

Animal Husbandry of the Hottentots.

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1. THE COUNTRY OF THE HOTTENTOTS.

DURING the early days of the Dutch settlement at the Cape, the Hottentots occupied most of the western half of South Africa. They were thinly scattered over this vast stretch of land, in small loosely-organised groups, each with its own individual name. The Inqua, Damaqua and Gonaqua constituted the most eastern tribes along the south coast of the Cape, the Gonaqua extending as far east as the Great Fish River; whilst the Great Namaqua were the northernmost group, living north of the Orange River in the southern parts of what is now South West Africa. But scattered hordes of Great Namaqua extended even into the north of that country, the ||Khaui-Goan and ‡Aunin (Topnaars) wandering as far north as the Etosha Pan and the Kaokoveld, south of the Kunene River.

Originally the Hottentots do not appear to have camped anywhere far from the coast belt. The !Kora, for instance, who at the beginning of the last century were found round the junction of the

Vaal and the Harts, were originally resident in the Cape Peninsula, and had only been forced into the interior of the country through their continual strife with the Europeans, and later through their quarrels with the Bantu. The same applies to such scattered groups, remnants of different tribes, as the Amraal Hottentots, round Gobabis, and the !Khara-GeiKhoïn, south-east of Rietfontein S. British Bechuanaland, who left the coastlands only when the Hottentot peoples carried out a general movement away from the European settlements. (Schapera, 1930.)

The climate of the original habitat of the Hottentots is determined by the physical conformation of the land and by its proximity to the Equator. A narrow fringe round the coast has an elevation of less than 1,500 feet above the sea, whilst most of the interior consists of a high plateau rising gradually around its borders to an elevation of over 3,000 feet. On the west, the escarpment is separated from the Atlantic by fairly uniform slopes, whilst in the south the Great Karroo and folded mountain ranges intervene. The high plateau intercepts the rainbearing winds from the Indian Ocean, so that the climate along the west coast is extremely dry; but along the south coast and the south-west the rainfall is heavier. Over the south-western Karroo the mean annual rainfall is 10 inches, being reduced towards the north-west of South West Africa to less than 3 inches. In the Cape Peninsula, on the other hand, the rainfall reaches an average of 40 inches per annum.

Along the west coast from the Olifants River to the Kunene stretches the barren desert country of the Namib, varying in width from 18 miles in the north to about 85 miles in the south. The greater part of the Namib is covered with drifting sand dunes, the monotonous character of the land being varied in places by more broken country. This stretch of coastland is dominated by the cold antarctic Benguella current whose power is rarely countered by very hot winds from the east. The sporadic rain falls during the summer from October to April.

South of the Orange River the Namib gradually changes into the highlands of Little Namaqualand where the mean annual rainfall is slightly higher than in the desert, reaching as much as 15 inches. The country south of the Olifants River is characterised by folded mountain ranges, separated by wide valleys, which extend over the whole southern portion of Cape Province. The total annual rainfall of this region reaches an average of 30 inches. The rain falls during summer and winter, but its seasonal distribution varies greatly according to locality. The Cape Peninsula itself is the best-watered area of what was formerly Hottentot land. The bulk of the rain falls during the winter, April to September, the summer being the dry season. East of the Cape Peninsula, the rainfall decreases again to between 15 and 20 inches.

Thus the land of the Hottentots is for the most part arid and semi-arid country. Its range extends through three distinct rainfall areas, the area of summer rain and winter drought, a second where rain may occur any time of the year, broken by irregular periods of drought, and finally, the winter rain area.

The rivers and water courses correspond with the great diversity of the climatic and physical conditions of Hottentot land. In the far north-west, between the highland region of the Kaokoveld and the Etosha Pan, the sandy plain is intersected by a number of shallow water courses which are filled by the overflow of the Kunene River and drain to the Etosha Pan. The hilly country south of the Kaokoveld, i.e. Northern Damaraland, is devoid of defined waterways, sink holes and subterranean caverns and springs. Along the coast, however, the Namib, at least in its northern portion, is distinguished by the presence of water courses flowing through open channels to the sea. In a southerly direction, where the Namib and the western outskirts of the Kalahari desert pass into Great Namaqualand, the Anas Mountains form the watershed of South West Africa. This part of Hottentot land is drained by the Kondip and Great Fish Rivers which carry their waters to the Orange. The Orange and Berg Rivers are practically the only streams of Hottentot land retaining their surface water all the year round. Almost all the others are dry sandy river courses which carry water merely for a short period after rain; and only in very wet seasons do they keep up their flow for any length of distance. The rest of the time they have water below their beds in places far between, or in stagnant pools, or occasionally from a spring in the otherwise dry river course. Away from the river beds springs are very few and water hard to find, as the hollows in the rocks and the vleis and depressions hold it only for a short time after heavy rains.

South of the Orange River, in the highlands of Little Namaqualand and the arid plain of Bushmanland, enclosed by the great bend of the Orange River, there is practically no surface water at all, the river beds being dry throughout the greater part of the year. But in the Kamiesberg, south of Little Namaqualand, a few short perennial streams are met with.

The southern portion of Hottentot land is formed by the Central or Great Karroo of the Cape Province which rises to 3,000 feet above the sea, and extends from the Olifants River in the West to the Sundays River in the east. Its river beds are dry, except during the short periods of summer rainfall when the waters sweep down to the sea. In the dry season they may turn into a series of pools and gullies, and in times of severe drought dry up completely. This applies even to such important rivers as the Gouritz, Gamtoos and Sundays, which have their sources in the summer rain region behind the coastal ranges. Only a few smaller streamlets situated in the limited area of moderately high winter rainfall rarely dry up. But the Great Karroo, north-east of this small winter rain area, in the days of the Hottentots when there were no wells or boreholes, was a desert proper.

The amount and incidence of the rainfall and scarcity of perennial surface water explain very largely the existing flora in the territory of the Hottentots.

The Kaokoveld and Ovamboland consist of elevated plains thickly covered with red sand and calcareous deposits. The rainfall, though very small, permits a fair amount of vegetation, mainly grasses, shrubs and trees. The plains are covered with tough Bushman

grass (*Aristida brevifolia*) or dense thornbush. *Aloe dichotoma* and *Euphorbia dinteri* as well as various leguminous and bulbous plants are characteristic of the vegetation of these regions. Over the arid tract of the Namib a very scanty xerophytic vegetation is encountered, whilst considerable areas are practically devoid of any growth except the remarkable tsama melon (*Citrullus vulgaris*) which, owing to its high water content, is the most important plant throughout the arid parts of Hottentot territory during the height of the dry season. (Schapera, 1930.) The sparse covering of cacti and stunted, dwarfed bushes, such as the milk bush (*Euphorbia sp.*) is sustained in the rainless Namib chiefly by the wet and heavy sea fog.

In Damaraland and Great Namaqualand the vegetation is richer than in the Namib. Northern Damaraland is a tract of extensive grass plains, the low-lying country often extremely fertile. The flora of this region includes the inflammable candle bush (*Sarcocaulon Burmanni*), the unique *Welwitschia mirabilis*, and, above all, the leafless cucurbitaceous !naras (*Acanthosicyos horrida Welw.*), an edible melon-like fruit. In the river beds the leaves and pods of various Acacias, especially the Kameeldoorn (*Acacia giraffae*) and the Ana (*Acacia albida*), provide a rich verdure and staple feed for cattle and sheep in these parts. The northern districts of Great Namaqualand form a park-like savanna with large thorn trees and well timbered stretches along the river beds; Kameeldoorn and Kokerboom (*Aloe dichotoma*) are most prominent in this region. In the south of Great Namaqualand, semi-desert conditions prevail, the arid plateaux supporting a poor growth of grass and shrubs, the latter mostly being of the *Grevia* species. During seasons with a heavy rainfall nutritious grasses crop up everywhere.

The arid and semi-arid tracts of Bushman- and Little Namaqualand produce a similar vegetation to the country adjoining the Orange in the north. The general aspect of the flora is that of widely separated xerophytic shrubs and bushes interspersed with various succulent plants. Grasses occur rarely, always growing in tufts.

In the Upper Karroo, south and east of Bushmanland, there is a considerable diversity of vegetation owing to the great range in rainfall and altitude. The north-western parts have a proper desert flora, while the more favoured districts show the characteristic vegetation of a semi-desert. A variety of dwarfed and stunted shrubs and bushes, mostly of the family Compositae, provide a sufficient sustenance for large numbers of stock even throughout the driest seasons. Grasses shoot up during the rainy season, but these do not form a typical feature of Upper Karroo vegetation. Thorn bushes and succulent, bulbous and tuberous plants are the characteristic flora of this region, while Acacias border the intermittent river courses.

South of the Olifants River, the eastern part of the Goudini valley adjoins the Southern Karroo which is almost entirely destitute of vegetation, whilst its southern part passes into the Cape Peninsula abundantly supplied with its winter rainfall. The characteristic Cape flora is dominated by a large variety of evergreen shrubs and numerous bulbous, tuberous and similar plants possessing subterranean storage organs. The sandy plains of Cape Peninsula, its

marshy hollows, river banks and mountain sides, all have their own peculiar flora. Patches of forest are found on the seaward sides of the mountains, whilst in the plains the flora is chiefly composed of Proteaceae, such as the silver tree (*Leucadendron argenteum*), the sugar bush (*Protea mellifera*) and other evergreen shrubs, Restionaceae, a family of grass-like plants, Ericaceae, the typical plants of the heath, and various grasses proper.

In the Great Karroo vegetation is very scanty, and during the dry season the soil entirely devoid of verdure. Drought-resisting thorn bushes, succulent, bulbous and tuberous plants compose the typical Karroo flora. Along the river courses and on the eastern mountain slopes trees occur in sporadic patches; during exceptionally wet seasons even grasses occasionally crop up.

These are the climatic and floral conditions of the country of the Hottentots, poorer than anywhere else throughout the southern parts of Africa. They have set their stamp on the Hottentots' mode of life and on their pastoral industry.⁽¹⁾

2. THE DOMESTIC ANIMALS OF THE HOTTENTOTS.

When Europeans first set foot upon South Africa, they found the country inhabited by Hottentot tribes in possession of large herds of cattle and flocks of sheep. Van Riebeeck, the founder of the Dutch settlement at the Cape, describes the herds of the Hottentots in the surroundings of Table Bay as being as numerous as blades of grass in a field. Akembie, the chief of the Namaqua Hottentots, is said to have alone possessed in 1661, 4,000 head of cattle and 3,000 sheep (Stow, 1905). Besides cattle and sheep, the only other domestic animal possessed by the Hottentots was the dog. From van Riebeeck's statement it is evident that none of the Cape Hottentots bred goats, and this applied to other Hottentot tribes as well. The goat was never used in their ceremonial meals, if it could possibly be avoided. This in all probability, suggests Mrs. Hoernlé (Hoernlé 1918), is due to the fact that it was not one of the original domestic animals of the Hottentots. They acquired goats some time later from the Bantu with whom they came in contact shortly after the European occupation of the Cape. The Naman, for instance, obtained their goats by barter from the BaTlaping, a Bantu tribe whom they called Biriqua, i.e. goat people (Dapper, Ten Rhyne and De Grevenbroek, 1933), and this is also the Hottentots' usual name for the BeChwana (Schapera, 1930).

The Hottentot cattle were gaunt, bony creatures. According to Kolben they were bigger and stronger than European breeds, a Hottentot ox weighing about 5-600 lb. (Kolben, 1719). The head was long and narrow, especially the nasal part, but with a fairly broad forehead; the body moderately deep and broad, and the legs strong, clean and well placed. The tail was long and thin, with a well developed switch, and the horns long and slender, their direction

⁽¹⁾ This chapter is compiled mainly from the following sources: I. Schapera, The Khoisan Peoples of South Africa, 1930, Chap. I.; H. Epstein, The Red Afrikaner Cattle, Chap. I (unpublished); S. Passarge, Südafrika, 1908; The Oxford Survey of the British Empire, 1914, vol. on Africa.

being mainly outward and with a slight twist. This peculiar direction of the horns may have led Stow (1905) to conclude erroneously that the Namaqua had a practice of training the horns of their oxen artificially, confining their shape to a spiral line similar to that in the Koodoo. But this observation may also be based on an entirely different phenomenon. Sparrman (1789) writes that in the Zuurevelden the cattle are sometimes given to gnaw each others' horns when shut up in their kraals at night, through which their horns take on a carved appearance; "a circumstance which", says Sparrman, "ought therefore by no means to be ascribed, as it has been, solely to the ingenuity and manual operation of the herdsmen". (See fig. 1.)

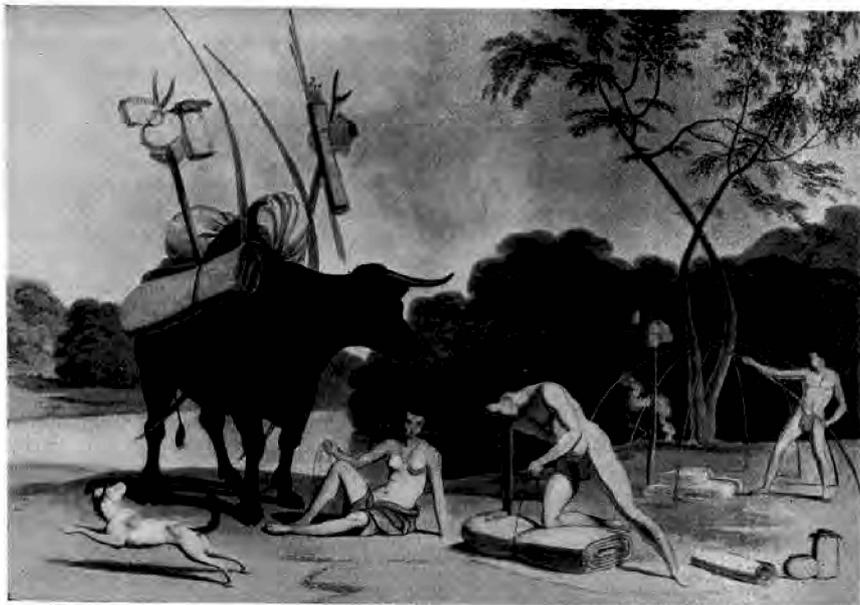


Fig. 1.—Korah Hottentots preparing to move. After Samuel Daniell.

The hump of the Hottentot cattle does not seem to have been very strongly developed. On Daniell's picture the load obstructs, judging the direction of the top line of the ox and the development of the hump, but the position of the front pack indicates a considerable slope down of the back behind the withers.

"The majority of authors", says Kolben (1719), "who have described Hottentot cows and oxen, state that these are distinguished by large humps. But I can assure my readers that, although I have seen the herds of the Dutch settlers and of many Hottentots, I have never met with a humped beast. The above statement is therefore either untrue, or the yoke pressing upon the neck of the ox causes the withers to appear raised to a hump. Yet it is certain that by nature their cattle are not humped though they are larger and stronger than European breeds".

This statement is difficult to accept as it stands. Kolben himself says that most of the other writers describe the Hottentot cattle as humped. On Daniell's and others' paintings of Dutch settlements, dating from the end of the eighteenth and the beginning of the nineteenth century, a large proportion of the oxen are depicted with humps. Yet Kolben (1719) himself states that "as the Hottentots know, the cattle of the Europeans originate and descend from the Hottentot's own stock".

But the fact that Kolben does not credit Hottentot oxen with humps is not surprising considering that the Hottentots lived, at the time of the European penetration into southern Africa, in one of the driest and poorest parts of the subcontinent. With all zebu cattle the size of the hump is easily influenced by the feeding. For instance, it is frequently observed in zoological gardens that zebu calves born there develop tremendous humps, whereas in their imported parents the hump is hardly noticeable (Epstein, 1937). In poorly fed specimens of the red Afrikander breed, which is descended as pointed out in another place from cattle of Hottentots (Epstein, 1933), the hump is even nowadays practically unnoticeable. Yet the hump of the Afrikander is one of the chief characteristics of this breed; and it is evident that this feature could not have been developed by Cape settlers, had its genetic factor not already been present in the original Hottentot stock.



Fig. 2.—Hottentot cow. After Schultze.

The accompanying photo of a cow of Hottentot type reproduced by Schultze, shows an animal which an untrained observer would describe as humpless. But it is evident to a trained eye that this cow would show a proper hump when well fed, and would certainly be capable, with a bull of similar conformation, of producing a calf that would develop a very prominent hump if properly reared. (See fig. 2.)

The principal colour of the Hottentot cattle was red through every shade from darkest to light. The ox represented on Daniell's painting is dark red, and the cow reproduced by Schultze seems to have been the same shade also. Black Hottentot cattle too were fairly common, and there were many red animals which had a white top and underline, or their red colour broken by white markings on almost any part of the body including the switch, and especially on the belly, dewlap and flanks. Roan was practically unknown among Hottentot cattle. But a red background with small white spots along the belly, dewlap, brisket, flanks and ribs was not rare. Brown and yellow stock occurred fairly frequently. In very rare instances Hottentot cattle were of a creamy white, even of an almost snow-white colour.

Hottentot sheep are relatively large in body, although not standing particularly high. Their heads are fairly big and long, with a convex, flat or occasionally even concave profile, and a slightly convex or straight chaffron. The muzzle is narrow and rounded. The eyes are unusually small, the ears fairly long and pendent, not too broad and narrowing slightly towards the tips. The ewes are mostly hornless, but the rams carry horns which are either crescent-shaped or elongated into a horizontal spiral. Their horns are fairly large tapering off rapidly towards the tips and displaying a great number of distinct transverse wrinkles. (See fig. 3.)



Fig. 3.—Hottentot sheep. After Antonius.

Usually the tail reaches to the hocks where it terminates abruptly, but in some specimens its cylindrical tip is so long as to sweep the ground. In the hairless under-surface of its fat-laden portion, and in the separation of the bare from the hairy areas by a pair of longitudinal grooves, the tail of the Hottentot sheep resembles that of other fat-tailed breeds. In most cases, however, there is a smaller accumulation of fat than in the majority of African and Asiatic fat-tailed animals. In some instances the fat-tail is egg-shaped not even reaching the hocks. In short, the modifications of tail structure

displayed by the Hottentot sheep are numerous, hardly two animals being exactly alike in this feature. The tail generally weighs about three to four kg. (Theal, 1907). (See figs. 4 and 5.)

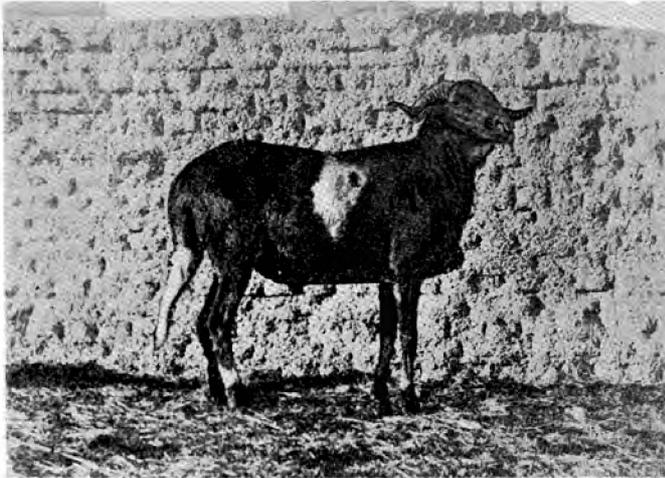


Fig. 4.—Nama ram. After Schlettwein.



Fig. 5.—Nama ewe. After Schultze.

The majority of Hottentot sheep are covered with hair instead of wool, the hair being short, straight and coarse. Others have a thick and curling woolly fleece, but in some specimens the fleece is long, coarse and shaggy. On the face, belly and legs the hair is short and dense. The rams usually display a more or less distinct throat mane.

Their colour varies from uniform dirty white to rusty or dark brown, black or silver grey, but piebald or skewbald specimens are not unknown.

The dogs of the Hottentots were ugly creatures, their bodies being shaped like jackals', and their hair coarse and bristling forward on the spine (Theal, 1907). They varied in size and colour. Schinz (1891) describes them as of medium size, with short hair, long snouts, and drooping ears; Von François (1896) as coarse and ugly, and varying in size and colour; whilst others refer to them as lean, hungry looking mongrels, half starved and savage-tempered.

3. DESCENT AND ORIGIN OF THE HOTTENTOT CATTLE.

The amount of research that has been hitherto devoted to solve the question of the racial origin of the Hottentots' domestic animals is negligible. For this reason practically all opinions advanced on this point have proved erroneous. Johnston (1908), for instance, in mentioning the resemblance of Hottentot and Bantu roots of the terms for cattle, sheep and goats, argues that the goat first, then the ox and the sheep were brought to the Hottentots from the north by Bantu or Nilotic negroes. In a previous publication on the West African Shorthorn the author (1934) has already commented on the superficiality of Johnston's hypotheses on the origin of African domestic animals. In the case of the domestic breeds of the Hottentots it is particularly dangerous to come to conclusions solely from philological resemblances of names, without producing any supporting evidence. That such conclusions are often liable to error is shown by the following instance: The Hottentots use the term "häs" for mare, from which the typically Hottentot masculine "hâb" for stallion has been formed. If we were to view this linguistic phenomenon independently of any other considerations, we would arrive at the wrong conclusion that the Hottentots acquired their first horses from English speaking people. This however is not the case. The first horses were imported into South Africa by the Dutch settlers who used the Afrikaans name "perd".

As to Johnston's theory of the Bantu origin of the Hottentot's domesticated animals, it is well known that within at least historical times the Hottentots possessed sheep and cattle and an old pastoral tradition long before they came into contact with the Bantu. It is true they obtained goats from the Bantu after the European occupation of the Cape. But even in this case Johnston errs when arguing from philological resemblances that the Hottentots obviously acquired their goats prior to their cattle and sheep.

Whether the Hottentots obtained their domestic animals from the Bantu in East Africa is, as Schapera (1930) submits, a more debatable question. The author, however considers the issue quite clear; for the East African Bantu peoples were certainly not in possession of fat-tailed sheep nor of zebu cattle at the time the Hottentots acquired theirs. Their cattle were of Sanga type, derived from an intermixture of Hamitic longhorn cattle and longhorned zebus, whilst their sheep were of the original long- and thin-tailed breed of the Hamites. The sheep of the Hottentots, on the other hand,

were fat-tailed animals, and their cattle zebus proper, as the author has shown in previous publications;—not, as Schapera asserts, “of the large, straight-backed, longhorned type (*Bos aegyptiacus*), still found among the native peoples in the Horn of Africa”. The present cattle population of the Horn of Africa, by the way, is also of zebu stock.

Evidence that the Hottentot cattle were of pure zebu stock, and not like the divers Bantu breeds of Sanga type derived from a mixture of longhorned zebu and the original longhorned breed of the Hamites, is furnished by various factors. Characteristic of the skull formation of zebu cattle are the great length and narrow width of the head, the comparatively long, narrow and fine muzzle, the slight prominence of the eyebrows, and the convex profile. These zebu features representing the “desert type” in cattle are found to a full extent in the Afrikaner breed descended from the cattle of the Hottentots (Epstein, 1933). Since Hottentot cattle no longer exist, nor any skeletal material, the Afrikaner cattle, being of pure Hottentot blood, have to be drawn on for evidence.

Their molar teeth are placed in an oblique position just as in other zebu breeds, the structure of the enamel is simple, the course of the grooves little complicated, and the enamel strongly developed. The back part of the lower jaw-bone ascends vertically in the Afrikaner as well as in other zebu cattle, and many other characteristics, by which these animals differ from cattle of Primigenius type, are common to all.

There is another important feature which proves that the Afrikaner, and their ancestors, the Hottentot cattle, are to be regarded as real zebus. Practically all zebu breeds are distinguished from other species by the shape of the spinous processes of their dorsal vertebrae the tips of which are bifid. The same phenomenon is found in the vertebrae of the Afrikaner cattle, but hardly even a suggestion of such a fissure in cattle of Primigenius type.

In the Bantu cattle, all of Sanga type until the short-horned zebu made its appearance in East Africa a few centuries ago, this feature shows a large range of variation. In some of them the fissure is fairly deep, although not quite as deep as in the red Afrikaner cattle and other pure zebu breeds; in others it is hardly perceptible; and even within one and the same breed the differences are considerable (Epstein, 1937).

That there is a similarity between the Afrikaner and the zebus brought by Semitic nomads from Abyssinia to Egypt and other parts of Africa 3,000 to 4,000 years ago, as regards the form and the direction of their horns and all important characteristics of the body, is shown by an ancient Egyptian picture of zebus, dating back to the period of the “New Kingdom”. (See fig. 6.)

This similarity makes it probable that the original characteristics of the zebu are preserved in the Hottentot cattle and their descendants in an even purer form than in zebus of Asia which, as Stegmann von Pritzwald (1924) asserts, were exposed to the influence of short-horned breeds (*brachyceros*).

It is not definitely known when the Hottentots first came into possession of their cattle. It is probable that they received them at a later period than the Nilotic and Bantu tribes did, whose cattle have the old Primigenius breed of the Hamites as a foundation, and at a time when zebus were imported into Africa in such large numbers as to preserve the breed in pure form. Importations to such an extent probably only took place in post-Christian eras, most certainly not prior to the last centuries before Christ.

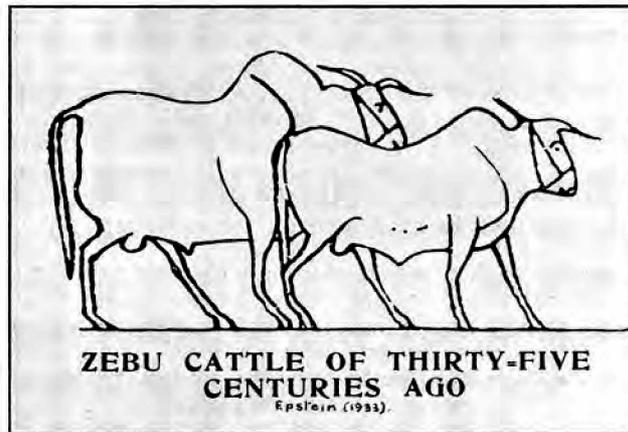


Fig. 6.—Zebu cattle of thirty-five centuries ago.

According to their own traditions, the Hottentots appear to have come from the lake district of Central Africa whence they were driven out at the end of the fourteenth century or the beginning of the fifteenth by a more powerful race armed with bows and battle axes. But, as Theal (1907) rightly remarks, that was certainly not their earliest home, and it is not even likely they resided there long.

Their zebu cattle must have been obtained in Abyssinia, the starting point of the zebu penetration into Africa, or somewhere in that vicinity; and the people from whom they received them must have been of Semitic or Semiticized stock, since all Hamitic and partly Hamitic races of Africa were originally in possession of longhorned Primigenius cattle or at least of cattle with a preponderance of Hamitic longhorn blood. The only peoples possessing pure-bred zebus were Semitic immigrants from southern Arabia. Schapera's statement "that cattle and sheep as domestic animals were introduced into Africa by the Hamites" is therefore erroneous in its generalisation. For the role played by the Semites and Hittites in introducing cattle and sheep into Africa is no less important, albeit chronologically later. The distribution of the zebus is as closely connected with the movements of Semitic peoples, as the occurrence of the Egyptian longhorn cattle with the migration routes of the ancient Hamites. The zebus of Africa in general and those of the Hottentots in particular must be considered as but a small branch of the vast family of zebu cattle which extends from the

steppes of Central Asia, their original home and place of their evolution, over the whole southern part of that continent from the Pacific to the Red Sea and thence through portions of eastern, southern and south-western Africa to the shores of the Atlantic Ocean.

4. DESCENT AND ORIGIN OF THE HOTTENTOT SHEEP.

Since the Hottentots themselves are relatively new-comers to South West and South Africa, it is evident that their sheep are equally as non-indigenous to southern Africa as their cattle. Nor could their sheep have been acquired in South Africa from the Bantu, as the latter did not then possess fat-tailed animals, but sheep of the long- and thin-tailed Hamitic type.

Therefore we must again follow the migration route of the Hottentots back to the lake district of Central Africa where to this day the sheep population is of fat-tailed type, and further north to Abyssinia and the Horn of Africa whither the Semites brought their fat-tailed sheep from the southernmost point of Arabia.

At the time, however, when the Hottentots acquired their sheep somewhere in the vicinity of Abyssinia or Somaliland, the fat-tailed breed was not as yet so completely established in that region as the zebu. For the sheep of the Hottentots are not of pure fat-tailed stock, but have besides a strain of the long- and thin-tailed hairy breed of the Hamites which followed the migration of their masters throughout Africa.

The Hottentot sheep display features not found in any pure fat-tailed breed. The great variation in the character of their coat, colour and conformation led Hamilton Smith (1827), at a time when far less was known of the Hottentot sheep than now, to divide them into three classes according to differences in the shape of their tail, horns and profile, and according to the colour and condition of their coat. These variations, however, merely show the complete lack of uniformity among Hottentot sheep due to their mixed ancestry. It is impossible to classify them as different types since all variations are connected by a multitude of transitional phases.

The mixed origin of the Hottentot sheep first becomes apparent through the great variety of their coat condition. The majority of fat-tailed sheep of Asia and Africa carry a woolly fleece. But the sheep of the Hottentots are with few exceptions hairy, their coat at the most being a mixture of kemp and wool.

A proof even more conclusive of the diphyletic origin of the Afrikander sheep is the fact that the majority of their rams develop a throat mane. No other breed of fat-tailed sheep is so distinguished. We must give credit for this feature also to the Hamitic sheep among which the rams carry manes.

Further it is necessary to consider the question of the tail formation of the Hottentot sheep. The modifications of tail structure are so numerous and widely divergent that this feature alone is

sufficient proof of the mixed origin of the Hottentot breed. Especially the type with a relatively thin, cylindrical tail so tremendous in length as to sweep the ground (sweep stert), clearly points to the influence of the long- and thin-tailed sheep of the Hamites. (See fig 7.)

Further evidence of the diphyletic origin of Hottentot sheep is provided by the shape of their rams' horns. Besides crescent-shaped horns similar to those of other fat-tailed breeds, a large number of Hottentot sheep carries spiral-shaped ones. In some instances the screw of the horn is narrow; in others it is drawn out, its axis pointing outwards. Horns so shaped are not known to have occurred in any pure fat-tailed breed of Asia or Africa, neither in ancient nor modern times. The only screw-horned sheep, except for one or two almost extinct breeds in Sumatra and north-western China, are *Ovis palaeoegypticus* and some of its descendants. The strepsiceros specimens of the Hottentot breed therefore offer irrefutable proof of their mixed parentage.



Fig. 7.—“ Sweep Stert ”. British Museum.

Again, the strepsiceros feature of the Hottentot sheep is reliable evidence that the crossing of the fat-tailed and Hamitic breeds had already been accomplished prior to the Hottentots coming into contact with the Bantu. For the original thin-tailed sheep of the Bantu were not strepsiceros in type, but had crescent-shaped horns.

Before concluding our account on the origin of the Hottentot sheep, a chronological remark may be of interest. We suggested before that the Hottentots acquired their cattle at a later period than the Bantu tribes theirs. Our study of the origin of the Hottentot

sheep proves the accuracy of this statement. The Bantu did actually acquire their domestic animals before the Hottentots came into possession of theirs; for just as the Bantu cattle have the ancient Hamitic long-horned breed as a foundation, whilst the Hottentot cattle were of the subsequently imported zebu type, so the Bantu sheep are of the original long-and thin-tailed breed of the Hamites, while those of the Hottentots in addition carry blood of the fat-tailed breed introduced into Africa at a much later date by Semites,

The period of the evolution of the Hottentot sheep in East Africa also corresponds with the above suggestion that the Hottentots did not obtain their domestic animals prior to the last centuries before Christ. For, considering that the fat-tailed sheep of Syria did not enter Egypt before the end of the second pre-Christian millenium, it is evident, in view of the slow means of communication in Arabia and Africa in those ancient times, that it must have taken at least a few centuries more before they arrived from Palestine, by way of Arabia, in Abyssinia and the lake country.

It is even doubtful, discarding the short sojourn of the Hottentots in the lake district of Central East Africa, whether the fat-tailed sheep were established there earlier than a few centuries ago. For it is but fifty years since the first fat-tailed specimens reached what is now Southern Rhodesia from the north (Epstein, in preparation).

That the zebus and fat-tailed sheep were preserved among the Hottentots through so many centuries in their original pure form is due to the fact that the Hottentots were one of the most southern African races of partly Caucasian stock. Therefore they were able to draw away from any pressure from the north and move southwards, where no pastoral tribes, but only Bushman hunters, were dwelling. During their migration to the Cape, their herds of zebu cattle and flocks of fat-tailed sheep were removed from any outside influences, until, at the most southern point of the continent, they met the vanguard of the Europeans.

As we have shown that the Hottentots' domestic animals are rather of Semitic than Hamitic origin, Schapera's suggestion (1930) that "the undoubted Hamitic affinities of the Hottentot languages would incline one to look for a direct Hamitic influence in respect of the domestic animals also", may have to be reversed; that is to say, the undoubted Semitic influence in respect of the Hottentots' domestic animals may incline anthropologists to look for Semitic affinities in the Hottentots.

5. ON THE ORIGIN OF THE HOTTENTOT DOG.

An attempt to trace the history of the Hottentot dog has been made by Major Gwatkin (1933-4). But it must be admitted that the difficulties of studying the origin of this interesting canine breed are far greater than in the case of the Hottentots' cattle and sheep. For the Hottentot dog, through lack of interest, or perhaps open hostility on the part of the early settlers, is now entirely extinct, whilst no skeletal material of it exists in any museum. And whereas

with the likewise extinct Hottentot cattle we have at least their pure-bred descendants, the red Afrikander breed, for study and comparison, the Rhodesian Ridgeback, though descended from the Hottentot dog and preserving some of its characteristic features, cannot be taken to fill this place. For, as Gwatkin states, "the Rhodesian Ridgeback has undoubtedly been crossed with other breeds introduced by Europeans and certainly in a most haphazard manner".

The means of arriving at a sufficiently well founded theory on the origin and descent of the Hottentot dog are therefore limited to the conclusions which can be drawn from the few existing pictures of these dogs and from the above-quoted descriptions by Theal and others. Since the Hottentots themselves appear to have originated somewhere between the lake district of Central East Africa and the highlands of Abyssinia, in the same region where they acquired their cattle and sheep, it is reasonable to assume that they came into possession of their dogs in the same place. The descriptions and pictures of the Hottentot dog show that it belonged to the pariah type found practically throughout the whole of Africa and the East.

The Hottentot dog, however, has one peculiarity which distinguishes it from other pariah breeds:— the hair on its spine points forward. And this feature has given rise to a strange theory on the Hottentot dog's origin. Gwatkin (1933-4), namely, has discovered that the Hottentot dog is not the only breed whose hair curls forward on its spine, but that it shares this peculiarity with a dog from the small island of Phu-Quoc in the Indo-China seas. This dog is described as follows:— "A long head with powerful jaws, erect ears, reddish eyes, with a savage expression, somewhat coarse body, neck very long and flexible, shoulders sloping, belly drawn up, loins broad and strong. Straight and lean legs, stifles rather straight with muscular thighs, longish feet with hard pads. Coat, on the whole body and legs very short and dense, on the back the hair is growing the wrong way, towards the head, and is much longer and harder. Colour, reddish fawn with black muzzle, the hair on the back being darker. Height, about twenty-one inches, weight about forty pounds".

In the absence of an osteological analysis of the Phu-Quoc dog's skull, the description points to atypical southern Asiatic pariah dog, a form closely approaching the dingo, but with a distinction in the character of its coat, namely, the hair along the spinal column growing forward. From the similarity of this feature in the Hottentot and the Phu-Quoc dog Gwatkin (1933-4) argues that "the Hottentot dog, if not actually the same as the Phu-Quoc, is definitely derived from the same Asiatic stock that originated the Phu-Quoc".

But whilst it may hold true that the African and southern Asiatic pariahs are descended from the same wild canine, Gwatkin's argumentation is nevertheless erroneous. For even if one of these two breeds had the hair on its back lying normal, this would not contradict the theory of their monophyletic origin. On the other hand, the similarity of this feature in the Hottentot and the Phu-Quoc breed provides no support whatsoever for this theory. The Incas, at the time of their country's conquest, possessed bulldog-, dachshund- and terrier-like breeds. Yet it is well-known that the

Inca dogs were derived from entirely different wild ancestors than are the Old World bulldogs, dachshunds and terriers. This example merely shows that the range of mutations due to the effects of domestication is limited; even entirely different species sometimes showing parallel mutations, such as hairlessness occurring in humans, dogs, swine, cattle, mice, goats; strepsicerous horns in the ancient Egyptian sheep and goats; woolliness in sheep, poodles, some Russian and Paraguayan horses, certain south-eastern European pigs, Angora cats, rabbits and Guinea pigs; tags or lappets in sheep, goats and pigs; ankylosis of the caudal vertebrae in sheep, dogs, cats and mice; coat colour, long pendent ears, fat deposits, hornlessness, and many more of the like. And such parallel mutations or convergencies may be induced in domesticity by the same or by different causes. In the case of the Hottentot and the Phu-Quoc dog the cause of the convergency in coat character may have perhaps been the same. We could imagine, for instance, close inbreeding, as both these dogs are insular forms, so to speak, the Hottentot dog being long removed from any foreign influence, since its masters constituted one of the most southern African races of partly Caucasian stock, in a country devoid of people possessed of domestic animals. Under such insular conditions it is relatively easy to preserve and propagate spontaneous mutations and atavistic Mendelian factors.

The parallelism in the character of the coat in the Hottentot and Phu-Quoc dogs therefore proves absolutely nothing with regard to their ancestry; and it is a fallacy to believe that this mutation could not have been developed in Africa spontaneously, but that the ridgeback, "favourite of the navigating Easterners", must have been introduced by sea from the original home of the Phu-Quoc. Gwatkin goes so far even as to state that as the Chinese and other Eastern nations were navigating the Indian Ocean for a considerable period before the 10th century, it was from this source doubtless that the Hottentots received their dogs. In support of this theory he even mentions Mongolian characteristics in the Hottentots themselves.

6. LAND TENURE.

Among the Hottentots every tribe had its own territory which was the tribe's communal property. Passers-by or new-comers had to get the chief's permission if they wished to hunt on a tribal holding or pasture their cattle and sheep there. In the early days of the Dutch settlement the different Hottentot tribes were situated far apart, each tribe holding certain centres round which it migrated, and claiming as its territory all land where its members were accustomed to graze their stock (Schapera, 1930). Since the Hottentots depended almost entirely upon milk for subsistence, they needed a large number of cows and ewes, and consequently a great extent of pasture for each separate community (Theal, 1907). This was the cause of their being so thinly scattered. For, owing to the natural poverty of their country and the frequent periods of drought, they had to move about freely in search of pasture. In the early days the boundaries of the tribal territories were not very clearly

defined, and on that account fights for pasture land occurred quite often. However, as long as sufficient grass and water were available for all, there was little objection raised as a rule to intrusion.

Along the west coast of southern Africa the land of the different tribes appears to have been even less clearly demarcated than in the vicinity of the Cape. But owing to the aridity of this region particular value was attached to the possession of the wells and waterholes which the Hottentots dug in the beds of the periodical streams and covered over carefully to prevent evaporation (Stow, 1905). This does not mean, as Mrs Hoernlé (1918) points out, that strangers could not use the water, but that certain specific tribes had a prior right to different fountains or pools, established by habit or through their work in digging such wells.

In later times, when the pressure of the Dutch from the south and of the OvaHerero from the north restricted the free movements of the Hottentot tribes, tribal boundaries were more carefully defined between the chiefs, and any encroachment was forbidden and deeply resented. If a tribe wanted to move into the territory of another, permission had first to be asked. If they were on friendly terms this was often granted without levy, but if relations were strained owing to previous cattle raids, permission was refused or a tribute of heifers demanded as payment or acknowledgement of the resident tribe's ownership of the district. Of course, sometimes permission was refused, and if encroachment took place nevertheless, it led to war. It often happened that a tribe paid the tribute for a short period, but refused further payment when once settled down and accustomed to its new surroundings, even under threat of war.

Communal land of a tribe could not under any circumstances become the property of an individual or the chief's. It was regarded as inalienable. The chief had no right to sell such land, and even the granting of usufruct was subject to the consent of every family under his rule, among whom tributes or purchase moneys had to be equally divided, (Wandres, 1909).

Every Hottentot had a personal right to the use of his tribe's land, water and grazing for himself, his family and his stock. No chief could interfere with or could deprive a subject of such rights. A first-comer had prior rights. If a man dug a well or opened up a spring, it was his property and he retained the sole right to it. Anybody wishing to use such water for himself or his stock had first to ask permission from the owner.*

Every Hottentot was allowed to move freely over the tribal territory and to erect his hut wherever he pleased, without restrictions from the chief or anybody else. But it must be understood that his right was merely to the use of the land and in no case implied full ownership to the exclusion of others.

In certain respects, however, members were limited in the unrestricted exploitation of the tribal land. For example, the chief could order certain grazing grounds to be vacated so they could be

* Report on the Natives of South West Africa and their Treatment by Germany. London, 1918, pp. 75-76.

rested. Such orders were in all instances implicitly obeyed by the people. The consent of the chief was also necessary if the inhabitants of a kraal wished to burn the veld in winter so as to speed up the growth of the young grass following the first spring rains. These instances show that despite their nomadic life the Hottentots had a certain knowledge of pasture management gained from experience.

7. OWNERSHIP AND ACQUISITION OF CATTLE AND SHEEP.

In the early days of the European settlement at the Cape the Hottentots were extremely rich in domestic animals. Every family had its own cattle and sheep; and although it was customary for those owners who dwelt as a community to graze their cattle and sheep together, the latter were not common but private property. To quote Kolben (1719): "There is only one herd of horned cattle in each kraal, but this does not belong to one person alone, such as the chief or one of the wealthier members, but every inhabitant of the kraal has a share in it, be it large or small." The cattle were considered so much the property of the husband and wife that the former could not dispose of any without the consent of the latter. Some of the cattle were killed entirely for the women's use. It was rarely that men and women ate of the same ox or cow (Stow, 1905).

Every Hottentot knew the animals he possessed. To facilitate discriminating between the stock of one owner from his neighbours', it was common practice among them to select their breeding stock according to colour. As a rule, every stock owner kept and bred animals only of one and the same colouring, exchanging those that differed for animals of the desired colour (Schultze, 1907). Schultze also mentions that the Hottentots marked their cattle in special ways by cutting, perforating or lopping their ears.

Cattle and sheep were acquired in different ways:— After the death of a Hottentot his stock was divided among his heirs. But in a wealthy family the father provided his children with stock whilst still alive. Usually a newly born child had some animals set aside for it, and at the puberty ceremonies or marriage both sons and daughters were given a few head of stock by their parents. Cattle were further acquired by barter with such objects as milk pots and weapons, and in more recent times European trade goods (Schapera, 1930).

Those Hottentots who were not given stock by their parents used to serve the wealthier owners as herdsmen, receiving a cow or a ewe for their service; or else they left the kraal for three, six or twelve months to work on a European's farm. In this manner they managed to acquire in due course a few head of cattle and sheep. It was easier for them to obtain stock from Europeans in this way than from their own people; for on a European's farm they used to get their weekly ration of tobacco and dagga, and sometimes a little money as well. Besides, they never accepted oxen or hamels for their work from European farmers, but only breeding cows or ewes. It was far more difficult to obtain cows and ewes from their own tribesmen, since the latter were extremely reluctant to part with breeding stock (Kolben, 1719).

Another common method practiced among the Hottentots was the herding of another's stock in return for part of the progeny. A wealthy Hottentot would place some or all of his stock under the care of an impoverished neighbour, allowing him to use the milk for his own nourishment and to take half the herd's increase. Even young boys would hire out their services as herdsmen to wealthy stock-owners, receiving at first an annual payment of one or more sheep, according to the size of the flock and herd, and later on a third or a half-share of the progeny. With good management and luck a good herdsman could in a number of years acquire quite a fair-sized herd of his own in this way, especially since the Hottentots very rarely killed cattle or sheep for food, and never female breeding stock, if they could help it.

Some shepherds remained with their masters for life, even though they had accumulated fairly large herds and flocks of their own. These their own children looked after, whilst they themselves herded their masters' stock (Schapera, 1930). The majority, however, having earned a few head of stock in the service of Europeans or wealthy tribesmen used to return to their own kraals to look after their cattle and sheep for the rest of their lives, bent on increasing them by every means possible. For a rich man was always listened to and had more influence than the chief himself (Mossop, 1935).

Finally, the foundation of many Hottentots' prosperity was laid by cattle-raiding among other tribes which was a common practice in the past. Their battles almost always took place in the vicinity of their cattle kraals. We have, however, no definite record as to how cattle and sheep so obtained were divided among the members of a raiding party.

S. HERD AND FLOCK MANAGEMENT.

As in the arid country of the Hottentots water was found at only a few places, these usually served as sites for their encampments. At such places the Hottentots remained for as long as the pasture in the vicinity was sufficient to sustain their herds. During the rainy season, when certain pools were temporarily filled with water, they were able to move about more freely, availing themselves of pastures that were useless to them during the dry season.

In the old days the encampment was in the form of a great circle enclosed by a thorn fence. The huts were erected round the circumference facing the great open space in the centre which served as a fold for the stock by night. Special enclosures were made for the calves and for the lambs, but there were no enclosures for mature cattle or sheep, these just lying in front of their owner's hut till driven out to pasture at morning (Schapera, 1930).

The animals were pastured in the vicinity of the kraal. The various owners did not appoint a special herdsman to do this work, nor did they go all out to look after the herds and flocks, since this, as Kolben says, would not at all suit their lazy lives. Every day, according to the number of stock, one, two or three herdsmen were

sent out from amongst the kraal inhabitants to look after the animals. The herdsmen changed daily, and nobody was freed from this service. If a wealthy Hottentot did not wish to do his turn, he had to send a servant or relative in his stead.

The oxen did not need any special care in herding since they were only required occasionally. They used to rove at large, returning about every two or three days to drink at the watering places; during the cold season staying away even four or five days at a time. When wanted for work they could easily be secured at the water; otherwise, they rested in the vicinity of the pools during the heat of the day, proceeding to the veld when the cool of the night set in. If an ox had to be fetched from the veld, the Hottentot sent out to look for the animal, easily recognised the footprints of his own herd amongst the numerous tracks crossing the veld in all directions, and from between the tracks of his herd those of the particular beast he was after.

Cows too old to calve and kept for slaughter were sent out with the oxen. Since they went further away from the kraal than the milch cows, to pastures less overstocked, and did not lose so much time in being driven to and fro, they soon became fat. Young sterile cows being usually in good condition and having a glossy coat were left in the herds, simply to please the eye (Schultze, 1907).

Of course, the cattle remained in the open over night only where not in danger of attack by beast of prey. In the early days, when lions and other wild animals still abounded, all cattle were kraaled at night as lions and leopards used to play havoc with the Hottentots' herds and flocks, especially on dark nights.

No attempt was made to control the breeding of cattle. The bull was allowed to stay with the herd. At the end of the rainy season, i.e. March or April, when grazing was plentiful and the cows in good condition, the bull followed close on their heels serving them when they came into season. At the beginning of the dry period the bull left the herd and roved alone in the veld until the next breeding season, only coming to the common water pool when there was not enough water elsewhere. His movements were quite unrestricted, and everybody kept out of his way since his wild, lonely life made him savage and dangerous to both man and beast.

Most of the Hottentots did not milk their cows in the morning because, as Mr. Sass, a missionary who resided for some time amongst them, states, their rest would be disturbed by early rising (Stow, 1905). After the calves had been allowed to suck, the cows were driven to pasture and left to graze until the herdsmen considered it time to drive them home or the attraction of the young calves brought them to the kraal of their own accord at the fall of evening. It was the herdsmen's prime duty to protect the cattle against attacks of lions and other wild beasts. The Hottentots struck the attackers with javelins or heavily poisoned arrows surely aimed (Dapper, Ten Rhyne and Grevenbroek, 1933). Usually boys were charged to watch the herds and flocks during the day, unless an attack from enemies was feared, young men then assisting (Stow, 1905).

The calves were driven to pasture in a different direction from the cows. Here they remained under the guard of the herdboys who drove them home at evening. Sick calves and those growing too thin from lack of milk were allowed to remain with their dams day and night.

When the cattle had returned from the fields, they were watered and driven into the camp enclosure where each beast was tethered to a stake by its left forefoot. The calves were then allowed to run to their dams, and at great exertion the Hottentots bestirred themselves to rise and milk them. After the milking the calves, having sucked the udders dry, were locked up for the night together with the young lambs in a hut specially built for the purpose or, as Schultze states, in an open kraal the walls of which were made of thorn bushes or, more rarely, of stones and clay. Older calves were tethered to stakes in front of the hut to prevent them getting to their dams or from falling a prey to wild beasts. The cows were tethered in a circle and fastened to one another by ropes made from reeds. The sheep were kraaled in the centre (Kolben, 1719).

Occasionally, if the pasture round the encampment was overstocked and poor, the cattle and sheep were driven far into the veld and kept at outlying posts for weeks and even months under the care of a few herdsmen (Schultze, 1907). Wealthy Hottentots sometimes had several cattle posts which were inspected periodically by the owner himself or his chief herdsman. As a rule, however, each family remained and moved with its own herd and flock, sometimes even acting independently of the rest in search for grass and water (Schapera, 1930).

When shifting the encampment to another place, the young boys had to get up early in the morning and drive the calves and sheep slowly along so that they had time to graze on the move, and that the young lambs could follow. The main herd followed later at a quicker pace; and as the cattle were not allowed enough time to graze on the way, they were left in the open during the night following.

The sheep, like the calves, were herded by day in the veld and kept at night in the kraal. They were under the care of herdboys who guarded them from danger and saw to it that they did not spread too widely over the veld. They had also to be collected during the midday heat under some trees so they could rest in the shade. Young lambs remained all the time in a special kraal and were only allowed to their mothers at morning and evening milkings. The lambs were weaned by rubbing the ewes' udders with dung. Once weaned they were pastured together with the ewes.

The rams always went with the flock; and whilst the Dutch settlers, as Kolben mentions, used to separate the rams from the ewes after the mating season, because they did not want the ewes to lamb twice a year, thinking that both ewes and lambs would grow too weak, the Hottentots did not follow this practice. They left the rams together with the ewes the whole year round thus obtaining two lamb crops annually, one or two lambs a time. Yet, Kolben (1719) writes that he could find no difference between the sheep of the Dutch and those of the Hottentots.

Calving time was usually in December and January; but the irregularity of the rainfall and the consequent scarcity of grass often retarded the mating and calving seasons by weeks or even months.

If a cow showed signs of being near parturition a special herdboyc had to watch over her and bring dam and calf home as soon as they could walk. The colostrum was considered unwholesome for the calf, because the Hottentots believed it turned into a hard substance in the calf's stomach. They themselves liked it all the more drinking it boiled or mixed with ordinary milk.

The milk production of the Hottentot cows was adapted to the needs of their calves. As soon as the latter found enough sustenance in the veld, the milk flow of their dams ceased. During periods of drought the cows gave so little milk that their calves often died of hunger, even if the dams were not milked at all.

The Hottentots followed the growth of their herds and flocks with the greatest interest remembering the life history of each animal. They knew their animals' ages better than their own and were able to tell whether a heifer was pregnant for the first time or had already had a calf, and how many times each individual cow had calved. For all these stages the Hottentots employed special terms; so also for cows in milk or in a dry state.

Formerly they designated their domestic animals according to their colour or physical development. Schultze (1907) records nineteen such terms in use among the Naman for cattle, six for goats and three for sheep.

None of the Hottentots ever exchanged a white ox or cow which they looked upon as an invaluable leader of the herd (Dapper, Ten Rhyne and Grevenbroek, 1933). This preference for white cattle is found among many Hamitic and Hamiticized peoples. The ancient Egyptians, for instance, worshipped Isis in the likeness of a white cow, and used to pray that the Lord (Great Chief) should send them a white ox. The half-Hamites of East and East Central Africa slaughter a white bullock at their great ceremony of handing over country from one age-grade to the other (Seligman, 1930). The Zulus have amongst their cattle a type with white bodies, black muzzles and black insides to the ears, which at one time were regarded as royal cattle, and were treated with great respect, if not reverence; in fact, it is thought that to some extent they were held as sacred.* But this reverence for white animals is not only found amongst peoples of Hamitic stock nor limited to cattle. Many other primitive peoples held white domestic animals as sacred. Among the ancient Germans and the great majority of the Slavs, for example white horses were consecrated to the god of war, whilst in Siam white elephants (albinos) were held as sacred (Rheinhardt, 1912).

Surplus bulls and rams were castrated by the Hottentots. There was one man in each kraal who used to do this work for the whole encampment. Young bulls were gelded when about a year old.

* Information supplied by Mr. E. Wyatt Sampson.

The testicles were not excised since this operation was regarded as too dangerous. The calf was thrown onto its back, its feet fastened with ropes, and its head held to the ground. Then the scrotum was bound closely and tightly with a thin, elastic thong made of antelope hide, so as to cut off communication with the spermatic vessels, the calf then being allowed to run in that condition till the testicles dried up and fell off (Kolben, 1719).

Oxen castrated at maturity were called by a special name designating strength because such animals are indeed stronger than oxen gelded during calfhood, although far less hardy (Schultze, 1907).

Rams were castrated when about six months old, or when too old to be of service. They were thrown onto a flat stone, and the scrotum was tied up in the same manner as bulls'. The operator then took a round stone and beat the testicles to pieces. The wound was left to heal by itself (Kolben, 1719).

The successful castration was celebrated by a feast consisting of the meat of a specially-slaughtered calf cooked together with the pounded testicles.

Ordinarily, the Hottentots did not slaughter any cattle or sheep for food, except those which, owing to sickness, old age or lameness, were unable to follow the herd. This rule was only broken when preparing their ceremonial meals. On killing a sheep, the Hottentots always looked for the leanest in the whole flock because, as Sparrman (1789) writes, the rest were intolerably fat. But since the Hottentots in reality were extremely fond of sheep's fat, it is far more likely that their preference for the leanest sheep in the flock was due to the fact that they knew from experience that worms or disease were the usual causes of exceptional leanness among their fat-tailed sheep, rendering the animals from a breeding point of view or for other reasons less valuable.

In the protection of their herds and flocks from wild animals, especially jackals, the Hottentots were assisted by their dogs which were extremely watchful and gave immediate warning of the approach of strangers or beasts of prey by loud barking. By means of milk the Hottentots familiarised the shy animals with the herds; and with their own persons by carrying a piece of rawmeat for a few days in their veldshoes, afterwards giving it to the dog, or by applying sweat from their armpits to the dog's nostrils.

Bitches which they wished to prevent from getting in pup were branded with hot irons around the vulva. This made them so sensitive at these parts that they refused mating.

In general, however, dogs were never cared for properly and much less valued by the Hottentots than among Bantu peoples who are extremely fond of dogs. They used to carry this passion to such a height that if a dog particularly pleased them, they would give two bullocks in exchange for it (Paterson, 1789).

9. MILKING AND THE USE OF MILK.

The milking of cows and ewes was performed by women, in the same right-sided manner as practised in Europe. The stores of milk were under the control of the women, not under that of their husbands, as with the Bantu among whom milking is essentially the task of the men, the women having very little indeed to do with the cattle, being ritually prohibited from all contact with them (Schapera, 1930). The Hottentot men tended the cattle, but their women did the milking (Theal, 1907).

It is not by chance that among the Hottentots the women, and not the men, milked the cattle and were complete sovereigns over the cows and milk. For among Semitic peoples likewise it is the women's task to milk; but throughout the entire group of Hamitic and Hamiticized tribes, with but one or two exceptions (Ovaherero), this work falls to the men. The cultural importance of this custom is illustrated by the fact that the Eastern Hamitic Beja actually despise the Arab tribes in their neighbourhood for allowing their women to do the milking (Seligman, 1930).

Unless their calves were present, the cows of the Hottentots, like all native cattle south of the Sahara, did not allow themselves to be milked, but kept their milk back. Even when the calves had sucked the first milk and were present at the milking, the cows did not yield all their milk, not permitting themselves to be stripped, but retaining the last rich milk for their calves.

Therefore the Hottentot women first allowed the calves to suck a little, then, having bound the cows' hind legs together, proceeded to milk them; but the last milk they again left for the calves. If a calf had died or been killed they placed its skin on another calf, and then began milking. But when the skin was not in their possession, they tried another method of inducing the cow to part with her milk: They bound her hind legs with a thong, so that she could not kick, and blew air into her vulva. In most cases this had the desired effect. The assistance of men at this performance was permitted (Kolben, 1719). Keller (1894) observed the same method among the Somali, but with this difference that the latter blew air into the rectum of the cow. (See fig. 8.)

The teats of the cows and the hands of the milkers were lubricated with milk. Only during the first days after calving the colostrum was not allowed to come in touch with the teats. During these days the teats and the milkers hands were moistened with saliva (Schultze, 1907).

Baskets of a peculiar kind were used for milking, composed of roots plaited together so closely that they could hold not only milk but even water. These baskets were never cleaned, the milk being encrusted upon them. The milk was not strained, but kept in the same basket into which it was milked, contaminated by hair, dust and manure. (See fig. 9.)



Fig. 8.—Hottentots inducing a cow to part with her milk. After Kolben.



Fig. 9.—Hottentot milk basket. After Sparrman.

The use of basketry vessels for milking seems to have been a sacral custom among the Hottentots at one time, if it is possible to take the practices of other African native peoples as evidence. Even to the present day none of the Eastern Hamitic Beja tribes, for instance, milk into a clay vessel or will put milk into these, in spite of the fact that many of them make good pots, nor would it be permissible to milk into the tin vessels introduced by European trade. Basketry vessels so well made as to hold milk without any tendency to leak are considered the appropriate receptacles (Seligman, 1930).

According to Kolben, the milk was either drunk fresh or sour, or after having been cooked together with edible roots. Sometimes it was mixed with a vegetable substance, such as the green leaves of the ebony wood, which were chewed and spat into it, or the

sap of the acacia (Schapera, 1930). Any surplus was exchanged for tobacco or churned into butter. Sparrman, on the other hand, was informed by the Hottentots that sweet milk was unwholesome, and that they never ate it until curdled. They always mixed it with sour milk in a leather bag which could contain about six gallons and was made from an undressed skin taken off entire, with the hairy side turned inwards. The sour milk mixed every day with some fresh was often preserved for many weeks without turning bad (Sparrman, 1789). The bag in which it was kept was never cleaned and commonly in a filthy state as indeed was everything else in and about the huts (Theal, 1907). Other types of vessels used for preserving milk were wooden pails and earthenware pots.

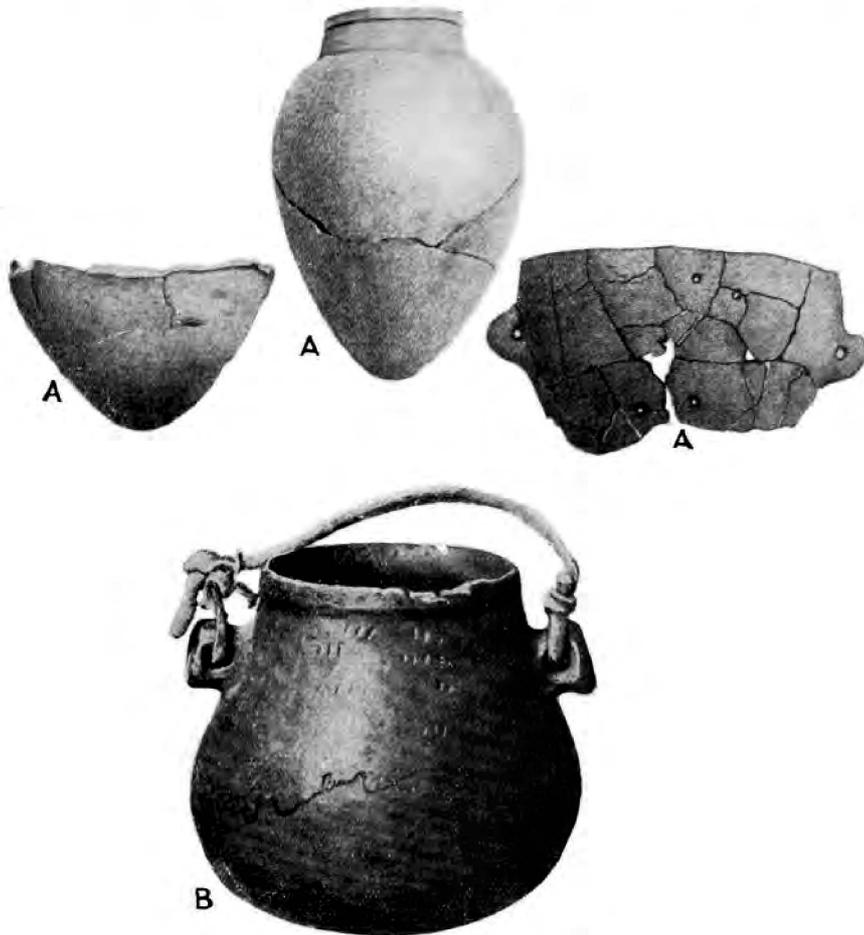


Fig. 10.—Clay Milk Vessels of the Hottentots.

(a) Albany Museum, Grahamstown. After Schönland.

(b) After Schultze.

The leather bag was made in the following manner (Schapera, 1930): A freshly killed goat, calf, gemsbok, or steenbok was cut open all along one side, from the left foreleg right up to the shoulder. Through this opening the whole body was taken out from the skin, the head and legs having first been cut away. Then all the openings were sewn up, with the exception of that of the right foreleg, which served as a spout for pouring the liquid in and out, and had a stone cork which could be tied fast. The fresh skin was turned inside out, the innerside cleaned of all particles of flesh and fat, and then dried, the hair remaining on the inner side of the bag.

The most common form of earthenware milk vessel was a large-bellied urn with a narrow-rounded base, small mouth and two ears through which a cord could be passed in order to suspend the vessel. Others were quite cylindrical, with almost flat bases, whilst in a third type the base was slightly rounded and larger than the rest of the pot. All Hottentot pottery was unglazed, though as a rule quite watertight (Schönland, 1903).

The pots were made by the women, each family making its own. The clay was taken from termite heaps, and kneaded together with the ants' eggs. After having been modelled to the required shape, it was smoothed inside and outside by hand, and dried for a couple of days in the sun. Then it was put into a hole in the ground and, with a fire inside and out, was burnt until hard (Kolben, 1719). The potter's wheel was unknown to the Hottentots before the advent of Europeans. (See fig. 10.)

Their wooden pails were made by hollowing a block of wood, cutting and boring it, no fire or other hot objects apparently being employed. The block was shaped and smoothed on the outside with a knife, and hollowed out with a semicircular iron blade fixed in a wooden haft. Some of the wooden milk pails resembled the earthenware pots in shape, even having similar ears for suspension (Schultze, 1907). (See figs. 11 and 12.)

The trees used for this purpose were soft woods and thus easily worked, besides showing less tendency to crack when dried or exposed to the sun. The Bantu usually took their wood from *Sclerocarya caffra*, *Cussonia* sp., *Burkea africana*, *Schotia transvaalensis* or *Schotia brachypetala* (Curson, Thomas and Neitz), whilst the Hottentots used chiefly *Acacia* wood. Two wooden kitchen utensils of the Hottentots, reproduced by Schultze, were made from wood of the Ana (*Acacia albida* Dël.) and the Kameeldoorn (*Acacia giraffae* Burch.) respectively.

To make butter the Hottentots used a bag sewn from a dried skin, with hair turned inwards. Into this dirty hairy bag they poured the milk, tying the opening up with a strap of leather. Two men or two women, or a man and woman, then took the bag by its two ends, shaking the milk rapidly until it turned into butter. Occasionally the freshly-cut thick roots of a certain plant (?*Portulaca* sp.) were put in with the milk to increase the yield of butter (Schapera, 1930).

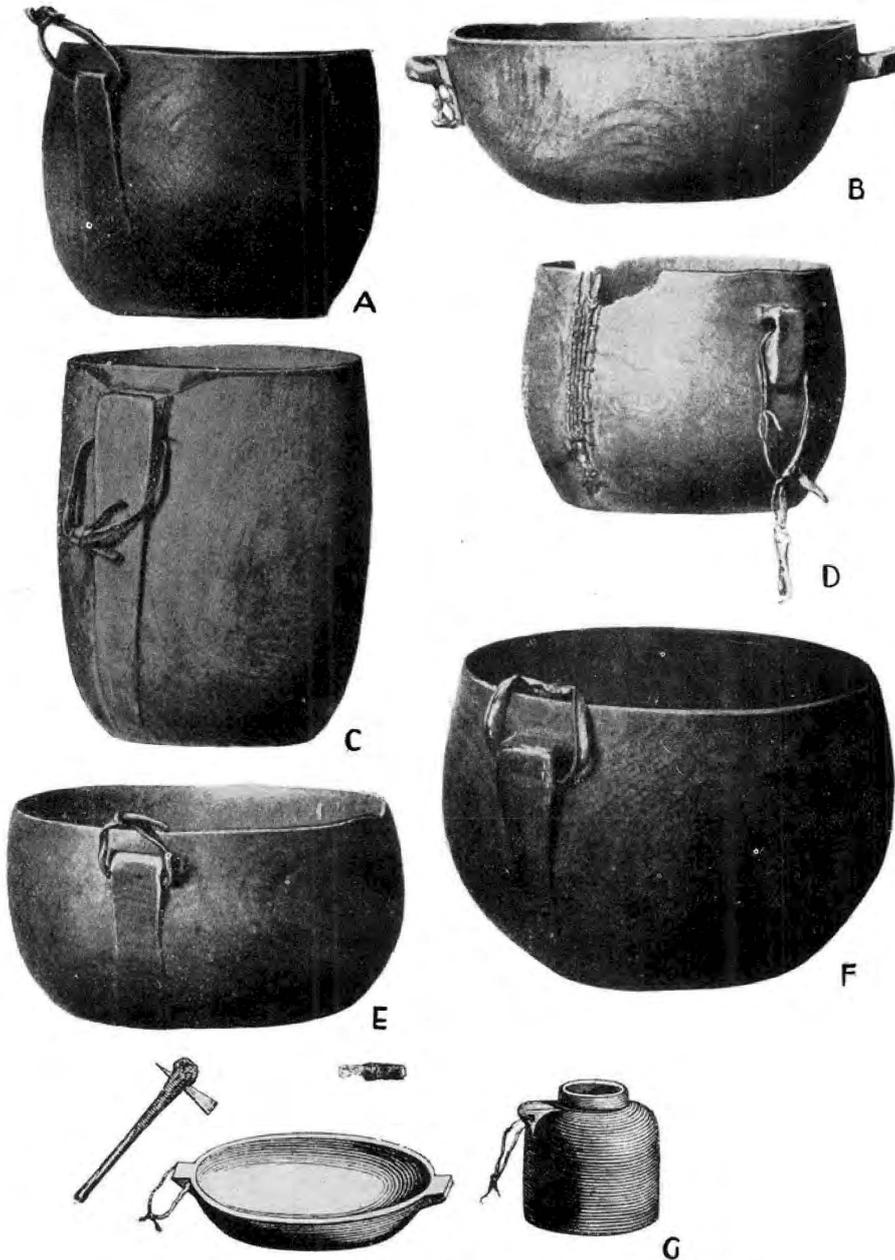


Fig. 11.—Eared wooden milk vessels of the Hottentots.
After W. Burchell and L. Schultze.

The butter, once formed, was taken from the hairy bag and put into an empty pot, unwashed, just as it came out multicoloured by manure, hair and other dirt.



Fig. 12.—Wooden milk buckets of the Hottentots. After L. Schultze.

The butter-milk was either given to young lambs and calves, or calves, or drunk by the Hottentots themselves who used to be quite indifferent to the dirt passing down their throats along with the milk.

Milk of cows was never mixed with that of ewes, but the two were kept separate. For cows' milk could be drunk by men and women alike, by young and old; but men and boys were not allowed to partake of even a drop of ewes' milk, which was left solely for the women. Kolben reports that at his time the Hottentots were no longer aware of the reason for this custom. All they knew was that their parents had told them that ewes' milk was unwholesome for men and its use therefore forbidden them (Kolben, 1719).

Children were taught to suck the ewes, very often deriving their whole sustenance from this source (Theal, 1907).

The special regard of the Hottentots for milk is one of their most interesting characteristics and which on analysis can be shown to go back to an old Hamito-Semitic civilisation.

10. FIGHTING OXEN AND BEASTS OF BURDEN.

The great interest the Hottentot pastoralists took in their cattle and the latter's importance to their masters can be gauged from the following particulars quoted from the interesting work of P. Kolben (1719), who visited the Cape in 1705 and stayed there for a period of eight years.

"The Hottentots", he writes, "have a sort of oxen which they call Backeleyers or fighting oxen. These are the biggest, strongest and boldest animals of the whole herd. In each kraal there are about five or six, and in some even more. They are chosen from the herd by old Hottentots who know how to instruct them. The Backeleyers are of great use, too, in the controlling of the herds at pasture; they have to fetch in stragglers, protect them against beasts of prey and bring the herds within compass."

"In the Hottentots' wars against one another these Backeleyers create havoc among the enemy. They gore and kick, and even trample to death, with incredible fury. Victory is assured to whichever side commands the largest number of fighting oxen."

"A stranger, especially a European, approaching a herd, must be on his guard; for these Backeleyers, which generally feed on the outskirts of the herds, quickly discover him and make for him at a full gallop. And if he is not within earshot of a Hottentot and has no means of escape, he stands in great danger. Sticks or stones thrown make no impression on Backeleyers, which go straight for the intruder. If, however, the person attacked shouts for assistance, and is heard by a Hottentot, the latter will whistle through his fingers, and the ox will stop, look doubtfully at the stranger, follow him towards the Hottentot, and then return leisurely to its herd and pasture."

"If no Hottentot is within hearing to come to his assistance, there is nothing to do but to shoot. Frightened by the report of the gun the Backeleyers run away. But if he has no weapon and no tree near by to climb, he has to wait in fear for what will happen. Even if he is not killed outright, he will be gored and kicked so badly that he will suffer serious injuries, perhaps fatal."

"I have often been chased by Backeleyers myself. When I saw them making for me, and no Hottentot was near to hear me shout and come whistling to my assistance and arrest their attack, I have been obliged to discharge my gun. In such circumstances I have always questioned the Hottentots as to the manner in which they instruct their oxen, and have learned from them that a young ox is fastened to an old Backeleyer and taught by blows and other means to follow him. At night they are also tied together so that the young ox is always close to the old one."

"The oxen used for carrying purposes are likewise very strong and stately beasts chosen from the herds by old men skilled in the judging and training of cattle. At about the age of two years an ox destined for a baggage animal is selected, caught and thrown on its back. Its head and feet having been fastened with strong ropes to stakes firmly fixed in the ground, one of the Hottentots takes a knife and pricks a hole through the beast's upperlip, between

its nostrils. Into this hole he puts a stick, about an inch thick and a foot and a half long, with a hook at the top to prevent its falling out."

"By means of this hooked stick it is very easy to break the ox to obedience; for if he refuses to be governed and tries to run away, the Hottentots fix his nose by the hooked stick to the ground, and this torture makes the ox tractable; when a Hottentot takes an ox by this stick, the animal follows patiently in terror of pain. When teaching him to carry burdens on his back, his nose is again fixed to the ground by the stick, or the latter held by a Hottentot, until the beast ceases to be refractory."

"When the Hottentots decide to break up their old kraals and move to new places, their huts and cooking utensils are loaded onto the backs of their oxen. Those not needed for transporting the huts are saddled with double baskets made from sticks and strips of leather, in each of which is room for two old or sick people."

"There are usually far more baggage- than fighting oxen attached to a kraal, but their relative numbers depend on the size of the tribe and its requirements."

This is Kolben's account.

Over a hundred years later, Hamilton Smith, (1827) referring to some Hottentot cattle of extraordinary size, writes:— "It is from these that their Backeley or war oxen are chosen: they ride them on all occasions, being quick, persevering, extremely docile, and governed by the voice of a whistle of the owners with surprising intelligence. They thrive most in the Zuure Velden."

The riding oxen were guided by a bridle of raw hide, attached to a primitive bit of wood or leather passed through the cartilage of the nose. Instead of a saddle a sheepskin was thrown over the back of the animal and fastened by a rope drawn tight round the forepart of its body. No stirrups were used, but both men and women rode the animals with ease, being accustomed to do so from childhood (Schapera, 1930).

Description of the training of pack- and riding-oxen are given by Schultze and Von François:

The Hottentot charged with the catching of a young untrained ox made his way through the herd and placed the loop of a long rope by means of a stick between the forelegs of the animal wanted, so that the ox could be caught by one of its legs when moving along. Four to six men held the other end of the rope waiting until the animal had calmed down a little. Then two men quietly approached the ox from behind, one on its right, the other on the left, drawing another long rope over the back of the ox until it reached the horns. One of the two next made a large circle around the animal's head forming a loop into the rope which was drawn tight round the horns. By means of these two ropes, the one around the horns, the other round one leg, the ox was pulled to one side, whilst another Hottentot twisted its tail over the animal's back so forcibly in the opposite direction that the beast was thrown to the ground giving up all resistance (Schultze, 1907).

Von François' (1896) description differs slightly: An ox was given its first training by young boys when about twelve to eighteen months old. The animal was caught with a loop round one of its hindlegs, a few boys holding the leg by a rope, whilst others put a thong round the animal's horns, pulling the two ropes towards one side. A third rope was fastened round the body of the ox, and one of the boys jumped on the animal's back holding on by this rope. As a rule, the ox immediately started to bellow and tried to break away, sometimes succeeding in throwing its rider off. But the ropes fastened to its horns and leg prevented the animal from getting away. After many futile attempts the ox became tired and refused to move from its place. At this moment the boys started to thrash the beast with leather thongs or to bite into its tail. The ox once more tried to break away, but soon stood still again when realising that all attempts were in vain. Then the game started all over again. This training having been repeated for eight days every morning and evening for about half an hour, a piece of wood was passed through the cartilage of its nose, a string being fastened to its two ends serving as a bridle. For a time the young ox was fastened to the horns of an old experienced riding beast, and the pupil began to walk patiently at its master's side.

"One can travel comfortably and securely in this way for a great distance and over rugged mountains," says Mrs. Hoernlé (Schapera, 1930), "provided one is not in too much of a hurry."

11. PREVENTION AND TREATMENT OF ANIMAL DISEASES.

Since the Hottentots depended almost entirely upon their cattle and sheep for subsistence, especially during the dry summer, the health of their stock was of the utmost importance to them, as was fully reflected in their ceremonial life. They held the belief that the well-being of their herds and flocks depended upon healthy conditions maintained in the community, and that any break in their traditions and customs was bound to affect their stock adversely.

In their ritual meals cows and ewes were used, and on certain occasions such animals were sacrificed to the tribal deities directly. At the great annual rain-making ceremony of the Naman, pregnant cows and ewes were killed to typify fertility, their uteri being preserved till after the feast when the uterine fluid was poured through a fire close to a river bank into the river below. At the same time milk and fat were thrown into the fire. When suffering a long period of drought a similar ceremony was performed in which a pregnant heifer was slaughtered. After a Hottentot's funeral his widow had to scatter the contents of an animal's stomach over the cattle kraals, saying, "let there be plenty of milk", and a similar custom was observed at a girl's puberty ceremony. At a widower's marriage ceremony the bridegroom, after his seclusion, had to sprinkle the cattle and sheep with water before he was again allowed to go among them as usual. Menstruating women must abstain from milking, and girls passing through the puberty rites were led around the kraal where they had to touch the bulls and rams to confer potency upon them. The animals were included in all purification ceremonies, and great care was taken to keep all pollution from their kraals (Schapera, 1930).

As soon as an animal died of disease, the Hottentots immediately moved their encampments to another place. Sparrman (1789) considers that this habit originated almost entirely in prejudice. But it is evident that experience must have taught the Hottentots that staying on in a place where an animal had died of disease, frequently resulted in an additional number of animals succumbing either from poisonous plants or infection. Sparrman himself admits that this "prejudice" "is perhaps one of the principal causes that the cattle of the Hottentots in some measure keep up to their original standard, whilst, on the other hand, those of the Europeans degenerate to a smaller race".

Kolben (1719) states that the diseases of the Hottentots' domestic animals were the same as those occurring among European-owned stock in South Africa, since the latter originate from Hottentot stock and live in the same environment, grazing on similar pastures. The Hottentots were rather reluctant to discuss their animals' diseases with Europeans. "Nothing is known in this country," Kolben writes, "of sheep dying *en masse* as in Europe. Nor do their flocks become mangy or start to cough, or contract other diseases. This is due to the healthy pastures and mild climate under which sheep do not even require salt licks, without which they would not thrive in Europe."

This last statement is of course erroneous, Hottentot sheep requiring just as much salt as those of other countries. Only it was unnecessary to give them special salt rations since there are plenty of natural licks scattered over the arid spaces of Hottentot land.

The phosphate deficiency of South African soils and pastures made itself felt as much among the domestic animals of the Hottentots in the early days as among the European- and Native-owned herds of South Africa at the present time. We have already quoted Sparrman's statement that the Native cattle in the Zuurevelden were given to chew unwholesome substances, such as thongs of leather, chalk and bones, and in default of anything else of the kind, even to gnaw one another's horns.

The Hottentots had among them certain individuals who were looked upon as specialists in the treatment of animal diseases. As soon as it was noticed that an animal was ill, one of these experts was called and asked for his advice. He usually bled the animal first, making incisions with a knife or sharp bone, and then forced some medicine down its throat, decocted from the roots and bulbs of many divers plants. When an animal was unable to pass urine, it was given a kind of earth wax dissolved in water. If a cow's or ewe's udder became inflamed, the swollen parts were treated with an ointment made of tail fat and buchu, a sweet-smelling powder ground by the women from various kinds of aromatic shrub and spores of fungi. Schultze (1907) mentions the following ingredients of buchu:—

- (1) The short fleshy leaves of certain species of *Mesembryanthemum*, or in their stead other herbs or subshrubs, such as slender tuberous roots of a *Cyperus* species;

- (2) various lichens, especially *Parmelia hottentotta* Thbg., which were scraped off rocks;
- (3) the dust-like spores of various fungi.

These ingredients were dried, roasted and powdered, and sometimes blended with very fine quartz dust, before being added to the tail fat.

In the event of a flock being seized with an outbreak of disease, an old Hottentot, expert in curing animals, slaughtered three healthy sheep as a sacrifice, one each on three successive days. The meat was consumed by the old men of the tribe, whilst the young men were given the blood and entrails, and the women a broth prepared from the meat. After the meal each of the three groups spent the day and following night apart in singing and dancing to atone for their offences against their supreme deity. If the disease ceased after a time they were filled with joy over the success of their prayers, but if the illness spread further, they laid the blame upon either the sacrificer of the sacrifice for not being good enough. Another old man was selected and the ceremony repeated with three fatter sheep. At the same time the settlement was moved elsewhere.

At certain times the sheep were driven through a smoking heap of wood. On the day determined on, the women milked the cows at dawn and brought the milk to the menfolk who had to drink it all. But the women themselves were strictly forbidden to drink or spill even a drop of it; otherwise the ceremony could not be performed that day. When all the milk had been consumed, some of the men fetched the sheep from the kraal, whilst others prepared a huge fire in an open space, thickly covered it with green branches so as to produce a dense cloud of smoke. When the sheep were brought up, the men ranged themselves in two rows along both sides of the fire leaving a passage between them through which the sheep were driven towards the smoking heap over which they had to pass.

The Hottentots believed that predatory animals, especially wild dogs, would not attack their flocks as long as the smell of the smoke clung to the sheep (Schapera, 1930).

It does not seem that the Hottentots had any considerable knowledge of the treatment of stock diseases. Nor did they care very much when an animal died in spite of bleeding and medicines. For they did not bury its carcase nor throw it to the dogs, but consumed it themselves, the owner inviting his neighbours to the feast. Kolben (1719) remarks that the Hottentots' manner of disposing of their dead stock was soon imparted by them to the European settlers at the Cape, "in particular the Governor, Simon van der Stel, who used to treat his male and female slaves to such delicacies, although this brought him but small profit".

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