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THE
ILLUSTRATED
NATURAL HISTORY.

BY THE REV.
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AUTHOR OF "ANECDOTES OF ANIMAL LIFE," "COMMON OBJECTS OF THE COUNTRY,"
"MY FEATHERED FRIENDS," ETC. ETC.

WITH NEW DESIGNS
BY WOLF, ZWECKER, WEIR, COLEMAN, HARVEY, ETC. ETC.
ENGRAVED BY THE BROTHERS DALZIEL.

VOL. I.

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hunter instantly reloads his rifle, and kills the second Peccary in like manner. In this way he will kill the entire family without giving the alarm. If the slain animal should not leap from the hollow, but fall dead at its post, the carcass is pushed out of the hole by the next in succession, who then assumes the part of sentinel without displaying any alarm. The other method requires the co-operation of two hunters, and is managed by one getting above the mouth of the hole and pinning the foremost Peccary to the ground with a pitchfork, while the other despatches it with a sword.

The food of the common Peccary is of a very varied character, and consists of fruits, seeds, grain, roots, reptiles, small birds and their eggs, and, indeed, of almost anything vegetable or animal which can be swallowed. The flesh of the Peccary is not of much value, as during many parts of the year it is wholly uneatable, on account of an odoriferous gland in the back, which taints the meat to such an extent that it cannot be eaten. The flesh of the male is at all times very unpleasant, but that of the female is in some months tolerably good, and has been compared to that of the hare. At the best, however, it is dry and insipid, as there is no fat or lard to be found in the Peccary. In all cases, the gland must be removed as soon as the animal is dead, for if it be permitted to remain but for a single hour, its effects will be perceptible throughout the entire body.

The common Peccary is not so harmful to the agriculturist as its large relation, and as it destroys such large numbers of reptiles, is probably rather beneficial than otherwise. The colour of the Peccary is a grizzled brown, with the exception of a white stripe that is drawn over the neck, and has earned for the animal the name of the Collared Peccary.

The TAGNATE, or WHITE-LIPPED PECCARY, is larger than the preceding animal, assembles in larger herds, is fiercer in its disposition, and works more woe to the farmer.

The White-lipped Peccary derives its name from a band of white hairs that crosses the upper jaw, and covers nearly the whole of the lower. The colour of the adult animal is black-brown, flecked with a grey grizzle, but when young it is striped after the manner of the *bosch-vark*. A slight mane runs along its neck, and its ears are fringed with long and stiff hairs. It is a most mischievous animal, as it makes long marches over the country, ravaging the crops in its progress, and always choosing, with a perversely excellent taste, the best maize and grass. The cry of the Peccary is a sharp shrill grunt. When angry, the Peccary clashes its teeth smartly together, producing a sound which is recognisable at some distance, and is very useful to the hunters, as it serves to give timely notice of the animal's approach.

The generic name, *Dicotyles*, signifies "double-capped," and is given to the animal on account of the peculiar open gland upon the back. This species is a good swimmer, and often crosses rivers of its own accord. As, however, it loses all its offensive powers while in the water, the Indians watch the opportunity, and by dashing among the floating animals, kill as many as they choose without any danger.

SEVERAL species of the RHINOCEROS are still inhabitants of the north, and several others have long been extinct, and can only be recognised by means of their fossilized remains. Of the existing species, two or three are found in various parts of Asia and its islands, and the remainder inhabit several portions of Africa. Before examining the separate species, we will glance at some of the characteristics which are common to all the members of this very conspicuous group.

The so-called horn which projects from the nose of the Rhinoceros is a very remarkable structure, and worthy of a brief notice. It is in no way connected with the skull, but is simply a growth from the skin, and may take rank with hairs, spines, or quills, being indeed formed after a similar manner. If a Rhinoceros horn be examined—the species of its owner is quite immaterial—it will be seen to be polished and smooth at the tip, but rough and split into numerous filaments at the base. These filaments, which have a very close resemblance to those which terminate the plates of whale-bone, can be stripped upwards for some length, and if the substance of the horn be cut across, it will be seen to be composed of a vast number of hairy filaments lying side by side, which, when submitted to the microscope, and illuminated by polarized light, glow with all the colours

of the rainbow, and bear a strong resemblance to transverse sections of actual hair. At the birth of the young animal, the horn is hardly visible, and its full growth is the work of years.

As the horn is employed as a weapon of offence, and is subjected to violent concussions, it is set upon the head in such a manner as to save the brain from the injurious effects which might result from its use in attack or combat. In the first place, the horn has no direct connexion with the skull, as it is simply set upon the skin, and can be removed by passing a sharp knife round its base, and separating it from the hide on which it grows. In the second place, the bones of the face are curiously developed, so as to form an arch with one end free, the horn being placed upon the crown of the bony arch, so as to diminish the force of the concussion in the best imaginable manner. The substance of the horn is very dense, and even when it is quite dry, it possesses very great weight in proportion to its size. In former days, it was supposed to bear an antipathy to poison, and to cause effervescence whenever liquid poison was poured upon it. Goblets were therefore cut from this material, and when gorgeously mounted in gold and precious stones, were employed by Eastern monarchs as a ready means for detecting any attempt to administer a deadly drug.

The skin of the Rhinoceros is of very great thickness and strength, bidding defiance to ordinary bullets, and forcing the hunter to provide himself with balls which have been hardened with tin or solder. The extreme strength of the skin is well known both to the Asiatic and African natives, who manufacture it into shields and set a high value on these weapons of defence.

All the species of Rhinoceros are very tetchy in their temper, and liable to flash out into anger without any provocation whatever. During these fits of rage, they are dangerous neighbours, and are apt to attack any moving object that may be within their reach. In one well-known instance, where a Rhinoceros made a sudden dash upon a number of picketed horses, and killed many of them by the strokes of his horn, the animal had probably been irritated by some unknown cause, and wreaked his vengeance on the nearest victims. During the season of love, the male Rhinoceros is always vicious, and, like the elephant, the buffalo, and other animals in the like condition, will conceal himself in some thicket, and from thence dash out upon any moving object that may approach his retreat.

Sometimes the Rhinoceros will commence a series of most extraordinary antics, and seeming to have a spite towards some particular bush, will rip it with his horn, trample it with his feet, roaring and grunting all the while, and will never cease until he has cut it into shreds and levelled it with the ground. He will also push the point of his horn into the earth, and career along, ploughing up the ground as if a furrow had been cut by some agricultural implement. In such case it seems that the animal is not labouring under a fit of rage, as might be supposed, but is merely exulting in his strength, and giving vent to the exuberance of health by violent physical exertion.

The Rhinoceros is a good aquatic, and will voluntarily swim for considerable distances. It is very fond of haunting the river-banks and wallowing in the mud, so as to case itself with a thick coat of that substance, in order to shield itself from the mosquitoes and other morbid insects which cluster about the tender places, and drive the animal, thick-skinned though it may be, half mad with their constant and painful bites. In Sumatra, a curious result sometimes follows from this habit of mud wallowing, as may be seen from the following extract from the "Journal of the Indian Archipelago." "This animal, which is of solitary habits, is found frequently in marshy places with its whole body immersed in the mud, and part of the head only visible. The Malays call the animal 'Badak-Tapa,' or the recluse Rhinoceros. Towards the close of the rainy season they are said to bury themselves in this manner in different places; and upon the dry weather setting in, and from the powerful effects of a vertical sun, the mud becomes hard and crusted, and the Rhinoceros cannot effect its escape without considerable difficulty and exertion. The Semangs prepare themselves with large quantities of combustible materials with which they quietly approach the animal, who is aroused from his reverie by an immense fire over him, which, being kept well supplied by the Semangs with fresh fuel, soon completes his destruction, and renders him in a fit state to make a meal of."



INDIAN RHINOCEROS.—*Rhinoceros Indicus*.

In every species of Rhinoceros the sight appears to be rather imperfect, the animal being unable to see objects which are exactly in its front. The scent and hearing, however, are very acute, and seem to warn the animal of the approach of danger.

The Asiatic species of Rhinoceros are remarkable for the heavy folds into which the skin is gathered, and which hang massively over the shoulders, throat, flanks, and hind quarters. Upon the abdomen the skin is comparatively soft, and can be pierced by a spear which would be harmlessly repelled from the thick folds of hide upon the upper portions of the body. In the INDIAN RHINOCEROS this weight of hide is especially conspicuous, the skin forming great flaps that can be easily lifted up by the hand. In a tamed state the Rhinoceros is pleased to be caressed on the softer skin under the thick hide, and in the wild state it suffers sadly from the parasitic insects that creep beneath the flaps, and lead the poor animal a miserable life, until they are stifled in the muddy compost with which the Rhinoceros loves to envelop its body. The horn of the Indian species is large in width, but inconsiderable in height, being often scarcely higher than its diameter. Yet with this short, heavy weapon, the animal can do terrible execution, and is said, upon the authority of Captain Williamson, to repel the attack of an adult male Elephant.

The height of this animal when full-grown is rather more than five feet, but the average height seems scarcely to exceed four feet. In colour it is a deep brown-black, tinged with a purple hue, which is most perceptible when the animal has recently left its bath. The colour of the young animal is much paler than that of the mother, and partakes of a pinky hue.

The JAVANESE RHINOCEROS is not so large as its Indian relation, the skin-folds are much less conspicuous, and are arranged in a different manner. The hide, too, is covered with certain angular markings, interspersed with short hairs, and its limbs are proportion-

ately longer and more slender. It is a nocturnal animal, seldom being seen by day, and issuing at night from its place of concealment for the purpose of feeding. Being a large and powerful beast, and happening to be very fond of several cultivated plants, such as the coffee and the pepper vine, it is apt to burst its way into the plantations, and to do considerable damage before it retires to its forest home. It seems to be more gentle and tractable than the common Indian Rhinoceros, and has been trained to wear a saddle, and to be guided by a rider.

The Sumatran species possesses two horns upon its nose, the first being tolerably long and sharp, and the second very thick, short, and pyramidal. The skin-folds are very slight in this animal; the hide is black in colour, rough in texture, and is covered with a thin crop of short bristly hairs. The neck is short and heavy, and the limbs are more clumsy than those of the Indian species. From all accounts it seems to be a very quiet creature, and to be held in no kind of dread, as an adult male has been seen to fly in terror before the attack of one of the native wild dogs. The head of this species is peculiarly long, a characteristic which is observable in the skull as well as in the living animal.

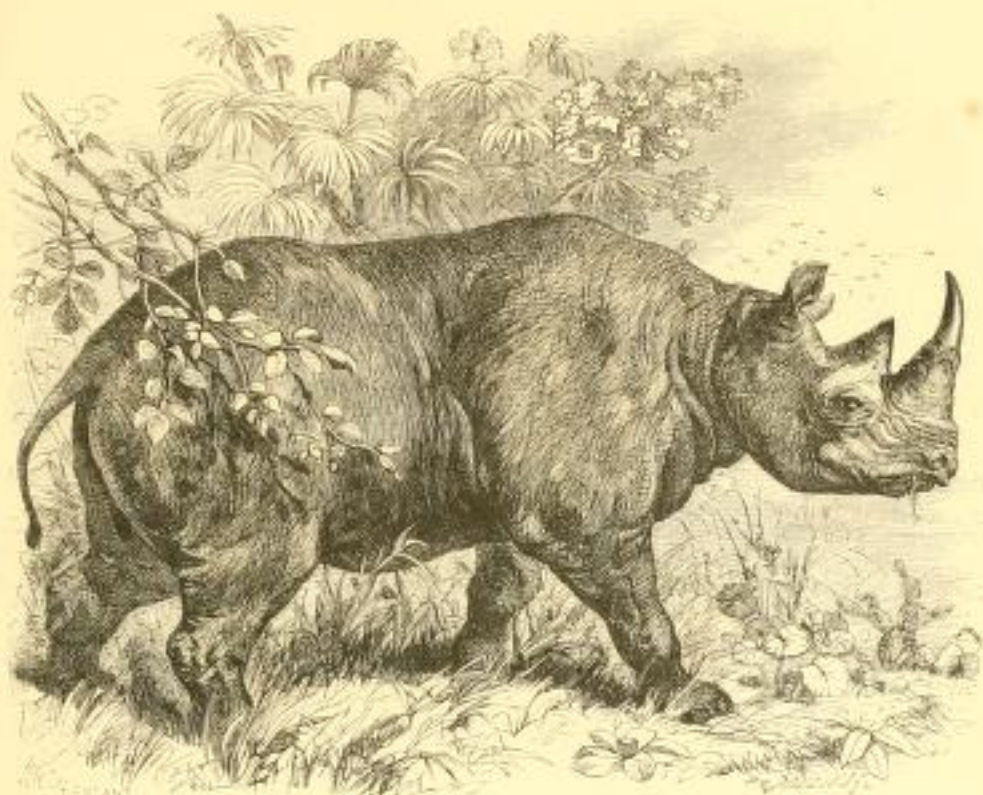
OF African Rhinoceroses four species are clearly ascertained, and it is very probable that others may yet be in existence. Two of the known species are black, and the other two white; the animals differing from each other not only in colour, but in form, dimensions, habits, and disposition. The commonest of the African species is the BORELE, RHINASTER, or LITTLE BLACK RHINOCEROS, of Southern Africa; an animal which may be easily distinguished from its relations by the shape of the horns and the upper lip. In the Borele the foremost horn is of considerable length, and bent rather backward, while the second horn is short, conical, and much resembles the weapon of the Indian animal. The head is rather rounded, and the pointed upper lip overlaps the lower, and is capable of considerable extension.

The Borele is a very fierce and dangerous animal, and is more feared by the natives than even the lion. Although so clumsy in shape and aspect, it is really a quick and active creature, darting about with lightning speed, and testing the powers of a good horse to escape from its charge. Like many other wild animals, it becomes furiously savage when wounded, but it will sometimes attack a passenger without the least provocation. On one occasion an angry Rhinoceros came charging down upon a wagon, and struck his horn into the bottom plank with such force as to send the wagon forward for several paces, although it was sticking in deep sand. He then left the wagon, and directed his attack upon the fire, knocking the burning wood in every direction, and upsetting the pot which had been placed on the fire. He then continued his wild career in spite of the attempts of a native who flung his spear at him, but without the least effect, as the iron point bent against the strong hide.

The skin of this animal does not fall in heavy folds, like that of the Asiatic species, but is nevertheless extremely thick and hard, and will resist an ordinary leaden bullet, unless it be fired from a small distance. The skin is employed largely in the manufacture of whips, or jamboks, and is prepared in a rather curious manner. When the hide is removed from the animal it is cut into strips of suitable breadth and laid on the ground. These strips are then hammered for some time in order to condense the substance of the skin, and when they are dry are carefully rounded with a knife and polished with sandpaper. One of these whips will continue serviceable for several years. The horn of the Borele, from its comparatively small dimensions, is not so valuable as that of the other species, but is still employed in the manufacture of drinking-cups and sword-handles. Its value is about half that of ivory.

The food of the Black Rhinoceros, whether the Borele or the keitloa, is composed of roots, which the animal ploughs out of the ground with its horn, and of the young branches and shoots of the wait-a-bit thorn. It is rather remarkable that the black species is poisoned by one of the Euphorbiaceæ, which is eaten with impunity by the two white animals.

When wounded, the Black Rhinoceros is a truly fearful opponent, and it is generally



RHINANTER, OR BORELE.—*Rhinoceros bicornis*.

considered very unsafe to fire at the animal unless the hunter is mounted on a good horse or provided with an accessible place of refuge. An old experienced hunter said that he would rather face fifty lions than one wounded Borele; but Mr. Oswald, the well-known African sportsman, always preferred to shoot the Rhinoceros on foot. The best place to aim is just behind the shoulder, as if the lungs are wounded the animal very soon dies. There is but little blood externally, as the thick loose skin covers the bullet-hole, and prevents any outward effusion. When mortally wounded the Rhinoceros generally drops on its knees.

It is at all times a rather savage beast, and is apt to quarrel with its own kind. Mr. Andersson mentions a curious battle of which he was an eye-witness, where four of these animals engaged furiously with each other. Two of them he contrived to shoot, and found that one was absolutely unfit for food, being covered with festering wounds which had been received in former encounters. The flesh of this animal is tolerably good, but that of the black species is rather tough, and possesses a bitter and unpleasant flavour, in consequence of the food on which the animal lives. The white species feeds almost exclusively on grass, and its flesh is remarkably good and tender. The Borele is a nocturnal animal, rousing himself from sleep at dark, and proceeding straightway to the nearest pool. Having refreshed himself, he takes long journeys in search of food, and returns to his temporary home soon after sunrise. When sleeping, he lies so still, that he may easily be mistaken for a fragment of dark rock.

As the eyes are set deeply in the head of the Rhinoceros, it is unable to see objects directly in its front if they are at any distance; its sight being hindered by the horns. But the hearing and scent of the creature are marvellously acute, and so wary is the animal, that even when feeding it will constantly halt, raise its ears, snuff the wind, and will not return to its occupation until its fears have been allayed.



KEITLOA, OR SUMATRA'S RHINOCEROS.—Engraved by Keitloa.

The KEITLOA can readily be recognised by the horns, which are of considerable length, and nearly equal to each other in measurement. This is always a morose and ill-tempered animal, and is even more to be dreaded than the borele, on account of its greater size, strength, and length of horn. The upper lip of the Keitloa overlaps the lower even more than that of the borele; the neck is longer in proportion, and the head is not so thickly covered with wrinkles. At its birth the horns of this animal are only indicated by a prominence on the nose, and at the age of two years the horn is hardly more than an inch in length. At six years of age it is nine or ten inches long, and does not reach its full measurement until the lapse of considerable time.

The Keitloa is a terribly dangerous opponent, and its charge is so wonderfully swift, that it can hardly be avoided. One of these animals that had been wounded by Mr. Andersson, charged suddenly upon him, knocked him down, fortunately missing her stroke with her horns, and went fairly over him, leaving him to struggle out from between her hind legs. Scarcely had she passed than she turned, and made a second charge, cutting his leg from the knee to the hip with her horn, and knocking him over with a blow on the shoulder from her fore-feet. She might easily have completed her revenge by killing him on the spot, but she then left him, and plunging into a neighbouring thicket, began to plunge about and snort, permitting her victim to make his escape. In the course of the day the same beast attacked a half-caste boy who was in attendance on Mr. Andersson, and would probably have killed him had she not been intercepted by the hunter, who came to the rescue with his gun. After receiving several bullets, the Rhinoceros fell to the ground, and Mr. Andersson walked up to her, put the muzzle of the rifle to her ear, and was just about to pull the trigger, when she again leaped to her feet. He hastily fired and rushed away, pursued by the infuriated animal, which, however, fell dead just as he threw himself into a bush for safety. The race was such a close one, that as he lay in the bush he could touch the dead Rhinoceros with his rifle, so that another moment would probably have been fatal to him.

THE common WHITE RHINOCEROS (*Rhinoceros Simus*) is considerably larger than the two preceding animals, and together with the kobaaba, or long-horned white Rhinoceros, is remarkable for its square muzzle and elongated head. The foremost horn of this animal is of very considerable length, attaining a measurement of more than three feet when fully grown. The second horn is short and conical, like that of the borele. Fortunately for the human inhabitants of the regions where the White Rhinoceros dwells, its temper is remarkably quiet, and devoid of that restless irritability and sudden access of rage which is so distinguishing a quality of the two black species. Even when wounded it seldom turns upon its antagonist, but contents itself with endeavouring to make its escape. Sometimes, however, probably when it has its young to protect, it will assume the offensive, and is then even more to be dreaded than its black relatives. The following anecdote, which was related by Mr. Oswell, the hero of the tale, to Mr. Andersson, affords an instance of this rare display of combativeness:—

“Once as I was returning from an elephant chase, I observed a huge White Rhinoceros a short distance ahead. I was riding a most excellent hunter—the best and fleetest steed that I ever possessed during my shooting excursions in Africa—at the time; but it was a rule with me never to pursue a Rhinoceros on horseback, and simply because this animal is so much more easily approached and killed on foot. On this occasion, however, it seemed as if fate had interfered.

Turning to my after-rider, I called out: ‘By heaven! that fellow has got a fine horn! I will have a shot at him.’ With that, I clapped spurs to my horse, who soon brought me alongside the huge beast, and the next instant I lodged a ball in his body, but, as it turned out, not with deadly effect. On receiving my shot, the Rhinoceros, to my great surprise, instead of seeking safety in flight, as is the habit of this generally inoffensive animal, suddenly stopped short, then turned sharply round, and, having eyed me most curiously for a second or two, walked slowly towards me. I never dreamt of danger. Nevertheless, I instinctively turned my horse’s head away; but, strange to say, this creature, usually so docile and gentle—which the slightest touch of the reins would be sufficient to guide—now absolutely refused to give me his head. When at last he did so, it was too late; for, notwithstanding the Rhinoceros had only been walking, the distance between us was so inconsiderable, that by this time I clearly saw contact was unavoidable. Indeed, in another moment I observed the brute bend low his head, and, with a thrust upwards, strike his horn into the ribs of the horse with such force as to penetrate to the very saddle on the opposite side, where I felt its sharp point against my leg.

The violence of the blow was so tremendous as to cause the horse to make a complete somersault in the air, coming heavily down on its back. With regard to myself, I was, as a matter of course, violently precipitated to the ground. Whilst thus prostrated, I actually saw the horn of the infuriated beast alongside of me; but, seemingly satisfied with his revenge, without attempting to do farther mischief, he started off at a canter from the scene of action. My after-rider having by this time come up, I rushed upon him, and almost pulling him off his horse, leapt into the saddle; and, without a bat, and my face streaming with blood, was quickly in pursuit of the retreating beast, which I soon had the satisfaction to see stretched lifeless at my feet.”

THE flesh of the MUCHUCCO, or MONOCHOO, as the White Rhinoceros is called by the natives, is apt to be rather tough, but is of good flavour. The best portions are those which are cut from the upper part of the shoulder and from the ribs, where the fat and the lean parts are regularly striped to the depth of two inches. If a large portion of the meat is to be cooked at one time, the flesh is generally baked in the cavity of a forsaken ant-hill, which is converted into an extempore oven for the occasion; but if a single hunter should need only to assuage his own hunger, he cuts a series of slices from the ribs, and dresses them at his fire. The hide of the Monochoo is enormously thick, and gives a novice no little trouble to get it from the body, as it is as hard as a board, and nearly as stiff. *An adept, however, will skin the animal as quickly and easily as if it were a sheep.

The Kobaoba, or Long-horned White Rhinoceros (*Rhinoceros Oswaldii*) is much rarer than either of the preceding species, and is found far in the interior, mostly to the east of the Limpopo River. The peculiar manner in which this species carries its horns, makes it a very conspicuous animal. In all the other species, the horns are curved, and incline rather backward; but in the Kobaoba, the foremost horn is nearly straight, and projects forward, so that when the animal is running, the tip of the horn nearly touches the ground. Indeed, the extremity of an adult Kobaoba's horn is generally rubbed down on one side, owing to the frequency with which it has come in contact with the earth. The head of this and the preceding species is always carried very low, forming a singular contrast to the saucy and independent manner in which the borele carries his head.

The long horn of the Kobaoba sometimes exceeds four feet in length, and as it is almost straight, is most valuable for many purposes. The best, toughest, and straightest ramrods are manufactured from this horn, and I have seen one of these ramrods that was almost four feet long, even after being shaped and trimmed, so that the horn from which it was cut must have been still longer. The mother Kobaoba employs this horn for a very curious purpose, as was seen by Cumming. Whenever the mother and her young are abroad, the calf always takes the lead, and in this instance she guided her little one by pressing it against the calf's side. The horn is also used by the Kaffirs to make "knob-berries," or knob-headed sticks, which they can employ as clubs in hand-to-hand combat, or can throw with wonderful effect. A party of Kaffirs will often go out in chase of birds, armed with nothing but these knob-berries, which they will hurl with such force and precision that they generally return home loaded with game.

The four African species of *Rhinoceros* are not at all prolific animals, producing only one young one at a time, and, as far as is known, a considerable interval occurs between each birth. It is not a gregarious, neither does it appear to be a monogamous, animal. It seems, however, to find some gratification in the presence of others of its own species, and may be seen in little assemblies of eight or ten in number. These assemblies, however, cannot be termed flocks or herds, as their members are not under the command of a single leader, nor bound together by any common tie, and, when alarmed, each individual makes his escape as he best can. The skin is comparatively smooth, and devoid of hair, so that the animal bears some resemblance to an overgrown pig.

ONE of the most curious little animals in existence is the **HYRAX**, interesting not so much from its imposing external appearance, as for its importance in filling up a link in the chain of creation.

About as large as a tolerably sized rabbit, covered with thick, soft fur, inhabiting holes in the banks, possessing incisor-like teeth, and, in fine, being a very rabbit in habits, manners, and appearance, it was long classed among the rodents, and placed among the rabbits and hares. It has, however, been discovered in later years, that this little rabbit-like animal is no rodent at all, but is of one the pachydermata, and that it forms a natural transition from the rhinoceros to the hippopotamus. On a close examination of the teeth, they are seen to be wonderfully like those of the hippopotamus, their edges being bevelled off in a similar manner, and therefore bearing some resemblance to the chisel-edged incisors of the rodents. There are several species of Hyrax, one of which inhabits Northern Africa and Syria, while the other two are found in Abyssinia and South Africa.

The South African Hyrax is termed by the colonists **KLIP DAS**, or **ROCK RABBIT**, and is found in considerable plenty among the mountainous districts of its native land, being especially common on the sides of the Table mountain. It is largely eaten by the natives, who succeed in killing it in spite of its extreme wariness and activity. Among the crevices and fissures in the rock the Hyrax takes up its abode, and may often be seen sitting in the warm rays of the sun, or feeding with apparent carelessness on the aromatic herbage of the mountain side. It is, however, perfectly secure, in spite of its apparent negligence, for a sentinel is always on guard, ready to warn his companions by a peculiar shrill cry of the approach of danger. Sometimes the Hyrax is seen at a considerable height, but is often observed near the sea-shore, seated on rocks which are barely above high-water mark.