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FIELD NOTES ON TWO LITTLE-KNOWN ANTELOPES: THE DAMARALAND DIKDIK (RHYNCHOTRAGUS DAMA-RENSIS) AND THE ANGOLAN IMPALA (AEPYCEROS PETERSI).

BY

G. C. SHORTRIDGE, M.B.E., C.M.Z.S., Director, Kaffrarian Museum, King William's Town.

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In the present paper field notes, relating especially to the distribution and habits, are given on two relatively little-known antelopes from Damaraland and Angola, as a result of personal observations during the course of several expeditions to Ovamboland and the Kaokoveld during the years 1925 to 1929.

THE DAMARALAND DIKDIK, Rhynchotragus damarensis.

Dikdik, with the exception of the species under discussion, are found in the coastal belts of North-East Africa.

Distribution.—In South-West Africa the dikdik is restricted to Damaraland and the Kaokoveld, and ranges from about the Tropic of Capricorn, or perhaps the 23rd parallel, northwards to the Cunene, from the Rua Cana Falls westwards to within 30 miles of the coast. It extends inland to the neighbourhood of Ondekaremba, near the Windhoek-Gobabis border in the south, northwards to the Waterberg and finally to the Namutoni-Tsumeb-Grootfontein line. The distribution of the Damaraland dikdik, even within its range, is patchy and coincides with certain belts or narrow strips of loose, generally limestone outcrop, densely covered with a distinct species of tangled fairly high thorn scrub, and it seldom, if ever, appears to be found in other situations.

It also occurs in south-western Angola, in a triangular area having for its base the lower Cunene River and its apex Benguella. In Angola, Blaine records having seen individuals within 20 miles of the coast. Statham records the "Bluebok" as being fairly plentiful in the arid and open forest country south of Benguella and has, without doubt, confused the dikdik with the blue duiker, which, although occurring in Angola, inhabits an entirely different region much further north and inland.

The dikdik occurs in rocky and stony thorn thickets between hill ranges along the valley of the Cunene, and in other similar situations throughout the Kaokoveld. It was recorded by Steinhardt as being widely distributed, but not very numerous in the Kaokoveld. Zukowsky, like Statham, confuses this dikdik, of which apparently he did not receive specimens, with the bluebok and refers to it under the heading "Cephalophus (Guevei) anchietae."

This dikdik is by no means rare in South-West Africa towards the northern end of its range, that is, in the Kaokoveld and Outjo district. Reports of its scarcity mainly come from the inhabited parts of S. Damaraland and Grootfontein districtlocalities that constitute the southern and extreme north-eastern limits of its distributional area. It appears to retreat before settlement, while, in the more closely populated native districts it is probably driven away or destroyed to a great extent by dogs. It is well known around Outjo Township, which is situated in flat or undulating thorn-bush country, thickly covered with loose outcrop, away from any hills; there, on account of being unmolested, individual dikdiks may now and then be observed, in the early mornings or at dusk, crossing footpaths within a few yards of some of the houses. The animal is not uncommon between Namutoni and Klein Namutoni where the surroundings are level everywhere within a radius of almost 100 miles. In this district the dikdik similarly exist in dense scrub, the ground being thickly and evenly strewn with limestone rock-composed largely of loose sharp-edged stones that are particularly difficult and tiring to walk over. The animal is considered, without doubt correctly, to be extremely rare in Ovamboland, where, on account of the sandy character of that territory, it is unlikely to occur at all except near the Kaokoveld border, and also possibly in the southeastern corner towards Namutoni.

The lower slopes of the detached rocky hills that extend for about 50 miles north of Grootfontein Town comprise the northeastern limit of its range, where it is believed to be scarce and perhaps, owing to natives with dogs, decreasing in numbers. In Otjiwarongo district, it has been reported from the Waterberg, but is considered to be rare. It is also recorded from near Otavi Mountain, parts of Windhoek district (particularly the southeast), around Okahandja, Omaruru, Karibib, the foot of the Erongo Ranges, etc. The animal is probably almost, if not entirely, exterminated by the Bastard Tribes in the Rehoboth district, to the south of which its range definitely comes to an end.

Habits.—The Damara dikdik generally goes about singly or in twos and threes, although in particularly favourable localities, such as the rocky cañon of the lower Cunene, west of the Rua Cana Falls, and between Kamanjab and Otjitemba, a considerable number may inhabit thorn thickets in close proximity. In the past these antelopes seem to have been regarded as mountain dwellers, perhaps on account of the fact that the kind of cover in which they concentrate usually occurs in valleys between hill ranges. Flat or undulating tracts, dry water-courses, sloping ground at the bases of hills-thickly strewn with loose limestone outcrop and overgrown with almost impenetrable though not very shady thornbush from 10 to 15 feet in height—are the types of country in which to find them. They never ascend far up hillsides, while, as in the vicinity of Namutoni and Outjo, they may be met with in level or undulating plains, provided that the right kinds of bush-cover and outcrop are present.

Damara dikdik are crepuscular and, during moonlight nights at any rate, are nocturnal. They are particularly wary and timid in habits and never wander any distance from cover, consequently they would seldom be persecuted, even by natives, were it not that, like most other small bush antelopes, they make and regularly traverse beaten tracks, which renders it possible for them to be snared. At the same time, owing to their alertness, activity and diminutive size, they do not appear to be caught in large numbers anywhere and are not much sought after in districts where larger and more easily hunted game exists. They are difficult to shoot as the rough and thorny nature of the country, in which they hide, renders silent progression almost impossible. At Outjo, which is situated in typical dikdik country, it was the custom of the Resident Magistrate to invite friends and visitors to come at sundown to watch a party of three of these animals that had the habit of crossing the road every evening at early dusk, within a few yards of his front verandah, while they were said to re-cross with equal regularity at about sunrise.

Their pale smoky colour is peculiarly well adapted to limestone surroundings and even when in motion they are shadowy and soon lost to sight. Steinhardt also comments on their inconspicuous coloration and general elusiveness.

The fur is said formerly to have been valued in Germany for the inside lining of gloves; it is doubtful, however, whether the skins were ever exported in large quantities, while I have only seen a single karross made from them.

Although, unlike klipspringer, their hoofs are sharply pointed, they stand and move about almost on the tips of them; hence the spoor, which is smaller than that of any other South-West African antelope, is much pitted, well defined and unmistakeable. These lightly-built, graceful animals tame readily; an individual kept for some time at Namutoni was in the habit of wandering about on friendly and fearless terms with dogs, and would come to drink regularly from an ordinary wineglass that was kept full of water for that purpose without upsetting it. Judging by this specimen, they will drink regularly where water is available, but, like klipspringer, they occur, more often than not, right away from its neighbourhood.

Dikdik deposit their droppings in chosen situations, the pellets being similar in size and shape to grains of rice. Steinhardt records that these accumulations may attain a metre in diameter. In the Kaokoveld they have the curious habit of choosing the droppings of an elephant or rhinoceros as the basis for their deposits, and a day or so after a herd of elephant has passed through a district where these antelopes are plentiful, nearly every dropping will be found thickly sprinkled with those of dikdik.

The meat is pale in colour and rather tasteless, more resembling that of springhaas than venison.

Nothing has been recorded about the breeding habits of the Damara dikdik, though a less than half-grown female obtained at Kaoko-Otavi on 20 June was estimated to have been about three months old. None of the females obtained in the Kaokoveld between May and August contained foetuses.

Dikdik are now Royal Game in South-West Africa.

Description.—The two record horn measurements given by Rowland Ward are 4 and $3\frac{1}{4}$ inches respectively. The best out of five males in the Kaffrarian Museum measures $3\frac{3}{8}$ inches, the remainder being 3 inches and under. The horns, as with duiker, are frequently chipped, while Zukowsky notes that individuals with deformed horns are not uncommon.

In size the Damaraland dikdik is the largest of the Madoquine group, which is otherwise East African. In the largest male measured, the head and body was 690 mm. and the tail 56 mm. The height at the shoulder of an adult female was 430 mm., or approximately 17 inches, measured to hoof-tip. The estimated weight was 14 to 16 lbs., the females being slightly heavier than males. The general colour is silver-grey on the crown and along the centre of the back, pale rufous on the backs of the ears, sides and limbs. The grizzled-grey body colour is very similar in tint to that of the silver fox, *Cynalopex chama*, although the texture of the hair is more sleek and silky.

The dikdik from Angola, *Rhynchotragus damarensis variani*, which has been subspecifically separated, is said to differ by being brighter in colour, the buff tint of the flanks extending on to the chest and underparts, while the grizzled effect on the back is darker than in the typical Damaraland race. Oldfield Thomas, however, doubts if there is sufficient reason for the distinction.

THE ANGOLA IMPALA, Aepyceros petersi.

The distribution of the Angola impala in South-West Africa is chiefly in the immediate vicinity of the Cunene watershed, from about 13° E. to the western end of the Angola-Ovambo border. It is particularly numerous in the northern Kaokoveld on either bank of the Cunene, but does not extend more than a mile or two south of that river except along its occasional small affluents, such as the Hondoto, where a few straggling parties at times wander as far south as Epembe Village. According to local natives, it extends up one or two similar streams further west to about the latitude of Kaoko-Otavi, but, whilst apparently never approaching the large water-hole at Kaoko-Otavi itself, stray individuals are reported at rare intervals to visit the small springs at Okorosave and Onjanjeresse during the rains. The southern permanent extension in the Kaokoveld consists of a small and perhaps stationary herd that keeps close to the neighbourhood of the several water-holes around Ombathu.

In north-western Ovamboland, although plentiful close to the Rua Cana Falls, impala rarely penetrate far south into the wooded plains of that territory even during the wet season, while normally, as in the Kaokoveld, they keep well in touch with Cunene. The only other locality in South West Africa where the Angolan race exists is a small strip of country along the southern margin of the Etosha Pan, where a detached and entirely isolated herd, estimated at about 200 head, was discovered in the vicinity of some permanent springs in 1926, when a specimen was shot by H. E. the Earl of Athlone. This herd, without doubt, originated from individuals of the species that, at one time, trekked south from the Cunene during a period of exceptionally heavy rain and were enabled to remain there on account of the existence of an adequate water-supply, fortunately, well within the confines of the Namutoni Game Reserve. Outside South-West Africa they have been recorded from Mossamedes and Benguella districts, as far north as the Caporollo River.

In Angola, according to Statham, the impala occurs along the Caporollo, Cunene, Cubango (Okavango) and possibly the Cuando (Kwando) Rivers, although he does not distinguish the two races. At the same time it has been established that the typical form, or *holubi*, if distinguishable, occurs everywhere along the Okavango and Kwando (Upper Chobi) Rivers; while those in the vicinity of the Cunene and the Caporollo are *petersi*. As the sources of the Cunene and Okavango are only about 20 miles apart, it is possible that the two may meet in Angola, although I do not think that they intergrade. On the other hand, the Angolan impala definitely does not overlap in South-West Africa with the typical race which replaces it in the Okavango watershed and everywhere further east.

During the early days of European settlement, small herds of impala are said to have existed in the neighbourhood of Omatako Mountain and elsewhere in Omaruru district. These, however, in all probability represented typical *melampus*, some of which might easily have wandered south from time to time from the Okavango by way of the Omuramba-Omatako which, rising in the Omaruru district, would constitute a natural migratory channel on the rare occasions when it flows.

Habits.—Impala go about in parties of about a dozen to thirty. A herd, as a rule, consists of one or two adult rams and the remainder of ewes and immature males, although during the dry season droves of a hundred, or occasionally over two hundred, may temporarily collect together. While plentiful in the vicinity of the Cunene, it would easily be possible to over-estimate their numbers on account of the narrowness of the belf they inhabit. They are very partial to undulating or moderately hilly forestcountry, such as the rocky and precipitous evergreen-forest belt near the Rua Cana Falls, but also frequent grassy park-like flats studded with trees and patches of bush near the river.

Kudu, impala and Burchell's zebra were often observed in close association along the lower Cunene and on adjacent wooded hill-sides, where all three animals were particularly numerous. Cunene impala drink at least twice daily—in the early mornings and evenings. They have the habit of returning to favoured spots —often the same as those used by native small stock. At Ombathu they only appear to come to water during the night, but that is without doubt owing to the waterholes being in constant daily use by natives and cattle. Ombathu was visited during the middle of September, when impale were heard grunting at intervals throughout the night, especially when approaching the water. The sounds were at first mistaken for those of warthog.

Statham mentions that he found Angolan impala among the hardest of animals to bag. In the Cunene area, however, I found just the opposite, the herds being rather unsuspicious, rendering it possible to follow up and pick out several from one party before they became seriously alarmed. The presence of impala in the northern Kaokoveld could at once be detected by the large and conspicuous circular accumulations of droppings that were deposited in the same patches year after year. These accumulations averaged from 8 to 10 feet in diameter and a foot or more in depth and were situated in open glades, the ground being bare and much trodden down all round.

A female shot near the Hondoto-Cunene Junction on 18 August contained a half-grown foetus.

Description.-In colour petersi, which can be regarded as specifically separable from any of the races of melampus, has very little of the rufous coloration of the typical Rooibok. The general tint which deepens along the line of the back is almost identical with that of the Tsessebe, and displays similar plumcoloured reflections, in adult individuals of both sexes, with only a slight rufous wash on the head and neck. The black headmarkings are always well-defined, although varying somewhat in extent and density. In a well-marked pair of mounted examples in the Kaffrarian Museum the face-blaze averages 11 inches in width, and extends from the upper part of the nostrils to just below the eyes, then continuing in the form of a thin line that joins up with a conspicuous black crown-patch, in the male situated between the horns. A diagonal black line above the eye, which is a little over $\frac{1}{2}$ inch in width, is equally well-defined and similarly connects up in front of the ears, behind the horns in the male, with the forehead-patch and extends, in the opposite direction, below the outer corner of the eye-socket for about 1 inch. The ears are strongly tipped with black, the extent being greater than in *melampus*.

The Angolan impala is a slightly larger animal than the typical species and may weigh upwards of 170 lb. Apart from colour and size, there is a very striking difference between the tails of the two forms, that of *petersi* being definitely longer and almost as full and bushy as in a reedbuck. The shoulder measurement of a male was 1,000 mm., or 3 ft. $3\frac{1}{2}$ ins. approximately, to hoof-tip; of a female 890 mm. or 2 ft. 10 ins. approximately. In length, head and body, the largest male recorded was 1,540 mm., with tail of 400 mm.; of an adult female 1,440 mm., with tail of 360 mm. Rowland Ward records five Angolan impala with horns that exceed 23 inches in length—the best being $24\frac{1}{2}$ inches. In the Kaffrarian Museum, however, there is one that measures $25\frac{1}{5}$ inches, and three others of $23\frac{1}{2}$ inches—all from the Cunene.