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PROCEEDINGS

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OF THE

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April 3, 1894.

Sir W. H. FLOWER, K.C.B., LL.D., F.R.S., President,
in the Chair.

The Secretary read the following report on the additions to the Society's Menagerie during the month of March :—

The registered additions to the Society's Menagerie during the month of March were 69 in number. Of these 47 were acquired by presentation, 13 by purchase, 2 were born in the Gardens, and 7 were received on deposit. The total number of departures during the same period, by death and removals, was 86 :—

Dr. Günther exhibited specimens of *Lepidosiren paradoxa*, collected by Dr. Bohls in the backwaters of the tributaries of the Upper Paraguay River (swamps of the Chaco). He pointed out a peculiar modification of the skin of the upperside of the hind limbs, which is beset by tentacle-like papillæ. These, when fully developed, are arranged in fan-like sets with from 2 to 7 branches each. This structure, he stated, is peculiar to the male sex, and is fully developed only in sexually mature specimens.

Dr. Günther expressed his doubts as to the validity of the species recently described by Professor Ehlers¹ as *Lepidosiren articulata*, from Dr. Bohls's specimens.

The specimens exhibited to the meeting did not bear out the constancy of the characters on which Professor Ehlers relied for the distinction of two species of *Lepidosiren*.

The following papers were read :—

1. Further Field-Notes on the Game-Animals of Somaliland.
By Capt. H. G. C. SWAYNE, R.E., C.M.Z.S.²

[Received February 24, 1894.]

WATERBUCK (*Cobus ellipsiprymnus*). Native name "Balanka" of the Adone (Webbe Negroes), corrupted to "Balango" by the Somalis.

I believe there are no Waterbuck in the whole of Somaliland, except on the banks of the Webbe Shabeyli. The only other place in Somaliland which might possibly contain Waterbuck would be the Lower Nogal, near the east coast. There are none on the Tug Fafan, at any of the points where I have crossed it. There are said to be plenty all along the Webbe Ganana (Juba), the course of which lies chiefly through Gallaland.

¹ Nachrichten der k. Gesellsch. Wiss. Göttingen, 1894, No. 2 (March 10).

² In continuation of his paper "On the Antelopes of Northern Somaliland," P. Z. S. 1892, p. 300.

The first important collections of the Waterbuck were made by Colonel Paget and myself on two independent but simultaneous expeditions to the Webbe last spring.

I found these Antelopes very plentiful all along both banks of the river, from Imé down to Burka in the Aulihan tribe, which was as far as I followed the stream.

They lie up in the dense forest which clothes both banks of the river for some 200 yards from the water's edge; and they go out to feed in the open grass-flats outside the forest.

They go in small herds up to about fifteen individuals, though most of the herds I saw consisted of only four or five, with one old buck.

The habits of the Somali Waterbuck are similar to those of the same species all over Africa. They feed chiefly on grass, delight in a mud-bath, and take to the water readily; a wounded buck I was following in thick forest tried to escape by swimming the Webbe, some 90 yards across, and we shot him as he galloped along the further bank. The Waterbucks on the Webbe vary much in colour, from brownish grey to nearly black.

The white lunate marking over the tail is always present; some heads have the forehead bright rufous brown, and others are nearly black in this part. The flesh is eaten by the Negroes, but not by Somalis.

The horns obtained on the Webbe are small compared to Waterbuck horns in other countries; out of some 15 heads collected by me at different times, none reached 25 inches. The females are hornless.

BUSHBUCK (*Tragelaphus decula*). Native name "Dól."

The Bushbuck is common in the dense forest on the Webbe banks; and it is the most wary and difficult to shoot of all the game-animals I have ever encountered. I never heard of its existence till my second expedition to the Webbe last autumn.

At Karanle I bought several skins and horns of "Dól" from the natives, which had been obtained by means of disguised pits, with a stake in the bottom of each. The Webbe pits are made by the Adone, and are about eight feet deep and five in diameter at the top. They are dug in the densest jungle in the paths frequented by the "Dól" when going to and returning from the water. Some of these paths are long tunnels 3 feet high, bored through the masses of vegetation for 50 yards or more. Sometimes I could only get to the river by creeping on all-fours through these tunnels; this is exciting work when it is considered that many kinds of game use them.

On my arrival at Karanle I sent skilled Negroes to repair all the pits within a mile or two of my camp, in the hope of getting a specimen.

During a month on the Webbe banks I shot only one young buck with my own rifle; but I organized three or four drives, in one of which my men shot a buck with their Sniders.

On this occasion the buck was in company with one female, which broke back through the line in spite of the firing, and in rather a curious manner. The only way of crossing the line was to jump over the head of one of my men who was standing erect; and this she did, striking him in the centre of the forehead with her hoofs and knocking him down; and so she got away.

The longest pair of horns were a pair which I picked up, measuring about 17 inches in length. Females hornless.

The young of both sexes are of a distinct reddish brown, getting darker as they grow older, and the natives say the old bucks become nearly black. The hair is generally curiously worn off along the spine.

There are four or five transverse white stripes and white spots up to about thirty on each side, more numerous in the young animals. The necks are scantily covered with short hair, and in the two young bucks we killed were very slender. The flesh is very good eating. I am not aware that the Bushbuck exists anywhere in Somaliland but in the dense forest close to the banks of the Webbe-Shabeyli river.

CLARKE'S GAZELLE (*Ammodorcas clarkei*). Somali name "Dibatag" or "Diptag."

The Dibatag is common enough where it is found at all, but it is very local in its distribution.

Since Mr. Clarke first discovered it in the distant Marehan country, to the south-east, and in the Dolbahanta country, a few have been met with and shot by sportsmen in the eastern parts of the Haud Waterless Plateau.

I have been singularly unfortunate with this Antelope, never having been in the country inhabited by it till I went to the Nogal Valley three years ago. At that time the "Jilal," or dry season, was at its height, and all game scarce and shy. I never got a Dibatag till last June, when on my return journey from Ogaden across the Waterless Plateau I made a detour of several days to the east on purpose to shoot one.

I searched for Dibatag at Tur, a jungle due south of Toyo grass-plains, the distance being some eighty miles from Berbera.

I was lucky in getting one good buck and in picking up two pairs of horns. I saw a good many Dibatag, but all were wild and shy. This is their extreme western limit, and they never by any chance come so far south as the Golis range. Further east, towards Burö, they are more plentiful and less shy.

Dibatag are very difficult to see, their purplish-grey colour matching with the high "durr" grass in the glades where they are found. Its glossy coat, shining like that of a well-groomed horse, reflects the surrounding colours, making it sometimes almost invisible; and at the best of times its slender body is hard to make out.

I have often mistaken female Waller's Gazelles for Dibatag, and

shot one of the former in mistake for the latter. The habits and gait are much the same, save that the Dibatag trots off with head held up, and the long tail held erect over the back like a stick, nearly meeting the head, while Waller's Gazelle trots away with its head down and its short tail screwed round. Like Waller's Gazelle, the Dibatag goes singly or in pairs, or small families up to half a dozen or so.

Like Waller's Gazelle also, the Dibatag is enabled by its long neck and long upper lip to reach down branches of the mimosa bushes from a considerable height. As I have mentioned before, the shape of head and way of feeding of both the Dibatag and *Lithocranius walleri* are giraffe-like, and I have seen both animals standing on the hind legs, fore feet planted against the trunk of a tree, when feeding. I think Waller's Gazelle subsists almost entirely on bushes, as they are constantly found in places deserted by Oryx and all other antelopes because there was no grass. I have seen Dibatag feeding both on thorn-bushes and on the "durr" grass. Both antelopes can live far from water.

The country most suitable for Dibatag is jungle of the "Khansa" or umbrella mimosa alternating with glades of "durr" grass, which grows about six feet high. The females are hornless.

THE SAKÁRO ANTELOPES (see P. Z. S. 1892, p. 307).¹

There are certainly two of these small Antelopes, which are called by the natives "*Sakáro Gussuli*" or "*Gussuli*," and "*Sakáro Gol-ass*" or "*Gol-ass*" (*i. e.* red-belly).

There is also a third Sakáro recognized by the Somalis, which I have often shot and generally classed with the Gol-ass. It is smaller than the Gol-ass and has yellowish grey on the sides of the belly instead of red, but is in every other respect similar. The Somalis call it "*Sakáro Guyu*" or "*Guyu*," and declare it to be a distinct variety from the Gol-ass, to be known by its smaller size and the yellow belly. It appears to be found wherever the Gol-ass is found.

I have often noticed, in about two hundred specimens that I have shot for food at one time or another during eight years, that the skulls appear to vary much in size in adult animals, but my attention was called to the third native name only at the end of my last expedition.

I will therefore consider, in the absence of proof, that there are only two kinds of this small antelope, viz. the Gussuli and the Gol-ass.

The Gol-ass is the ordinary Somali "*Sakáro*," which I have mentioned in my former paper.

I came on the "Gussuli" for the first time a day's journey south of Seyyid Mahommed's village in the Malingur tribe and all over the Rer Amaden country. Its range is very similar to that of the Rhinoceros, and it is found in many parts of the Haud,

¹ [On these Antelopes see also Mr. Oldfield Thomas's paper, below, p. 323.—P. L. S.]

where it overlaps with the range of the Gol-ass. The female Gussuli appear to be much larger than the male; and it is a pretty safe rule, when looking for a buck, to fire at the smaller one.

The Gussuli have long snouts, in shape quite different from that of the Gol-ass, being much longer and tapering to a point. They are also somewhat larger than the Gol-ass, and are recognizable in the bush by their grey colour. They start up in pairs or in threes. Sometimes the bush is alive with them, and I have seen more than a dozen run off together; but they do so only when alarmed, and are not naturally gregarious.

THE BEIRA ANTELOPE (see P. Z. S. 1892, p. 308).

"I first heard of the 'Beira' near Ali-Maan, in the Gadabursi country, among very rugged hills, in the autumn of 1891. Then my brother (Capt. E. Swayne, Bengal Staff Corps) saw two for the first time, but failed to get a shot.

"He described them as reddish Antelopes, rather larger than the Klipspringer, with small straight horns, bounding away among the rocks exactly as a Klipspringer does.

"On my last trip the Somalis assured me that I should find 'Beira' on the Wagar Mountain and on Negegr, which is its eastern continuation, is about 40 miles S.S.E. of Berbera, and rises to nearly 7000 feet. They said it was nearly as large as an ordinary flabby-nosed Gazelle, but reddish—that it inhabited ground similar to the Klipspringer, but was shy and difficult to shoot. This no doubt accounts for no European having shot one, though my brother heard of them so far back as 1891.

"I tried vainly to get 'Beira,' having no time to go again to Wagar myself. On leaving the coast last November, I sent men in to look for 'Beira,' offering a reward of 20 rs. for a good head and skin of a male and female, and gave full instructions to my agents in Berbera and Aden to pay the reward and to send me the specimens. I received the two skins and pair of horns direct from Aden, without explanation, but have no doubt whatever they are the specimens of 'Beira' which I sought. They have evidently been killed by natives, and that accounts for the imperfect condition of the specimens. To my brother is due the credit of the discovery."¹

GRÉVY'S ZEBRA (*Equus grevyi*). Somali name "Fer'o."

Grévy's Zebra was, I think, first shot in Somaliland by Colonel Paget and myself on our simultaneous expeditions last spring.

I found them first at Durhi, in Central Ogaden, between the Tug Fafan and the Webbe, about 300 miles inland from Berbera. I shot seven specimens, all of which were eaten by myself and my

¹ [Since this paper was read the "Beira" has been described by Herr Menges (Zool. Anz. xvii. (1894) p. 130) as a new species, and called *Oreotragus megalotis*.—P. L. S.]

thirty followers; in fact for many days we had no other food; and this was no hardship whatever, as the meat is better than that of many of the antelopes. The flesh is highly prized by the Rer Amaden and Malingur tribes.

The Zebra was very common in the territory of these two tribes. The country there is covered with scattered bush over its entire surface, and is stony and much broken up by ravines; the general elevation is about 2500 feet above sea-level.

The Zebras, of which I saw probably not more than 200 in all, were met with in small droves of about half a dozen, on low plateaux covered with scattered thorn bush and glades of "durr" grass, the soil being powdery and red in colour with an occasional outcrop of rocks. In this sort of country they are very easy to stalk, and I should never have fired at them for sport alone. I saw none in the open flats of the Webbe valley, and they never come near so far north as the open grass-plains of the Haud, Durhi south of the Fafan being their northern limit.

The young Zebras have longer hair and the stripes are rather light brown, turning to a deep chocolate, which is nearly black in adult animals.

After firing at one of a drove of Zebras I was sorry to find on going up to it that it was a female, and that its foal was standing by the body, refusing to run away though the rest had all gone. We crept up to within ten yards of it, and made an unsuccessful attempt to noose it with a rope weighted by bullets, but it made off after the first try. We must have been quite five minutes standing within ten yards in the thick bush while we were preparing the noose.

Zebras are very inquisitive; when I was encamped for some days at Eil-Fúd, in the Rer Amaden country, the Zebras used to come at night and bray and stamp round our camp, and were answered by my Abyssinian mule. The sounds of the two animals are very similar.

BLACK RHINOCEROS (*Rhinoceros bicornis*). Native name "Wiyil."

For many years the Two-horned Rhinoceros has been known to exist in the interior of Somaliland, and going further in every year I have constantly been expecting to come upon their ground.

The first Somali Rhinoceroses were shot by my brother and myself in our expedition to the Abyssinian Border in August 1892, and since then only a few have been shot by Europeans.

They come far north of the range of the Zebras, sometimes wandering as far as the open grass-plains of Toyo, a hundred miles south of Berbera, where they hide in the patches of "durr" grass. They are common in the south-eastern Haud; I never found any signs of them in many expeditions in the Habr Awat, Esa, and Gadabursi countries. They are most common in the valley of the Tug Fafan, and thence in the whole of the country as far as the

Webbe, and they are plentiful beyond in Galla-land. They are said to exist to the south-east of Berbera, but I never saw any traces of them.

We found the Rhinoceros the most stupid game-animal we have encountered, and easily approached if the wind is right. They were not more prone to charge than Elephants, and I only had one narrow escape. I have never seen more than three together.

The ground they like best is very stony broken hills with some river-bed not too many miles distant, where they can go at night to drink and bathe. They travel considerable distances to the river and wander all night up and down the channel looking for a convenient pool, and making a maze of tracks in the soft sand.

The Abbasgul, Malingur, and Rer Amaden tribes eat their flesh when hungry, and I found it very good and lived for a week on it.

We could usually cut from 15 to 30 shields from each Rhinoceros, $\frac{3}{4}$ inch thick and 15 inches in diameter, worth about a dollar apiece at the coast.

Everywhere in Central Ogaden the caravan-tracks are furrowed in grooves a yard or more long and six inches deep, which look like the work of a plough. This is done by the Rhinoceros plunging his front horn and hard thick lip into the ground as he walks along.

A good pair of bull's horns measure 19 inches for the front and 5 inches for the back one.

MISCELLANEOUS NOTES.

Besides the animals mentioned in this and my previous paper, the game-animals seen by me in Somaliland include Lions, Elephants, Leopards, Wart-Hogs, and Ostriches.

The Spotted Hyæna is very common, and the Striped Hyæna rather rare. There is a wild dog, called "Yey," which I have never seen or shot.

Crocodiles swarm in the Webbe-Shabeyli river. I had a horse dragged into the river and killed by one. There are a few schools of Hippopotami, one of which had its usual abode near Sen-Morettu, but I failed to find it, only coming upon the fresh tracks.

There are Giraffes in the Aulihan country, three days from Burka, but I gave them up for the chance of going to the Arussi Gallas.

While on the Webbe I heard that four Buffaloes, all bulls, had strayed from the Geriré Galla country, through eighty miles of bush, and had taken up their abode in the forest on the Webbe banks at Sen-Morettu, four years before my visit to that spot. My informant, a Gilimiss Somali, told me his father had killed two of them, two years before, with poisoned arrows, and that two remained.

I found their fresh tracks, the first I had ever seen, and tried very hard for two days to get a sight of them. We put them up

eight times at a few yards distance in the fearfully dense forest, without once seeing them, and organizing a drive next day they broke through the line of beaters and got away, making for the distant Galla Hills. These are the only Buffaloes I ever heard of in Somaliland.

They are said by the Gallas to be plentiful on the Webbe Web, a tributary of the Juba, three days distant from Karanle.

2. On the Dwarf Antelopes of the Genus *Madoqua*.

By OLDFIELD THOMAS, F.Z.S.

[Received March 17, 1894.]

The genus *Madoqua* (by which name, as Mr. Sclater has pointed out, *Neotragus* of most authors should be known¹) consists up to the present of three species—*M. saltiana*, Blainv., from Abyssinia, *M. kirki*, Günth., from S. Somali and E. Africa, and *M. damarensis*, Günth.², from Damaraland. During the recent opening up of the fauna of Somaliland, the North-Somali specimens, without any very detailed comparison, have been referred to *M. saltiana*, and the Central-Somali ones to *M. kirki*, these being indeed their nearest allies in each case; but now, on a careful examination of the whole genus, which has been helped by the further material recently collected by Capt. H. G. C. Swayne, and presented to the Museum by Mr. Sclater, I have come to the conclusion not only that these two are each different from the species to which they have been respectively referred, but also that there is a third Somali species, different again from the other two. I have therefore now to describe all three species as new.

It happens most unfortunately that a good deal of the material before me has been collected by sportsmen who have not been trained as professional collectors, and who, in crossing the ranges of the three Somali species, have killed and brought home a number of skins and skulls, but the exact reference of these each to the other is not always quite certain. By care in the selection of type specimens, however, risk of error from this cause is minimized, much as it has added to my difficulties in working out the genus.

The genus is readily divisible into two very distinct groups, of which *M. saltiana* and *M. kirki* are respectively typical; the

¹ *Madoqua*, Ogilb. P. Z. S. 1836, p. 137. Type *M. saltiana*, Blainv.

Neotragus, Gray et auct. plurim. (nec H. Sm. in Griff. An. King. iv. p. 269. Type *N. pygmæus*, L.).

The genus which has hitherto borne the name of *Nanotragus*, Sund. (1846), must therefore now be known by that of *Neotragus*.

² Mr. True, in his paper on the Mammals of Kilima-njaro (P. U. S. Nat. Mus. xv. p. 477, 1892), has suggested that *M. kirki* and *M. damarensis* are the same, and uses for them the latter of these two names, unaccountably as it appears to me, *kirki* having been the first described. In my opinion, however, *M. damarensis* is really distinct from *M. kirki*, being considerably larger than the latter, as may be seen by the synopsis and measurements given below.