamochoerus penicillatus*; the generic name signifying water hog, and the specific title meaning "pencilled," in allusion to the tufts of hair upon the tips of the ears.

This is considered to be a rare species, and the animal may fairly be reckoned



## THE ZOOLOGICAL GARDENS.

Among the treasures of the Society. The Water Hog is a handsome beast, with its rich, ruddy coat, to which the black patch on the forehead and the white stripe of the back afford a fine contrast. The ears are, perhaps, the most remarkable points in this animal, being very long, standing boldly erect, as shown in the illustration, and switched sharply about in order to brush away the clustering flies.

An allied species, the BOSCH VARCK (*Potamochoærus*, or *Chæropotamus, Africanus*), is to be found in the forests, and occasionally does great harm to the crops, breaking through the fences and eating the vegetables. The Kaffirs, however,



The Masked Fig (*Sus larvatus*).

make their quadrupedal enemies pay for the damage which they occasion. They mark the spots at which the animals enter the inclosure, and then they dig pitfalls in the way. As soon as the Bosch Varck falls into one of these traps, he begins to squeal after the manner of pigs when alarmed, and thus tells the Kaffirs of their success. He does not live very long after his fall, for a dozen assagies are eagerly plunged into him, and he is speedily taken out of the hole, cooked, and eaten.

Both these animals are remarkable for the large wart-like excrescence on either side of the face.

Near the river hog are two species of Peccary. The COMMON or COLLARED PECCARY (*Dicotyles Tajaçu* or *Torquatus*) is very plentiful in Central America, where it assembles in herds, and is generally the master of the locality wherein it resides. To the eye it is a harmless little animal, not larger than a half-grown English pig, and with scarcely half-an-inch of tusk showing beyond its lips. In reality, however, it is a most formidable being, almost ignorant of fear, and its



## THE ZOOLOGICAL GARDENS.

little lancet-shaped tusks cutting like penknives. The rushing sound of a herd of Peccaries, and the sharp, snapping strokes of their teeth, will make the bravest hunter take to his heels.

The whole herd dashes onwards, heedless of obstacles, and the leaders strike right and left with their keen-edged tusks. There is scarcely a hunter in Central America who has not some amusing anecdote of the Peccary and its vagaries. The animal does, however, learn wisdom, and those herds that live within reach of the white man are much more timid than those which have resided in the interior. They have learned the effects of fire-arms, and as soon as they hear the bullet whistling among their ranks, followed by the loud report, they scamper off in all directions. Those, however, that have dealt only with the natives, and have no practical knowledge of fire-arms, dash angrily towards the hostile sounds, and force their antagonist to gain the shelter of a tree. From this point of vantage he may thin their numbers greatly; but they care little for the diminution of the herd, and it is long before they find out that they must either run away or perish.

At night they creep into some crevice, such as a cave in the rocks or the hollow of a fallen and decayed tree, backing in, as is the manner of swine, and leaving the oldest member of the herd to enter last. He always acts as the sentinel, and if a skilful hunter can manage to hide himself directly in front of the cave, so that the sentinel cannot see him, he may destroy the whole herd. A Colt's revolving rifle, with an extra cylinder, is the best weapon, because the hunter need not expose himself by reloading.

Taking good aim between the eyes, he presses the trigger, and the animal falls dead. The body is immediately pushed out of the hole by the next Peccary, who looks about for the foe, and seeing nothing which can alarm him, he settles down to his post. In his turn he falls dead, and is succeeded by another, and so on until the whole herd has perished. The hunter always takes care, like a good general, to secure a retreat; for if he should make the least movement the sentinel dashes at him, followed by the rest of the herd, and forces him to run for his life.

Just behind the withers of the Peccary there is an open gland, which gives out an intolerable musky odour. As soon as the animal is killed, this gland must be removed, or the flesh cannot be eaten. In some cases, however, the musky odour is so disseminated through the flesh that even a hungry man cannot eat it. Mr. G. Byam mentions that he once shot a Peccary, cut out the gland while the animal was still struggling, and had a leg roasted for his dinner. He was very hungry, and welcomed the leg of roast pork as it was brought to table. But the musky flavour was so powerful that violent sickness ensued, and from that day he could not even bear the sight of pork. On account of this peculiarity the Peccary is sometimes called the Musk Pig. The Spanish settlers in Central America know it by the name of Savalino.

The WHITE-LIPPED PECCARY (*Dicotyles labiatus*) is considerably larger than the last-mentioned variety, and is conspicuous for the white margin of its lips. The hair on the body is brownish-black, marked with rings; and the mane and hair about the head are nearly long enough to conceal the ears. The White-lipped Peccary is an inhabitant of Paraguay, and is often three feet and a-half in length, while its weight frequently exceeds 100lbs. They are gregarious, and traverse whole districts, which they lay waste, led by some old male. When any obstacle intervenes to their passage they stop, and appear to hold a deliberation; but, <sup>as</sup>



## THE ZOOLOGICAL GARDENS.

soon as one has passed, the whole troop follow, swimming rivers, no matter how broad or swift, and climbing banks and hills with ease.

There are yet two more species of *Suinæ* which must be noticed.

The first is, perhaps, the most extraordinary in appearance of all the living species. It is undoubtedly piggish in form as well as in voice and habits, and yet is unlike all the other pigs, making them look quite elegant and trim by the contrast which it affords to them. Its head and face are all wrinkles, and its body is all folds. There never was so strange a looking pig, and no artist would have dared to draw such an animal "from the depths of his moral consciousness."

If the visitor will look at it directly in front, he will see the reason for its name—the MASKED PIG (*Sus larvatus*, or *pliceps*). It looks exactly as if some one had been trying to make a pasteboard mask of a pig's face, and failed egregiously in the attempt. The whole front is pinched, and puckered, and crumpled into multitudinous wrinkles, and ridges, and furrows, running in every direction, and completely covering the short, broad face. When the animal moves its snout from side to side the wrinkles move in concert, and produce a most extraordinary effect, not without a spice of the ludicrous. In fact, when the animal is munching provender, it looks absurdly like one of Rembrandt's old weather-beaten, wrinkled cronies, trying to mumble some hard and tough morsel in her toothless gums. The large flapping ears of the animal take the place of the old woman's cap, and give a curious exactness to the resemblance. As to the eyes, they are so hidden by the fatty folds which surround them, and the great flapping ears which fall over them, that they can scarcely be distinguished.

The body is every whit as remarkable as the head, and strongly reminds the observer of the Indian rhinoceros. The skin hangs loosely in great folds—I had almost said festoons—swinging about with every movement, and rolling in flat, heavy masses when the animal lies down.

It is fond of the reclining posture, and can scarcely be induced to rise, either by hints from the keeper's stick or by the offer of food. The colour of the Masked Pig is dark grey brown, but on the hind quarters, and just surrounding the tail, is a rather large patch of whiter skin, nearly devoid of hair, which has a very conspicuous aspect as the creature moves about. The Masked Pig is a native of Japan, and this specimen was deposited by Mr. Bartlett in January, 1862. It appears to be in perfect health, and, as it has lived for so long a time in the Gardens, we may hope that this singular animal may survive for many a year. The specific name, *pliceps*, is of Latin origin, and is very appropriately given to this animal, the two words of which it is composed signifying "wrinkled head."

Our last example of the *Suinæ* is the ANDAMAN PIG (*Sus Andamensis*), remarkable for the great length of its head and its peculiar drooping attitude, the snout nearly touching the ground as the animal walks along. It is not a very large species, being about the size of the white-lipped peccary, and having legs longer in proportion to the body. It is a neat, trimly-made animal, and seems very active on its legs, trotting about continually, and looking out for provisions, which it sadly grudges to its neighbours, squeaking impatiently when they are fed by visitors.

This pig is a native of the Andaman Islands.

(To be continued.)