
XXI. *Descriptions of two Quadrupeds inhabiting the South of Africa, about the Cape of Good Hope. By Andrew Smith, M.D., Member of the Wernerian Society of Edinburgh, Superintendent of the South African Museum, and Assistant Surgeon to the Forces. Communicated by Sir Everard Home, Bart., V.P.R.S., F.L.S., &c.*

Read June 19, 1827.

Most of the larger quadrupeds of South Africa are now known by names, yet few, comparatively speaking, by perfect descriptions. That such should be the case is not at all to be wondered at, when we consider that almost all the knowledge we possess regarding them has been obtained either from dried skins or from the works of travellers,—a class of individuals usually but little versed in natural history, and whose temporary residence, even if better informed, affords but few opportunities for making such experiments and observations as are absolutely necessary to advance science.

To describe animals with accuracy, they must be studied when alive, examined when young, observed when old, and closely watched through every stage between those periods; and to do that requires long and actual residence in the spots where they occur: circumstances which point out the propriety of local institutions for such purposes in all places whose natural productions are not thoroughly known. If such a plan had long ago been pursued at the Cape, doubtless the two animals now about
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to be described would ere this have been familiar to naturalists, and the illustrious Cuvier saved the necessity of making the following confession regarding one of them*. "Nous avons au cabinet du roi une hyène dont la patrie est inconnue, sur laquelle je suis en doute si c'est encore une variété de l'hyène rayée ou bien si on doit la regarder comme une espèce distinct."

Two species of the genus *Hyæna* inhabit the more southern parts of Africa, viz. the *Hyæna encrita*, or Tiger Wolf of the Cape colonists, and the Strand Wolf of the same, or the animal evidently alluded to by Cuvier in the remarks above quoted. The description of the latter has been drawn up from observations made on several different specimens, but particularly on one which was purchased for the South African Museum, when very young, and which now full-grown still continues in the possession of that establishment.

The other animal, as will be seen, is a new species of *Hyrax*, which, though it has lately been sent to Europe, has not yet, as far as I know, been named or described. From its being always found living in cavities or hollows of old decayed trees, I have given it the specific appellation of "*arboreus*." The drawing of the *Hyæna* accompanying this paper, is a close and faithful representation of the animal; and it was my wish to have sent one also of the *Hyrax*, but in that I have been disappointed, in consequence of my specimen dying before the drawing could be made.

HYÆNA VILLOSA.

Hyæna with the body dusky-gray variegated by large black spots or oblique bands, with the neck yellowish, and the extremities marked by interrupted transverse black lines.

* *Récherches sur les Ossemens Fossiles*, par M. Cuvier, tom. iv. p. 384.

STRAND WOLF, STRAND JUT, of the Colonists.

TAB. XIX.

In point of size and strength this species falls considerably short of the *Crocota* or most common Cape Hyæna. It usually measures about three feet from the forehead to the root of the tail, or a little better than four from the nose to the tip of the tail. The fore legs are considerably longer than the hinder ones; and when perfectly straight and upright, they maintain the upper parts of the shoulders about two feet four inches from the ground: on such, as well as on most other occasions, the head is still higher; and from thence till near the root of the tail the upper surface of the animal exhibits distinctly an inclined plane. The fore parts are much stronger and more robustly formed than the hinder ones, and its principal strength lies in the shoulders, neck, and head: the latter is throughout strongly constructed, and the upper part is very broad, and appears even more so than it actually is, on account of the manner in which the hair, like a ruff, stands out upon its sides between the ears and the throat. The forehead is deep, slightly convex, and covered thickly with a rigid short hair, partly black, partly white, and partly reddish-brown,—all, however, so intermixed with each other as to exhibit a sort of grizzled appearance. The lower portion of the face, commencing at the eyes, is much narrower than the upper parts, convex, in front flattish, at the sides and throughout thinly covered by short, black, and reddish-white hair. Immediately under the outer angle of each eye are one or two black spots and black hair, more or less distinctly in the form of one or more vertical stripes, occurs amongst the reddish-white sort that forms the ruff-like appearance previously alluded to as extending between the ears and the throat. The nose and the centre of the face immediately adjoining it
are



W. Taylor sculp.

Hyaena villosa.

are black and bare, the latter smooth, the former slightly rough and granular. The eyes are rather large, the irides very dark brown, and the pupils vertical, sometimes linear, sometimes oval. The ears are about four inches apart, pointed, usually erect, moderately long, and covered outside with a little fine reddish-white down, inside with the same, and the *meatus auditorius externus* partially crossed by a tuft of white hair, which descends from the inside of the superior margin of the external ear.

The chin and sides of the under lip are blackish; the beginning of the throat a deep black; and these two hues are separated from each other, more or less completely, by a transverse oblique band or white blotch. On the forehead, immediately over the inner angle of each eye, are a few particularly long black hairs, and some similar ones are observed about two inches behind the organs just mentioned, only, however, rather a little below their level. The latter issue from a thimble-like cavity formed by the shorter hairs receding from each other, and another and a similar appearance, may even if any thing more distinct, occurs about an inch behind the corner of the mouth, from which also protrudes a small number of like black stiff hairs. The whiskers are long, very strong, black, and disposed in three or four rows on the sides of the upper lip a little behind the nostrils. The hair on the neck and body is very long and shaggy, measuring in many places, but particularly about the sides and back, at least six inches. On the lateral parts of the neck, from the temples to the anterior edge of the shoulders, the whole is of a dirty tawny-white or dirty-yellow, which, with a little more white, is nearly the colour of the breast, belly, and insides of the extremities. Along the upper part of the neck, commencing at the forehead, the hairs are rather longer than on the sides, and of a tawny-white colour, slightly varied, however, by a

partial intermixture of a black or blackish-brown sort. A dirty tawny-white, or rather tawny-gray, occurs also on the back and sides, but is in those places less distinctly observed in consequence of the number of large irregular blackish spots, or transverse oblique stripes, which in some specimens are of so great a size and so closely set that their colour may be considered as the ground one, and the lighter hues only as variegations. The root of the tail is a dirty tawny, and the tip, or indeed the greater part of its length, bushy and black, with a slight intermixture of white hairs, and the whole measuring about eight inches in length. Outsides of the legs dirty-white crossed by a number of narrow nearly straight deep black bands, which are regularly wanting on the insides. Feet dirty-white and without variegations, each with four toes, and each toe with a short strong claw.

From an early age, the great length of the hair formed a very striking feature in the appearance of the captive specimen; yet I nevertheless felt inclined to view it as an example of the common striped species, and was disposed to attribute for a time the length of the covering to the circumstance of the animal's confinement. Recent examinations, however, of several others of a similar description, all of which had passed their early, and some of their mature, years in a state of nature, have proved, that the peculiarity alluded to did not depend upon the change of situation, but was common to it under all circumstances, and therefore with other characters has led me to regard it as a distinct species*.

In its manners, habits, and disposition, it agrees with the spotted sort; but from an inferiority of physical powers it is a

* I have no means of ascertaining the *H. fusca* of Geoffroy St. Hilaire: at any rate the description of that species does not correspond with ours.

less formidable enemy to man. Though equally carnivorous with the *Crocuta*, it seldom attacks the larger quadrupeds, and it is only sheep, goats, and such-like animals that suffer from its predatory habits. A living specimen, which I kept a long time in my possession, appeared particularly inclined to indolence during the day, and submitted to confinement even from the first without apparent regret, till the gloom of night approached, when he generally became restless, active, and evidently anxious after liberty. Every change that was made in his situation was followed during a certain number of succeeding nights by fresh exertions; but as soon as he found an escape to be unattainable he quietly submitted to his fate. When he was first procured, he was chained to a wooden post in the open air, and a large box was placed near him to afford a shelter from the inclemencies of the weather; but this he soon broke to pieces. He was then moved into an outhouse, and there kept chained till the collar began to chafe his neck, when it was cut off, the door closed, and he left so far free.

Though he could, while thus secured, range over every part of the house, yet he never attempted to effect his escape from the building till he found himself disencumbered of his chain, when he commenced the very first night afterwards digging up the floor close to the edge of the wall; and so industrious was he, that ere morning he had formed a cavity in which he could almost conceal himself. The hole was immediately filled up by large stones, all of which, however, he removed during the next night, and went on digging till he reached the foundation of the wall. This from its strength and breadth put a stop to his further progress. Having on this occasion also been disappointed, he relinquished his exertions, appeared perfectly contented with his residence, and showed no inclination whatever to commence operations in any other part of his dwelling. He always evinced

a great anxiety to carry things of every description to the place where he was confined; and whatever he got he invariably showed much inclination to retain, as even the most trifling articles were not without difficulty regained. He always seemed much delighted at the occurrence of rain, and during its continuance kept leaping and running about with unusual activity. Great warmth appeared always to be disagreeable to him; and whenever the heat of the sun was powerful, he regularly, if possible, got into the shade. On various occasions he appeared playful and mild, which, however, there was reason to believe, arose more from cunning than from good-nature; and on one of these occasions he continued his familiarity till he got his playmate, a young dog, within his grasp, after which he proceeded instantly to devour him. He appeared always extremely suspicious, and as if in constant fear of snares; for on one or two occasions I placed a common deal board obliquely across the house in which he was confined, and it was not till a considerable time after he had become accustomed to it that he ventured out of the distant corner into which at such times he regularly retreated. On gaining sufficient confidence to enable him to leave his retreat, he invariably advanced with much caution towards the board; and it was not till after a considerable lapse of time that he even dared to bring his nose in contact with it. In doing this, he frequently and suddenly retreated without any evident reason, and often merely from flies which he disturbed by advancing his head. After having on such occasions cautiously smelt the object which caused his fears, he never even then appeared satisfied with his situation till he had licked it all over with his tongue, and tried the influence of his teeth upon such parts as they could be brought to touch.

He appeared now and then fond of exercise; and at such periods he would run a hundred times, or even more, from one extremity

extremity of his habitation to the other without resting*. He always appeared to relish meat in which the blood remained, more than that from which it had escaped; and he invariably betrayed a great anxiety to destroy whatever animals came near him. On occasions when he succeeded in effecting this, he regularly lay down upon his victim and rolled over and over it, after which he carefully licked up such blood as might be upon it, or upon the ground on which it lay.

After a continuance of such gambols for about half or three-quarters of an hour, he usually proceeded to consume his prey; and then, as well as at other times, when he had more than he could at once devour, he generally concealed it in some hole or corner, and there let it remain till hunger urged him to make another meal. He always evinced a great liking to bones, and often would seize upon them in preference to flesh, and employ his teeth for hours together in breaking them in pieces, and his tongue in collecting the marrow and soft parts from the fractured portions. Such employment he appeared to pursue partly as a pastime and partly as a means of gratifying his palate, which the species under consideration, as well as the *Crocota*, is known to practise in his wild retreat, or place of concealment.

While one day employed in secretly observing the habits of this animal, I noticed an upright beam, which stood in one corner of the building in which he was confined, besmeared towards its middle with a dirty white-looking matter resembling impure candle-grease. On continuing to survey it, I saw the Hyæna approach the spot and lick off a portion with his tongue, which proceeding he repeated several times in close succession, till almost all of it had disappeared. Leaving him when scarcely

* I have often observed hawks, when in a state of confinement, do the same, which was probably to make up for the want of their natural exercise, so requisite for proper digestion.

any of this grease was to be seen, I was not a little surprised on my return to find the quantity much increased, and therefore determined if possible to ascertain from whence it was acquired. With this view I had the post cleaned, and then concealed myself so as to be unnoticed by the animal, and yet be able to see him. Scarcely was quietness established, when he approached the old spot and commenced rubbing his *nates* forcibly against the wood for about half a minute, and upon desisting an abundant supply of the white greasy-looking substance was found to have been deposited, which he commenced consuming agreeably to the mode already described. The rubbing-place was cleaned several times, and as regularly as that was done, the loss was supplied, till at last the animal finding all his exertions of no avail, selected a large stone in a distant corner of the building upon which to form the deposit, and where he continued to place it as long as he was annoyed. Since I first observed this habit, which is now more than six months, I have never for many minutes together seen the beam without more or less of the substance in question; and whenever I have secretly watched the animal for any time, I have seen him licking off and swallowing portions of it. He seldom finished a meal without betaking himself to the beam; he almost never rose from rest without making a similar journey, and he rarely at any time passed the deposit without partaking of it. Is this secretion necessary for carrying on the process of digestion, or for maintaining the regularity of the functions of the alimentary canal?

HYRAX ARBOREUS.

Hyrax, with the colour a mixture of reddish-brown and black above; white beneath; a white blotch near the middle of the back.

BOOM-

BOOM-DAS of the Colonists.

This species rather exceeds the size of the *Hyrax Capensis*, usually measuring about 21 inches from the tip of the nose to the extremity of the back, and about 7 inches in height. In its general form it resembles the species just named; and in the manner of moving and sitting they exactly coincide. The colour above is a sort of tawny-red, freely mottled and variegated with black; on the lower parts of the sides it is reddish-white, with a less abundant intermixture of black; and beneath, as well as on the insides of the legs, it is an uniform dull white. The reddish colour arises from the tips of most of the hairs being of that hue; and the black variegations depend partly upon a scanty intermixture of long hairs, which are entirely of that colour, but principally upon an exposure of the deeper parts of the general covering, which are throughout inclined to black; and in consequence of this last being the chief source from whence the mottled appearances are derived, that necessarily is more or less considerable according to the position of the hair, &c. The crown of the head has a predominance of black; the sides and middle of the face anterior to the eyes are covered by a sort of short, dull, dusky, or reddish-white hair; and a whitish streak extends backwards from thence over each eye. The sides of the head a mixture of grayish-white and black, the upper and lower lips whitish, as is also the point of the chin, the throat, and the other under parts, as already mentioned. The ears are short and roundish, with their tips projecting but little beyond the hair with which the animal is covered; outside they are beset with long dusty whitish hair, and inside they have a mere scanty coating of the same colour. Directly in the middle of the back, about half-way between the shoulders and rump, is a narrow longitudinal whitish blotch, and about the centre of the chin is
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a transverse darkish band. The tail is wanting; the feet and toes are covered above by a dirty reddish-white hair; the whiskers are long, black, and situated on the anterior parts of the upper lip, and some similar looking hairs occur immediately over each eye.

The teeth in this species differ a little from those in the other Cape Hyrax, more particularly the incisors; but as I have not had an opportunity of examining them minutely, I may only mention at present, that the upper ones are more pointed, and that the lower ones stand in pairs, from the two intermediate ones being separated by a considerable interval. The latter are also a little shorter than the lateral ones, and all of them have their tips tri-dentated.

This animal is found in many of the forests of South Africa, and is occasionally seen coming out of holes in decayed trees, or standing upon the summits of such as have only trunks remaining.

Little is yet known of its manners; and almost the only observation that can be elicited from the farmers and inhabitants of the parts of the country in which it resides, is, that it makes a great noise previous to the fall of rain.