SUPPLEMENT

TO THE

GAME ANIMALS OF AFRICA

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In the following pages I have endeavoured to bring the volume as nearly as possible up to date. Most of the matter in the "Addenda" issued with the volume has been incorporated, and the loose sheet relating to Foa's zebra has likewise been included.

R. Lydekker.

Harpenden, *November* 1911.

THE AFRICAN ELEPHANT

(Page 1)

It is stated by Mr. F. A. Knowles in the *Journal* of the East Africa and Uganda Natural History Society for 1911, vol. ii. No. 3, p. 21, that an elephant, locally known as the forest-elephant, and distinguished by its very long and slender tusks, is an occasional visitor to Uganda from the Semliki and the district west of the Albert Nyanza. This elephant is evidently *Elephas africanus albertensis* (*supra*, p. 8), described by myself on the evidence of a tuskless skull, and may now be known as the Semliki race. A pair of tusks from the Semliki received by Mr. Rowland Ward in 1911 were of the slender type described by Mr. Knowles.

The Unyoro elephant, which has been provisionally associated by myself with the Semliki race, is stated by Mr. Knowles to be perfectly distinct, and therefore seems to require a new name.

THE BLACK RHINOCEROS

(Page 25)

In a paper published in the *Proceedings* of the Zoological Society of London for 1909 (p. 198) Dr. E. L. Trouessart suggested that the type of horn described as *Rhinoceros holmwoodi* is referable to the northern race of the white rhinoceros (*R. simus cottoni*). In the *Field* for 1909 (vol. civ. p. 193) I have, however, given reasons in support of the opinion that the long and slender East African horns of the *holmwoodi* type are referable to a local form of the black rhinoceros; and since the publication of that notice I have obtained additional evidence in favour of the same view. The typical specimen was purchased at Zanzibar, but in a pair from British East Africa, presented by Dr. Ansorge to the British Museum, the front horn has the same general character, thereby indicating that this district is the habitat of *R. bicornis holmwoodi*.

In Count Joseph Potocki's *Sport in Somaliland* (1900, p. 82) the name *somaliensis* was applied to the Somali rhinoceros, and although no diagnosis was given, the fact that the name is accompanied by a plate of the animal entitles it to recognition. That the Somali rhinoceros should rank as a local race (*R. bicornis somaliensis*) has been demonstrated by myself in the *Proceedings* of the Zoological Society for 1911, p. 958, where it is shown that the skull, in comparison with an East African specimen, is distinguished—in addition to its inferior size—by its relatively narrow form.

THE BONTE-QUAGGA

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Specimens collected in 1910 by Messrs. Selous and McMillan show that the bonte-quagga, or zebra, inhabiting the Guasengishu plateau of East Africa is more or less completely maneless, lacking even the fore-lock. This gives a very remarkable appearance, the ears standing out from the head like horns instead of being connected by means of the mane and fore-lock. These Guasengishu bonte-quaggas cannot, however, be regarded as even racially distinct from *Equus burchelli granti*, since some examples from the Athi plains—the typical locality of that race—have the mane much less developed than in other representatives of the species.

In 1911, Mr. R. B. Woosnam, Game Warden of the East African Protectorate, sent home a photograph of the skin of a Grant's bonte-quagga in which a saddle-shaped patch on the hind part of the back is devoid of stripes. This unstriped area is situated just where the longitudinal stripes of the hind-quarters pass into the transverse stripes of the back, and occupies about half the interval between that point and the withers. The dorsal stripes are continued through it, and below it the belly-stripes have the normal development. In colour the pale unstriped area is dirty white. The animal, which is adult, was killed near Nakuru, and a few days later a second, but half-grown individual with a similar uniformly coloured area, was shot in the same place. Mr. Woosnam states that the natives are well acquainted with such abnormally coloured zebras, of which for many years there have been one or two among the herds, but never more. In *Nature*, vol. lxxxvi. p. 241, 1901, Professor Ridgeway proposed the name *E. burchelli goldfinchi* for these zebras which are, however, nothing more than abnormalities.

On page 97 of vol. xxiii. of the *Memoirs* of the Linnean Society of Normandy, 1910, Messrs. Brasil and Pennetier described a bonte-quagga as *E. burchelli pococki*. The specimen on which this determination is based is a stallion in the natural history museum at Rouen, obtained in 1882 from the menagerie of one Pézon. Nothing is known of its previous history, although from the type of marking it may be considered certain that it came from southern Africa. In the almost complete absence of barring on the limbs it agrees with the typical *E. burchelli*, but the shoulders and quarters are completely striped, and the body-stripes are continued downwards to join the longitudinal ventral stripe. In the latter respect the race resembles the Zulu *E. b. wahlbergi*, in which the legs are barred to some distance below the knees and hocks. The ground-colour of the coat is cream instead of white, as in the typical *burchelli*. Its describers consider that *E. b. pococki* is extinct, and to a considerable extent intermediate between *E. b. typicus* on the one hand and *E. b. chapmani* and *E. b. wahlbergi* on the other.

In the *Field* for 1909, vol. cxiv. p. 889, Mr. Pocock has given reasons for considering the so-called Ward's zebra (*supra*, p. 65) as a hybrid, born in Messrs. Barnum and Bailie's Menagerie, between the typical zebra and Chapman's bonte-quagga. This so-called species, to which Professor Ridgway inadvertently gave the technical name of *E. wardi* in the *Proceedings* of the Zoological Society for 1909, p. 798, must accordingly disappear.

The South Abyssinian bonte-quagga has been separated by Mr. Camerano (*Atti Ac. Reale Torino*, 1902, p. 10) from the Masai *Equus burchelli granti* as *E. b. jallæ.*

The zebra from North-east Rhodesia described as *E. annectans* (*supra*, p. 65) is regarded by Mr. R. I. Pocock ("Harmsworth Natural History," p. 789) as a bonte-quagga nearly allied to *E. b. crawshayi*, and specially characterised by the great width of the black stripes.

FOA'S ZEBRA

(*Equus foai*)

To the zebra inhabiting the mountainous country opposite Teti, on the north bank of the lower part of the Zambesi, Messrs. Prazák and Trouessart in 1899 (*Bulletin Muséum d'Histoire Naturelle*, Paris, vol. v. p. 350) gave the name *Equus foai.* From all races of the bonte-quagga this zebra is distinguished by the larger number of main stripes on the body and hind-quarters, and by the circumstance that there is no backward bending (except in the last of the series) of the body-stripes as they approach the dorsal stripe, to which they run approximately at right angles. In this respect Foa's zebra approximates to the true zebra and Grévy's zebra, from both of which it differs by the stripes on the hind-quarters adjacent to the dorsal stripe running parallel with the latter in the direction of the tail, as in the bonte-quagga, instead of at right angles. Consequently, the "gridiron" pattern of *zebra* and the concentric stripe-arrangement of *grevyi* in this region are alike wanting. In general build, as well as in the shape of the head and ears, Foa's zebra is nearer to the bonte-quagga than to either of the other species; this being borne out by the fact that the body-stripes meet the stripe traversing the middle line of the under surface. The legs are striped to the fetlocks, and the pasterns black. This species is probably related to Crawshay's bonte-quagga.

THE AFRICAN BUFFALO

(Page 67)

In the *Proceedings* of the Zoological Society for 1910, p. 993, I described a small buffalo from the left bank of the Kwilu river, in

Belgian Congo, as *Bos caffer simpsoni.* In their heavily fringed ears and the general form of the horns these buffaloes approximate to the small red *B. c. nanus*, but the horns are larger, the right one of a bull measuring 25$\frac{3}{8}$ inches along the outer curve and the left one 24$\frac{1}{2}$ inches; the basal girth of the former being 16$\frac{1}{2}$ inches, its maximum width 6$\frac{3}{8}$ inches, and the expanse from tip to tip 13$\frac{1}{2}$ inches. In a cow the left horn measured 15 inches in length, with a girth of 9$\frac{1}{2}$, and an expanse of 8$\frac{3}{4}$ inches. In profile the horns incline upwards nearly in the plane of the face. The colour of cows and bulls is pure brown, much darker than the tawny red of *nanus*—the young only agreeing approximately in hue with the latter, and the cows being fully as dark as bulls. Usually the fringes of the ears are tinged with tawny, with one white lock.

In the same paper a pair of horns brought home by Dr. K. W. Kumm from the upper Shari valley, in the Lake Chad district, is provisionally referred to *B. c. thierryi*, a race typically from Togoland, German West Africa.

The Shari horns are deeper in the antero-posterior direction at their bases, where they are more expanded and flattened, and also more closely approximated in the middle line than in the type of *thierryi*; but since the latter is a female there seems no reason why they should not pertain to the same race.

The above paper also contains a note on two heads of red buffaloes from French Congo, which appear inseparable from *B. c. cottoni* of the Semliki.

Another, but at present unnamed race of dwarf buffalo inhabits the Yala district of southern Nigeria, and is characterised by the bulls being brownish black and the cows dun or khaki-coloured. Bulls stand from 3$\frac{1}{2}$ to 4 ft. at the withers, and are short-legged and heavily built animals. In the adults of both sexes the legs are light-coloured from the knees and hocks to the hoofs. Calves are dark grey.

Specimens of the Senegambian *B. c. planiceros* brought from the Gambia by Mr. Russell Roberts in 1910 show that this race is considerably larger than *B. c. nanus*, with the horns more laterally expanded and recurved, and the general colour brown.

It may be added that in the *Proceedings* of the Biological Society of Washington for 1911, vol. xxiv. p. 191, Mr. N. Hollister expresses the opinion that as the African buffalo is so distinct from the Indian species it ought not to be included in *Bubalus*; if this view be accepted, the name *Syncerus* is available as a subgeneric title.

THE LELWEL HARTEBEEST

(Page 107)

The statement that the typical race of this species, which was described by Heuglin on the evidence of a horn probably bought from Sudani traders, has a dark face-blaze is incorrect. A male and female believed to be from the Lado district were uniformly reddish tawny, with the tips of the horns inclining inwards.

THE KORRIGUM, TIANG, OR TOPI

(Page 116)

A topi from the Guasengishu plateau of British East Africa, lying to the eastward of Mount Elgon, is distinguished from *Damaliscus corrigum jimela* by the blaze on the face being whitish buff, or white instead of black. Although described by Prof. A. Cabrera on page 998 of the *Proceedings* of the Zoological Society for 1910 as a species, it may be regarded as a local race under the name of *D. c. phalius.* In old bulls the blaze is stated to be as white as in a blesbok.

THE BRINDLED GNU OR BLUE WILDEBEEST

(Page 134)

The typical form of the white-bearded race from Kilimanjaro is tawny-coloured, with the fore-quarters marked by transverse chocolate-coloured bands, and the greater portion of the front of the face as well as the sides of the lower part, together with the ears, nearly black. On the other hand, a dark phase is exemplified by a skin from the south of Lake Naivasha, British East Africa, presented to the British Museum by Mr. H. H. Tarn in 1907, by others from the Guaso Nyero valley given by Mr. R. J. Cuninghame in 1908, and by others from East Africa presented by the Master of Belhaven; in these the general colour of the coat of the neck, fore-quarters, and flanks is more or less uniformly blackish brown, passing into dark tawny on a larger or smaller area on the upper surface of the hind-quarters, this light area, which is traversed anteriorly by a dark stripe, extending in one

specimen as far as the mane, but in other examples being mainly confined to the rump. In one skin there is distinct brindling on the neck, but elsewhere both dark and light areas are almost free from bands, although a few indistinct bars occur on the sides of the chest in one skin. Other specimens show a gradual increase in the number and distinctness of the barrings, accompanied by a lightening of the colour of the coat, so that there seems to be practically a transition to the light-coloured and brindled Kilimanjaro gnu.

THE DUIKERBOK

(Page 141)

The more typical long-eared representatives of the species are found all over South Africa; the most northern form of these on the west being *Cephalophus grimmi splendidulus*, Gray, from Angola; farther east is the Matabili *C. g. flavescens*, Lorenz, which probably crosses the Zambesi into northern Rhodesia; the eastern representative is *C. g. altifrons*, Peters (= *ocularis*, Pet.) from southern Mozambique, which ranges south of the Zambesi to Tette and north to the Loangwa river, at least as far south as Angoniland. In the Shiré Highlands Mr. R. C. Wroughton has shown (*Annals and Magazine of Natural History* for 1910, series 8, vol. v. page 274,) that these long-eared races give place to short-eared types allied to the Abyssinian duikerbok, which is often reckoned as a species, but which may be regarded as a race of the southern one, under the name of *C. g. abyssinicus*. The Shiré race, which on this view will be known as *C. g. shirensis*, agrees in size with the other East African forms, but is distinguished by its brighter ochery coat, the general colour above being ochery buff; all the hairs have drab bases, those of the neck and shoulders are ochery buff to their tips, those of the back shortly tipped with black. Below the colour is the same as in the next race, but much paler.

The second race described by Mr. Wroughton, *C. g. hindei*, is from Nyasaland and characterised by its bright colouring. In size it is about the same as *C. g. nyansae*; its general colour above being tawny ochre, bright on the neck and shoulders, duller on the back and loins, but the yellow tinge is never absent, even on the rump, as it is in *nyansae*; individual hairs of the neck are drab-grey, with ochery tips, but posteriorly the ochery tip becomes a sub-apical ring and the tip black. The chin and insides of the upper part of the limbs are

whitish; the throat ochery buff, with the hairs the same colour throughout, but on the flanks the hairs are coloured like the neck although with drab bases. The grizzling characteristic of the more northern forms in *C. g. shirensis* is so fine and faint that, at a short distance, the coat seems to be uniformly coloured—this and the pale bright ochery colouring serving to distinguish this race from all the rest.

NYASA BLUE DUIKER

(Page 164)

The Congo representative of this species has been described by Dr. E. Lönnberg (*Arkiv för Zoologi*, vol. iv. No. 16, p. 12, 1908) as *Cephalophus nyasae congicus*. It is distinguished from the typical race by colour. In the latter the back is described as being of a darker brown than in *monticola*, with a more distinct rufous suffusion, while the rump is dark chocolate-brown. In the Congo race the back is warm sepia, of nearly the same tint from neck to rump. Towards the flanks this shades off into light smoky grey, with a slight buffy tinge, due to the tips of the hairs being of that colour, while the under surface is white. On the hams the hairs are sufficiently rufous at the tips to communicate a tinge of this colour, although the rest of the hairs are of the same grey as the flanks. The rufous tinge of the hams is sharply defined from the dark sepia-brown of the rump, but shades into that of the back. The legs are rufous, with a smoky brown mark above the sides of the hoofs; the face is nearly black, with a dull rufous brown stripe; and the tail is black above and white beneath.

The skull of both races of *nyasae* differs from that of *monticola* by the great relative length and narrowness of the muzzle.

THE RED DUIKER

In the *Annals and Magazine of Natural History* for 1911 (ser. 8, vol. viii. p. 278) Mr. R. C. Wroughton recognises four races of this species, two of which are named for the first time. Of these the Transvaal *Cephalophus natalensis amaenus* is distinguished by its richer colouring, which is redder on the back and yellower on the flanks, with the nape nearly black, whereas in the typical race the upper-parts

are tawny and the nape slatey grey. The so-called *C. robertsi* of Mozambique (p. 153 of the text), with which, as I have suggested, *C. n. vassei* is identical, forms the third race (*C. n. robertsi*), distinguished by its larger size, paler colouring, and larger ears; the general colour being tawny ochre, with the under-parts paler. Lastly, the Nyasa *C. n. bradshawi*, while agreeing in size with the preceding, differs by the still greater paleness of the colouring, the under-parts being dirty white.

THE KLIPSPRINGER

(Page 166)

The Masai race of this species (*Oreotragus saltator schillingsi*) is distinguished by the general presence of horns in the female. In 1911 Capt. W. H. Wilkin forwarded to the British Museum the skin and skull of an immature horned female of this race killed by himself the preceding September on the Anala river, in British East Africa, about twelve miles from the German boundary (about 1° 45′ S. × 35° E.). Capt. Wilkin, who also shot a second and older female, states that on the Anala all the female klipspringers appeared to have horns, so that he gave up shooting them on account of his inability to distinguish bucks from does. On the other hand, he states that a sporting friend shot a female klipspringer near the junction of the Guaso Nyero and the Guaso Narok which was hornless. This, however, was not improbably an individual variation, as the locality is too near the centre of the range of *schillingsi* to make it likely that a second race should occur there, and it is only reasonable to suppose that some females of that race may be destitute of horns.

Our knowledge of the range of the klipspringer was extended in 1911 by the discovery that the species inhabits the mountains of Northern Nigeria. The first information on this point was afforded by Dr. Porteus, who presented the skull of a buck to the British Museum; but this was supplemented by a letter from Mr. M. Hyatt, in which it was stated that the writer had killed three specimens in the Naraguta district.. I have named the Nigerian race *O. a. porteusi* (*Proc. Zool. Soc.* 1911, p. 960). The skull is characterised by its great width.

According to information supplied by Mr. E. A. Hamilton klipspringers inhabit the mountains of Angola.

THE GUASENGISHU ORIBI

(*Oribia microdon*)

The skull of a male oribi from the Guasengishu plateau of British East Africa is described by Mr. N. Hollister (*Smithsonian Miscell. Collections*, vol. lvi. No. 2, p. 4, 1910) under the above name. It indicates a large species characterised by the relatively small size of the cheek-teeth, which occupy a smaller space than those of species with absolutely smaller skulls. A skull from the Lake Region which came under my own notice in 1911 presented a similar feature; its horns measured $5\frac{3}{4}$ inches in length, or rather more than in the type specimen.

LANG'S DIK-DIK

(*Madoqua langi*)

This species, which was named by Dr. J. A. Allen in the *Bulletin* of the American Museum of Natural History for 1909 (vol. xxvi. p. 153), is described as being indistinguishable in the colouring of the upper-parts from Kirk's dik-dik (*supra*, p. 192), but with the lower surface pale fawn instead of clear white in front and dirty white behind, while the cheeks and the sides of the neck are tawny instead of yellowish grey, and the crown of the head is more strongly varied with yellowish rufous. The two species are, however, best distinguished by the characters of the skull; that of *M. langi* being much the larger of the two, with bigger teeth, relatively as well as absolutely. The lower line of the muzzle of the skull is straight instead of arched, as in *kirki*, and the nasal bones are nearly three times as large as those of the latter, thus leading to the elongation of the fore-part of the skull generally. The type specimen was obtained at Elmenteita, British East Africa, at no great distance from the habitat of *M. cavendishi*. Although the type of the latter indicates an immature individual, yet the skull is much larger than that of the present species, while the skin is differently coloured, being dark fawn above in place of yellowish grey.

THE BEIRA

(Page 278)

Mr. Pocock (*Proc. Zool. Soc.*, 1910, p. 878) regards the beira as related to the dik-diks, and not to the gazelles.

OTHER DIK-DIKS

In the *Ann. Mag. Nat. Hist.* for 1909 (ser. 8, vol. iv. p. 49) Dr. Drake-Brockman described a new race of Phillips's dik-dik from the Guban district of Somaliland, as *Madoqua phillipsi gubanensis*, and a new species from Abyssinia as *M. cordeauxi*. The former differs from the typical representative of the species by its thinner and shorter hairs, which give to the coat a sleeker appearance. The Harar dik-dik (*supra*, p. 190) is relegated by Dr. Brockman (*Proc. Zool. Soc.* 1911, p. 979) to a race of *phillipsi* characterised by its darker colour and thicker coat; it inhabits high ground. The name *M. placentinii* has been given by the same writer (*Proc. Zool. Soc.* 1911, p. 981) to a Somali dik-dik allied to *swayneí*, but distinguished by the much greater development of the grizzling of the hairs, so that the whole of the upper-parts, with the exception of a clay-red nose-patch and the crest, appears grey; the buff ears have black margins.

Cordeaux's dik-dik, on page 983 of the journal last cited, is referred by its describer to *Rhynchotragus*. Having the distinctive head-characters of that group, it much resembles *M. phillipsi gubanensis* in general appearance, but is considerably larger.

Yet another local race, *M.* [*R.*] *guentheri wroughtoni*, from the north bank of the Wabi River, in the foot-hills of Mt. Abu-el-Kassim—far away from the typical locality of the species—has been described by Dr. Brockman (*Ann. Mag. Nat. Hist. op. cit.* p. 51). It is specially distinguished by its larger ears and darker colour. Lastly, *M. erlangeri* (*supra*, p. 190) is referred by Dr. Brockman (*P.Z.S.* 1911, p. 983) to *Rhynchotragus*.

THE WATERBUCK

(Page 194)

In a paper on the waterbucks in the collection of Major Powell-Cotton at Quex Park, Birchington, Dr. Paul Matschie (*Sitz.-Ber. Ges. naturf. Freunde*, Berlin, 1910, p. 409) describes two new races of the typical species. The first of these, *Cobus ellipsiprymnus pallidus* (p. 410), is from the Webbe Shebeyli, Somaliland, and is distinguished from the typical race of the species by the general colour being very light brown, without any tendency to rufous, instead of a mixture of grey and russet brown. The white rings round the eyes are also much narrower; and the hair on the forehead and nasal region is a mixture of pale and sepia brown instead of dark brown. The strong curvature of the horns is likewise a distinctive feature.

In the second race, *C. e. thikae* (p. 411), from the Thika valley, N.E. of Nairobi, the forehead is burnt umber, the nasal region blackish grey-brown, the white band above the muzzle very narrow, and the light rings round the eyes of medium width, with brown hairs amid the white. The sides of the face are bright brownish grey mingled with sepia; the white of the chin ascends as high as the gape of the mouth. The throat and chest are warm sepia or russet mingled with grey; all the hairs being grey with rufous sepia tips; and there is a large white patch in the centre of the chest. The back is reddish sepia, and the flanks are but slightly tinged with grey. Above the hoofs is a white band about an inch in depth, broken by a narrow interval behind; and while the upper surface of the tail is coloured like the back, the under side is white.

In the Lorian Swamp and the neighbouring part of the Guaso Nyiro valley, British East Africa, are found light-coloured or semi-albino waterbucks, with eyes of the normal hue. They are referred to by Col. W. H. Brown in the *Proceedings* of the Zoological Society for 1905, p. 297, and by Lord Gifford in the *Field* of August 10, 1910. The light individuals generally go about with normally-coloured waterbuck.

THE DEFASSA WATERBUCK

(Page 199)

In the paper cited under the heading of the preceding species Dr. Matschie has named and described eleven local races of the

defassa, based on the specimens in the collection of Major Powell-Cotton. These are *Cobus defassa hawashensis*, Hawash river, p. 413; *d. powelli*, Laikipia, p. 415; *d. angusticeps*, do., p. 416; *d. nzoiae*, Guasengishu, p. 417; *d. fulvifrons*, e. of Kitosh, p. 418; *d. avellanifrons*, Lake Albert district, p. 419; *cottoni*, do. ,p. 420; *dianae*, do., p. 421; *d. breviceps*, Pembe on the Nile, p. 424; *d. ladoensis*, Lado district, p. 426; *d. griseotinctus*, n. of Lado, p. 427. Their main points of difference are based on colour.

VAUGHAN'S KOB

(Page 206)

From observations made by Mr. Selous in the Bahr-el-Ghazal (see the *Field*, September 2nd and 9th, 1911) it appears that Vaughan's kob is restricted to the east central, central, and northern districts of that province, and that in summer it turns blackish. On the other hand, the kob of the south and south-western districts is a yellow-eared animal apparently related to the Uganda race of Buffon's kob. The observations, supplemented by heads in the dark dress brought home by Mr. Selous, indicate that Vaughan's kob is merely a local race of the white-eared species. For the present I do not propose so to name it, since, as I have suggested in the text, all the above forms may prove to be local races of Buffon's kob.

ROBERTS' LECHWI

Cobus robertsi

On page 222 of the text this lechwi was stated to have been founded on immature specimens of *C. smithemani*. Mr. Rothschild, who owns the type specimen, informs me, however, that this is not the case. *C. robertsi* appears, indeed, to come closer to *C. leche* than to *C. smithemani*; and is found in company with the former, from which it differs by the black patches on the sides of the lower part of the neck and part of the shoulders, as well as by the admixture of black on the cheeks and the sides of the throat and neck. The horns are also stouter, with the ridges closer together and wider.

This species is a native of northern Rhodesia.

HAY'S GAZELLE

(*Gazella hayi*)

Native name, *Rhazalrim*

This species was named by myself in 1911 (*Proc. Zool. Soc.*, p. 961) on the evidence of a mounted specimen in the British Museum, killed by Mr. M. V. Hay in Algeria, between Constantine and Biskra. Of the size of the dorcas, it is distinguished from that species by the absence of a distinct lyrate curvature to the horns, which carry only about twelve rings in place of twenty-four or twenty-five. The face-markings approximate to those of the edmi, the middle stripe being darker than in the dorcas, with a distinct nose-spot; the eye-stripes are less conspicuous, and the forehead is not chestnut. There is no faint light stripe above the flank-band; the knee-tufts are larger and blacker than in the dorcas; and the tail is brown, in place of black, with a smaller amount of fawn at the root. Apparently the ears are longer than in the dorcas.

THE RED-FRONTED GAZELLE

(Page 258)

The range of the Mongalla (not Mongola) race extends from Gondokoro, in Uganda, northwards to Ber, in the Mongalla district of the Sudan on the Abyssinian side of the Bahr-el-Gebel. The skull of the Libyan race of *G. rufifrons* differs from that of *tilonura* by the greater length of the portion in front of the teeth. In *rufifrons* the length of the tooth-row is $2\frac{7}{16}$ in., and that of the part in front $2\frac{1}{8}$; in *tilonura* these measurements are $2\frac{6}{16}$ and $1\frac{7}{8}$. In the much smaller *isabella* they are $2\frac{1}{8}$ and $1\frac{9}{16}$. Skulls and horns of the three species are figured on page 27.

THOMSON'S GAZELLE

(Page 259)

As mentioned in the "Addenda" issued with the original volume, Dr. E. Lönnberg ("Sjöstedt's Kilimandjaro-Meru Expedition," Upsala, 1908, p. 46) gave the name of *Gazella thomsoni nasalis* to the Kilimanjaro race of this species on account of the absence of a black nose-spot.

Ignoring this, Mr. T. Knottnerus-Meyer, who refers the species to

a separate genus (*Eudorcas*), recognises (*Sitz.-Ber. Ges. naturf. Freunde*, Berlin, 1910, pp. 106-124) no less than thirteen local forms, which are regarded by him as species, although they are, at most, no more than races. Their names are (1) *G. t. baringoensis*, Lakes Baringo and Solei; (2) *t. nahuroensis*, Lakes Nakuro, Naivasha, and Elmenteita; (3) *t. biedermanni*, Shirati district; (4) *t. langheldi*, Usukuma; (5) *t. schillingsi*, from Lake Natron to Kilimanjaro; (6) *t. njiriensis*, west side of Njiri Swamp; (7) *t. sabakiensis*, east side of same; (8) *t. bergeri*, Nairobi; (9) *t. mundorosica*, Mundorosi plains; (10) *t. typica*, south of Kilimanjaro; (11) *t. wembaerensis*, Wembare plains; (12) *t. manyarae*, Lake Manyara; (13) *t. ruwanae*, Ruwana plains. Of these either No. 5 or No. 10 is probably identical with Dr. Lönnberg's *nasalis*; Mr. Meyer regarding British East Africa as the typical locality of the species, whereas Dr. Lönnberg considers that this position is occupied by the Kilimanjaro race.

Apart from certain skull-characters, the races recognised by Dr. Meyer are mainly distinguished by slight differences in the colour of the hair and shape of the horns. As it would occupy too much space to record their differences, and as the number of races may prove to be excessive, the quotation of the names must suffice.

THE BEISA

(Page 284)

The beisa of the Laikipia plateau, British East Africa, has been described by Mr. N. Hollister (*Smithsonian Misc. Collections*, vol. lvi. No. 2, p. 7, 1910) as *Oryx annectans*, as it appears to form a link between the typical representative of the species and the fringe-eared Kilimanjaro race. It is, however, only a local race, and should be known as *O. beisa annectans*.

THE SABLE ANTELOPE

(Page 290)

On page 35 of Dr. J. E. Gray's "Catalogue of Ruminant Mammalia in the British Museum," 1872, reference is made to a variety of the sable antelope, for which the name *kirki* was suggested. Its supposed distinctness was based on a statement by Sir John Kirk in the *Proceedings* of the Zoological Society for 1864, that in the Batoka Hills, to the north of the Zambesi, all the sable antelope are rufous.

In 1910 Mr. E. Heller (*Smithsonian Misc. Collections*, vol. liv. No. 6, p. 1) proposed the name *Ozanna roosevelti* for the sable antelope of the Shimba Hills, British East Africa, basing his description on a female skin. Compared with the typical South African animal, the specimen is stated to have the upper-parts much lighter, only the dark head-stripes, throat, and fore-legs being black, while the general body-colour is light chestnut. There is also less marked contrast between the dark and light face-stripes, the light ones being buffish yellow in place of white. The head of a male from the same region in the British Museum, presents, however, no appreciable difference in colour from Mashonaland bucks; and it is thus quite clear that the East African animal is, at most, nothing more than a local race of the sable antelope, which may be characterised by the paler colouring of the female, and perhaps by the relatively late age at which the dark livery is assumed. At present there is nothing to distinguish the British East African animal from *Hippotragus niger kirki* of the Batoka Hills; but if it should eventually be proved distinct, it should be known as *H. n. roosevelti.*

THE ELAND

(Page 305)

In the sixth edition of Mr. Rowland Ward's "Records of Big Game," 1910 (p. 328), I have proposed the name *Taurotragus oryx selousi* for the Mashonaland eland, as typified by the heads figured in Mr. Selous's "A Hunter's Wanderings," one of which is reproduced in plate xii. of the volume to which the present contribution is a supplement. Mashona eland have an incomplete white chevron on the forehead, with a large frontal tuft of brown hair.

LORD DERBY'S ELAND

(Page 314)

The first paragraph in the text should read as follows:—

This magnificent eland, of which a bull from the Bahr-el-Ghazal stood 5 ft. 8 in. at the shoulder, was first known in this country from Senegambian horns and skins sent home by Whitfield, collector for the menagerie then maintained at Knowsley by the 13th Earl of Derby. The name was given in 1847 by Dr. J. E. Gray on the evidence of a pair of horns.

THE BUSHBUCK

(Page 323)

As stated in the "Addenda" to the original volume, the Mweru bushbuck has been described by Dr. Lönnberg ("Sjöstedt's Kilimandjaro-Meru Expedition," 1908, p. 48) as *Tragelaphus scriptus*[1] *meruensis*. It is distinguished from *masaicus* by the lack of white body-stripes, and of a white spot below the eye, although the two cheek-spots are present. The general colour is dark reddish brown on the back and hind-quarters, passing into smoky brown on the shoulders and sides of the chest, while the under-parts are smoky brownish grey, with a white patch on the inner side of the upper part of the legs.

A bushbuck from Nakuru, British East Africa, was described in 1909 by Dr. J. A. Allen (*Bull. Amer. Mus. Nat. Hist.* vol. xxvi. p. 148) as *T. tjaederi*, but may be regarded as a race, with the name of *T. s. tjaederi*. It is stated to be allied to the imperfectly known *T. s. delamerei* of Somaliland, but differs in having the under-parts darker instead of lighter than the back, by the larger size of the white patches on the fore-part of the neck, and by the presence of a long white stripe on the front of each hind-leg corresponding to a black stripe on the fore-leg, instead of white stripes on both pairs. There is also a distinct crest along the back which is wanting in the type of *delamerei*.

The locality of *T. s. meneliki* (*supra*, p. 325) is Arusi-Gallaland near the sources of the Webbe Shebeyli, at a height of about 9000 feet. *L. t. multicolor* also occurs in the neighbourhood of Lake Zwei.

THE NYALA

(Page 331)

On page 333 of the original volume there is stated to be a gap in the distributional area of the nyala, which occurs in the Gaza country of Portuguese East Africa, to the southward of the Sabi river, whence it extends to St. Lucia Bay, but is unknown in the great tract lying between that river and the Zambesi, although it reappears to the north of the latter in the Nyasa district. In 1910 I received a letter from a correspondent at Pretoria, who informed me that he has killed nyala to the south of Zambesi between that river and the Pungwe, although, for

[1] Originally given as *sylvaticus*.

obvious reasons, he is not at present desirous of revealing the exact locality. The only gap now remaining in the distributional area is formed by the tract between the Pungwe and the Sabi, and if the species does not exist there at the present day there can be little doubt that it did so formerly.

THE MOUNTAIN NYALA

Tragelaphus buxtoni

By far the most important addition to the big-game fauna of the continent made since the publication of the "Game Animals of Africa," is the mountain nyala, typified by a specimen shot by Mr. Ivor Buxton in the Sahatu Mountains of Arusi-Gallaland, at a height of about 9000 feet; this and other specimens being described by myself in the Zoological Society's *Proceedings* for 1911 (p. 349).

The conformation of the horns affiliates this antelope to the bushbuck group, from the other members of which it is distinguished by its superior size. From the nyala, which makes the nearest approach in this respect, *Tragelaphus buxtoni* differs in the reported identity of the colour in the two sexes, in the shorter coat and less bushy tail of the male, the presence of two white gorgets on the throat and chest, the absence of any marked difference in the general colour of the lower part of the legs from that of the body, and in the more open spiral formed by the more massive horns. In the type specimen, which is an approximately full-grown but young buck, the horns form about one complete turn, and have the general characters of those of the nyala, but are relatively heavier, and diverge more outwardly with an open spiral. They are obliquely ridged at the base, and the smooth terminal portion is worn yellow at the tip. The length along the outer curve is 37 inches, the basal girth $9\frac{1}{4}$ inches, and the tip-to-tip interval 21 inches.

In general colour the coat, which is rather long and coarse, is speckled brown-fawn, passing into dull tan on the sides of the face, and becoming darker on the front surface of the muzzle, and chocolate-brown on the forehead above the white chevron. The under-parts are lighter, but on the front of the fore-legs and the lower portion of the hind pair the tint becomes darker. There is a short dark brown mane on the neck, continued backwards as a mingled brown and white dorsal crest. The bushy tail is white beneath. The ears, which are much of the same type as those of the nyala, are of moderate width,

bluntly pointed at the tip, and tubular for a considerable distance at the base; most of the long hairs on the inner edges being white, as is also much of the inner surface of the outer margin. The white markings include a not very distinct chevron between the eyes, the usual patches on the sides of the muzzle and chin, a pair of spots on each side of the face below the eye, and a smaller and fainter one behind the same, a narrow but deep gorget on the throat, and a wider but less deep one of a more lunate shape on the upper part of the chest. A curved row of nine spots—some of which are fainter than the rest—extends from a point about over the head of the thigh-bone to the back of the lower part of the shoulder. There is another white spot on each side of the buttocks. The inner surface of the thighs and of the upper portion of the fore-legs is dirty white. A white area occupies the back of each fore-leg below the knee, extending on to the outer and inner surfaces of the limb, but not reaching the pastern; and a somewhat similar area occurs on the hind-leg, extending slightly above the hock. There is a pair of white oval spots on each fetlock some distance above the hoof.

Rowland Ward Copyright.

Head of Mountain Nyala.

In the second head, of an older buck, the horns are of greater length, and much battered on the front surface, and worn away at the tips, of which the left one is broken. They form about one turn and a quarter, and have a more upright direction than in the type specimen, in both of which respects they are more nyala-like. Although the buck to which this head belonged was a member of the same herd as the type, the coat is longer and looser, especially on the throat, where it forms an incipient fringe. The colour is darker and

greyer, being a greyish brown like that of a waterbuck. The face is also darker, the whole of the lower portion being chocolate-brown like that of the forehead, and the tan restricted to the area round the eye, behind which is a small white patch. There is a tendency to rufous in the hair round the muzzle and between the horns. In consequence of the darker colour of the face, the frontal chevron is more conspicuous than in the type; and the upper gorget is very distinct, and continued by means of scattered white hairs almost to the lower one.

Another head of an old buck agrees in essential characters with the one last mentioned; but the body-skin of the same animal differs from that of the type not only in its longer and darker hair and the greater development of the dorsal crest, but in the presence of two indistinct vertical white stripes—one considerably longer than the other—on the hind-quarters, with faint traces of a still shorter third one; a feature in which the specimen makes a further approximation to the nyala.

Although the mountain nyala comes nearest to the species from which it takes its name, in the general form of the head and the character of the tail it is distinctly kudu-like; and it tends to connect the bushbuck group so closely with the kudus as to render the generic separation of the latter from *Tragelaphus* (in which *Limnotragus* may be included as a subgenus) no longer advisable.

THE GIRAFFE

(Page 350)

In part 2 of a paper entitled "Recherches sur l'Okapi et les giraffes de l'Est africain," published in the *Annales des sciences naturelles, Zoologie* (Paris, sér. 9, vol. xiii. 1911), Messrs. Maurice de Rothschild and H. Neuville have described and figured certain East African giraffes which they regard as serving to connect *Giraffa camelopardalis rothschildi* with *G. c. tippelskirchi.* The giraffe of which they give a coloured plate and refer to *rothschildi* is, however, *tippelskirchi.* If its identification with the former were correct *rothschildi* would have to be included in *tippelskirchi.*

A mounted adult bull giraffe from north-east Rhodesia, the skin and bones of which were presented to the British Museum by Mr. H. S. Thornicroft, has been described by myself in *Nature* for 1911 (vol. lxxxvii. p. 484) as *G. c. thornicrofti.* Related, apparently, to *tippelskirchi,*

it differs by the low frontal horn forming a distinct compressed cone instead of an irregular mass, by the forehead and bases of the horns being brown in place of grey, and the uniformly tawny colour of the lower part of the legs; the latter having these either whitish (? old bulls) or tawny and profusely spotted (females and? young bulls). The bull of the Rhodesian giraffe is characterised by the low and conical frontal horn, the grey ground-colour and sparse spotting of the sides of the face, the chestnut-brown forehead, deepening into black on the tips of the horns, the absence of a distinctly stellate pattern on the neck and body spots, which are light brown on a yellowish tawny ground, and the uniformly tawny lower portion of the legs.

A male giraffe from Barotsiland, to the north of the Zambesi, and a female from the same district to the south of that river, have been described by Prof. P. Noack (*Zool. Anzeiger*, vol. xxxiii. p. 354, 1908) as a new species under the name of *G. infumata*. It is stated to be allied to *capensis*, from which one of its points of difference is the rosette-like arrangement of the spots on the hind-legs, which are described as resembling those of a leopard. In the absence of photographs or figures it is difficult to appreciate the other characters given by Prof. Noack; but the animal is certainly not more than a local race, and should therefore, if distinct, be known as *G. c. infumata*.

In 1910 Mr. Knottnerus-Meyer (*Zool. Anzeiger*, vol. xxxv. p. 800) gave the name *giraffa hagenbecki* to an immature female giraffe about six years of age from Gallaland, then living in Mr. Carl Hagenbeck's menagerie at Stellingen. It was at first regarded as referable to *G. reticulata*, but its describer points out that the blotches, which are largest on the body and neck, are dark lustreless brown, separated by a network of white, fairly regular in these regions. On the outside of the thighs, limbs, and head the markings are broken up, and are very small on the forehead and occiput. The hind-limbs and the posterior parts of the fore-limbs are spotted, but the anterior parts of the latter from the knee downwards are white, so that the cannon-bones appear to be marked out. The pubic region and the inside of the thighs are also white.

Messrs. Rothschild and Neuville point out, in the memoir cited that this giraffe, which is certainly not a species, may be a local form of *G. reticulata*, but that, owing to the immaturity of the type specimen, its true affinity cannot at present be determined.

THE NETTED GIRAFFE

(Page 374)

This species was named by Mr. de Winton in the *Annals and Magazine of Natural History* for 1899 (ser. 7, vol. iv. p. 211), and not, as stated in the text, in the *Proc. Zool. Soc.* for 1897.

A piece of skin from the fore-part of the body of an East African giraffe, now in the British Museum, has been described by myself (*Nature*, vol. lxxxvii. p. 484, 1911) as the type of a new race under the name of *Giraffa reticulata nigricans.* It differs from the typical race by the white lines being rather narrower, and the dark areas smaller and brownish rufous, with a tinge of blackness, and a distinct blackish streak or star in the centre. The home of this race is not improbably the Kenia district. To a certain extent it connects the typical *reticulata* with *G. camelopardalis rothschildi.*

THE BUSH-PIGS

(Pages 391-396)

The classification of the bush-pigs (*Potamochoerus*) has been revised by Dr. E. Lönnberg in the *Arkiv för Zoologi* for 1910 (vol. vii. No. 6). In this paper four African species of the genus are recognised, viz., (1) *P. choeropotamus*, typically from the Cape and Natal, but represented in Portuguese E. Africa, Mashonaland, and N.E. Rhodesia by *P. c. mashona*, in the district to the west of Lake Nyasa by *P. c. johnstoni*, in the Mweru district and southwards to the Zambesi by *P. c. nyasae*, and in the Kilimanjaro region by *P. c. daemonis.* (2) *P. hassama* of Abyssinia. (3) *P. intermedius* of the Ruwenzori district of Uganda. (4) *P. porcus*, typically from Liberia to the interior of the Cameruns, but represented in the coast district of the Cameruns by *P. p. pictus*; in the northern part of the western French Congo and southwards by *P. p. albifrons* of du Chaillu; and in the Ubangi district, dividing French from Belgian Congo, by *P. p. ubangensis*, characterised by its white muzzle.

The chief difference from the classification followed in the text of "The Game Animals of Africa" is the relegation of Johnston's bush-pig (p. 395) to the grade of a local race of *P. choeropotamus*, and the recognition of the Uganda *P. intermedius* as a species by itself. The

latter is a very interesting animal, since, as its name indicates, it serves to connect the south-eastern *P. choeropotamus* with the western *P. porcus.*

The face below the eyes and the muzzle are white, with the sensory bristles and a narrow cheek-band above them black. A broad blackish band, blending superiorly into a brownish patch towards the otherwise whitish crown of the head, extends across the forehead between the eyes. The black ears have whitish margins near the tips and some white hairs in the terminal tufts. In the dorsal crest the black bristles have long whitish tips which communicate the dominant colour to the whole. The back and flanks are pale rufous, with a few black bristles; but, with the exception of the whitish chin, the under-parts and limbs are black. The whole coat is long and bristly, as in *P. choeropotamus*, and affinity with that type is indicated by the strong development and mixed colour of the dorsal crest. On the other hand, the general colour and colour-pattern are of the *P. porcus* type, especially as represented by the white-snouted *P. p. ubangensis.*

THE FOREST-HOG

(Page 396)

In the *Proceedings* of the Biological Society of Washington for 1910, vol. xxiii. p. 49, Mr. G. M. Allen shows that in colour and general character the West African forest-hog is identical with the typical *Hylochoerus meinertzhageni.* The ~~Washington~~ specimen shows no very definite warts on the face with the exception of one below each ear; but this is doubtless a feature peculiar to the female. The forest-hog of the Ituri is also regarded by Mr. Allen as not more than a race of the same animal. It is added that the term "giant pig," sometimes applied to these black swine, is a misnomer, for in reality they are not particularly large, although standing high. In the Florentine journal, *Pubblicazioni del R. Istituto di Studii superiori, Sezione di Scienze Fisiche e Naturali* for 1909, Dr. E. Balducci describes a forest-hog from the upper Congo as a new species under the name of *H. gigliolii.* This, however, is probably inseparable from the Ituri *H. m. ituriensis* (*supra*, p. 398) with which the author of the paper appears to have been unacquainted.

The forest-hog figured on p. 397 of the text was shot by Captain W. R. H. Dunn.

THE WART-HOG

(Page 399)

Six local forms of wart-hog are recognised by Dr. E. Lönnberg in the *Proceedings* of the Zoological Society for 1909 (p. 936), namely, the typical Cape *Phacochoerus aethiopicus*, *P. ae. sundevalli* of Natal, *P. ae. masaicus* of the Kilimanjaro area, *P. ae. africanus* of Cape Verd and Senegambia, *P. ae. aeliani* of Abyssinia, and *P. ae. delamerei*, probably from Somaliland. The typical Cape form is distinguished by the shortness and width of the post-orbital portion of the skull; in *aeliani* and *africanus* the same region is much longer, but whereas in the former it is narrower, in the latter it is broad. The post-orbital region is also long in *sundevalli* and *masaicus*, the Natal race having a broader frontal region than its Kilimanjaro cousin: both retain one pair of upper and either one or two pair of lower incisor teeth. Curiously enough, the presumably Somali *delamerei* resembles the Cape animal in the shortness and breadth of the post-orbital region of the skull, and the absorption or loss of all the incisors, although it differs in certain details of skull-structure. Similarity in the above respects in these two races may, it is suggested, have been brought about by similarity of environment.

THE HIPPOPOTAMUS

(Page 403)

In vol. liv. No. 7, of the *Smithsonian Miscellaneous Collections*, 1910, Mr. G. S. Miller describes the skull of a hippopotamus from Angola as representing a distinct species, although it is of course a local race, and should be known as *Hippopotamus amphibius constrictus*. From that of the typical *H. amphibius* of the Nile and north-eastern Africa generally, the Angolan skull differs by the more marked flattening of the upper surface, the much deeper lateral constriction behind the muzzle, the shorter union at the chin of the two halves of the lower jaw, and the proportionately smaller size of the cheek-teeth. In the hippopotamus of the Cape, which was named by the French naturalist Duvernoy so long ago as 1846, and may now be known as *H. a. australis*, the flattening of the skull is carried to a still greater degree, the socket of

the eye is peculiar in having its transverse diameter in excess of the vertical, and there are certain distinctive peculiarites in connection with the teeth.

THE LION

(Page 413)

A pair of lion cubs brought to England by Mr. H. G. Barclay in the spring of 1911 from British East Africa retained the spots—in a more pronounced degree in the female than in male—when about ten months old, and accordingly indicate that the lion of that district is either identical with or closely related to the Masai race of German East Africa.

As the name *Felis capensis* was used in 1781 by Forster, and again by Gmelin in 1788, for the serval, Mr. N. Hollister suggests (*Proc. Biol. Soc. Washington*, vol. xxiii. p. 123) that the Cape lion should be known as *F. leo melanochaetus*, a name given (as *melanochaitus*) by Colonel Hamilton Smith in 1858.

THE SERVAL

(Page 434)

In the *Annals and Magazine of Natural History* for 1910 (ser. 8, vol. v. pp. 205, 206), Mr R. C. Wroughton, who employs for the species the name *Felis capensis*, ~~as being earlier than~~ *F. serval*, described three new races of the serval, namely, *F. s. hindei* from East Africa, *F. s. kempi* from the Elgon district, and *F. s. beirae* from Beira. The first of these (*hindei*), typically from Mashakos, is characterised by its long silky fur, heavy, broad markings, and small size, the length of the head and body being about 25½ inches; *kempi* is darker-coloured, with finer markings, and of rather larger size, the length being about 30½ inches; *beirae* is largest of all, measuring about 33 inches in length, and is further characterised by the narrowness of the lines down the middle of the back, which are much broken up, and also by the small size and abundance of the black spots. The skull and teeth are relatively stout.

because serval is not identified as an African cat.

THE SPOTTED HYÆNA

(Page 449)

Several new forms of the spotted hyæna—here regarded as races—have been described since the publication of the original volume, in which a previously named race was omitted; Prof. Cabrera has also pointed out, *Proc. Zool. Soc.* 1911, p. 94, that the typical race of the species is probably from Senegambia. The omitted race is *Hyaena*[1] *crocuta leontiewi*, from Abyssinia, described in 1905 by Dr. Satunin in the *Zoologischer Anzeiger*, vol. xxix. p. 556. In 1908 Prof. Lönnberg described, on pp. 16 and 17 of the section on Mammals in "Sjöstedt's Kilimandjaro-Meru Expedition," two East African hyænas, namely, *H. c. kibonotensis* from the Kibonoto plains and *H. c. panganensis* from the Pangani valley. In the *Proceedings* of the Zoological Society for 1911, pp. 97-99, Prof. Cabrera added three other local forms, *viz.*:—*H. c. rufopicta* from the Boran country, *H. c. thomasi* from the Ankoli district of Uganda, and *H. c. nyasae* from southern Nyasaland. Later on the same naturalist (*Bol. R. Soc. Españ. Hist. Nat.*, 1911, p. 200) named a fourth race, *H. c. nzoyae*, from the Guasengishu plateau of British East Africa. Of these races it must suffice to mention that *rufopicta* is a pale reddish and red-spotted hyæna, very different in appearance from the grey ones of Abyssinia and Uganda; *thomasi* is a pale grey, black-spotted animal; *nyasae* is pale yellowish in general colour, with large dark spots and pale feet; while *nzoyae*, is allied to *thomasi*, but is of a dull yellowish colour without any trace of grey. All these four races, together with Satunin's *leontiewi* (described from the skull alone), and Matschie's *wissmani*, are characterised by the relatively narrow palate of the skull, whereas in *capensis* the same region is much broader.

A spotted hyæna, brought home by Mr. David Davies from British East Africa, probably referable to the Kilimanjaro *Hyaena crocuta germinans*, is characterised by the number, large size, and blackness of the spots, the ground-colour being orange. In these respects it presents a marked contrast to a specimen from Zomba, Nyasaland, in which the spots are comparatively few, small in size, and pale in colour, the ground-colour of the coat being tawny-yellow.

[1] The authors cited separate the spotted hyæna generically from the striped species as *Crocuta* or *Crocota*.

THE AARD-WOLF

(Page 454)

The representative of this species inhabiting the Suakin district has been described by Prof. A. Cabrera (*Ann. Mag. Nat. Hist.* ser. 8, vol. vi. p. 464, 1910) as a new race, under the name *Proteles cristatus pallidior*. It is stated to be nearly allied to the Somali *P. c. septentrionalis*, but paler-coloured, with less black on the mane and tail, and the feet brownish in place of black.

THE CUBEROW

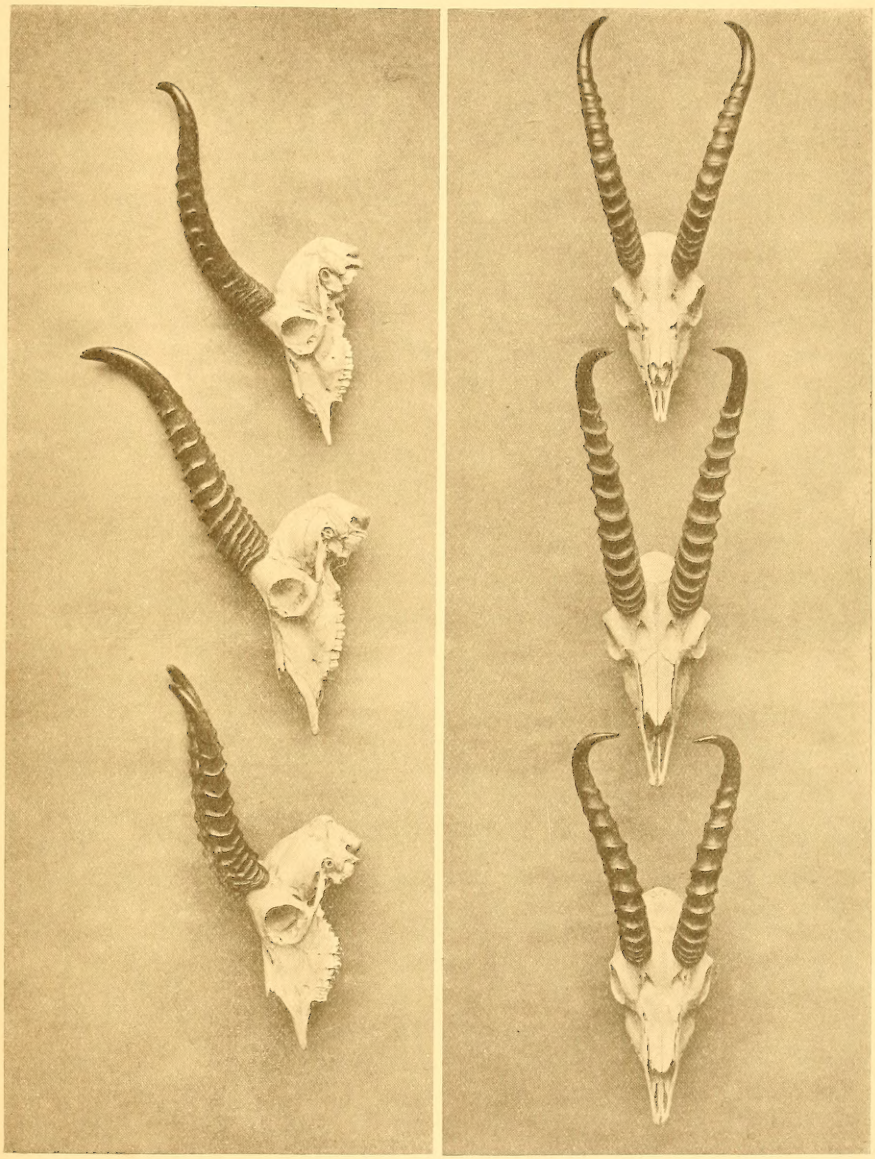
(Page 462)

In a memoir on the domesticated animals of the Mediterranean Islands published at Zurich (*Neue Denkschrift. Schweiz. naturf. Ges.* vol. xlvi. pp. 115 *et seq.*), Dr. C. Keller shows that the skull of the cuberow presents a remarkable resemblance to that of the prick-eared Ibiza greyhound of the Balearic Islands. So marked, indeed, is the resemblance that the author believes the Ibiza greyhound, which was once represented by an allied breed in Egypt, to be the domesticated descendant of the cuberow. The skull of the former shows a great elevation in the profile of the forehead, but this is evidently a feature due to domestication.

A

B

C



Skulls and Horns of Sudani Gazelles collected by Mr. W. B. Cotton.

A. *Gazella isabella.*
B. ,, *rufifrons.*
C. ,, *tilonura.*