

# ILLUSTRATED NOTES ON SOME EXTINCT SOUTH AFRICAN UNGULATES

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AFTER attending the XVth International Congress of Zoology at London in July of last year, I stayed for some time in Holland. There I visited the Rijksmuseum van Natuurlijke Historie at Leiden and the Zoölogisch Museum at Amsterdam. I gladly took the opportunity to inspect once more the remains of two extinct South African ungulates preserved in these scientific institutions, viz., the true quagga (*Equus quagga quagga* Gmelin) and the bluebuck (*Hippotragus leucophaeus* (Pallas)). I afterwards procured some photographs, one of which is believed to be unique. The notes accompanying the photos may serve to recapitulate some very little known facts about these mammals that like others (Cape lion, Burchell's zebra *sensu* Antonius) became extinct through the action of man a long time ago.

All measurements are taken from mounted specimens; therefore these cannot be considered absolutely correct for the living animal.

The quagga, a member of the zebra tribe, was once fairly widespread in South Africa, occurring in an area covering most of the Orange Free State and the adjoining south-eastern parts of the Cape Province. No accurate information is available and there is some confusion about the northern limit. Certainly the area north of the Vaal River was never occupied by the quagga; some authors take the Vet River as the boundary. In the east its area was limited by the Drakensberg Mountains and more to the south by the sea. The western boundary of the quagga's country may have been somewhere between Griqualand West and Swellendam. It is generally implied that the distribution of the quagga coincided with that of the black wildebeest (*Connochaetes gnou* (Zimmermann)).

The quagga was essentially a dark animal with pale stripes; in general the zebras are light animals with a pattern of dark stripes. The background colour is brownish, fading to very pale brown or even white towards the belly and the legs. The head, neck, and forequarters show a number of vertical white stripes. In the Amsterdam quagga these stripes do not extend beyond the shoulders: in the Leiden specimen they reach the hind quarters, where they are, however, sometimes hardly visible, so that no sharp division between striped and unstriped parts can be observed. A number of subspecies have been described based mainly on the extent of the pattern of stripes. The material, however, is too scanty to warrant subdivision; moreover, many variations in pattern of zebras are phenotypical only. Thus quaggas with stripes restricted to the neck and specimens with a far less reduced pattern may have occurred in the same herd.

A different question arises if we consider some early illustrations and the coloured plate in Roberts' book<sup>1</sup> (frontispiece). These figures depict an animal with dark stripes on a paler background. It is certain that, if ever such animals existed, they must have been extremely rare, since none of the 23 preserved skins of quaggas shows any sign of such a pattern. Antonius<sup>2</sup>, the late world authority on zebras, says in his monograph about these figures: ". . . sind, wie ich schon früher einmal festgestellt habe, nachweislich flüchtig und ungenau und daher durchaus nicht beweiskräftig". Apparently the artist of Roberts, the Rev. P. J. Smit, had only seen one or more of the incorrect figures. The accompanying description is correct; it is obvious that nobody checked the plate properly.

Apart from a fair number of drawings and paintings depicting the quagga there for-



**Fig. 1 — Female quagga** (*Equus quagga quagga* Gmel.) preserved in the Zoölogisch Museum, Amsterdam. This specimen was the last of its kind and died in 1883 in the zoological gardens at Amsterdam. Photo Zoölogisch Museum, Amsterdam.

Unfortunately exist three photographs of a specimen in the Zoological Society's Gardens at Regent's Park, London (vide Antonius<sup>2</sup>, loc. cit., figs. 18-20). The specimens under discussion have been figured on various occasions (Lydekker<sup>3</sup>, Ridgeway<sup>4</sup>, etc.).

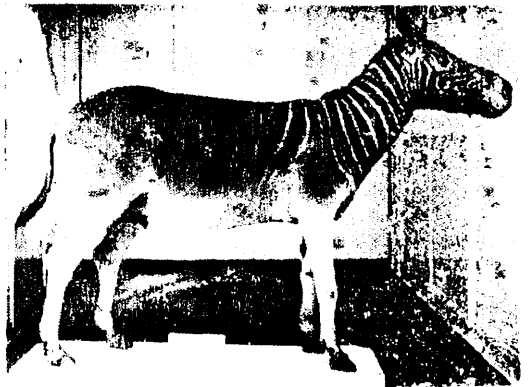
The quagga preserved in the Zoölogisch Museum, Amsterdam, lived in the gardens of the Koninklijk Zoölogisch Genootschap (Royal Zoological Society) "Natura Artis Magistra" from 9th May, 1867, till 12th August, 1883. Unfortunately nothing is known about the origin and the cause of death of this female specimen, since, in those days, no proper records were kept in the Amsterdam Zoo. At the present it would appear to be rather difficult to unearth the desired data from the bulky archives since this particular zoological garden is more than 120 years old. The mounted specimen has a height at the shoulders of 120 cm=48 inches. It was undoubtedly the last of its kind; earlier specimens died in London in 1872 and in Berlin in 1875\*). The mounting of the Amsterdam quagga was done more skillfully than that of the other specimens;

\* Various publications quote the London quagga as the last to be in existence, e.g. Allen<sup>5</sup>, etc. Others quote the year 1875 as the year of the death of the last specimen.

no doubt this is due to the much later date at which the work was done.

We know very little about the vanishing of the quagga from its natural haunts. We only can assume that the last specimen in captivity outlived its companions in South Africa for at least some years. Apparently nobody at that time seems to have realized what was happening, otherwise certainly some efforts for propagating the species in captivity would have been made.

The Leiden quagga is an adult male specimen, shot near Steenberg (C.P.) by Dr H. van Horstok on June 15, 1827. Van Horstok, a medical doctor, collected natural history specimens in the Cape Colony for the national museum at Leiden. On November 11, 1825, King William I of the Netherlands had sent him a special instruction, containing among other things promises for reimbursement of costs and the recommendation to send the specimens home with Dutch merchantmen. The minister of naval affairs and colonies was called upon to write a letter of introduction to the British governor of the Cape Colony. For some years Dr van Horstok forwarded important collections (mainly mammals, although I have also seen series of marine Mollusca) to the museum; he died about 1838 (Cf. Gijzen<sup>6</sup>). The quagga collected by Van Horstok has a height at the shoulders of 115 cm=46 inches. The complete skeleton is also preserved in Leiden.



**Fig. 2 — Male quagga** (*Equus quagga quagga* Gmel.) preserved in the Rijksmuseum van Natuurlijke Historie, Leiden. This specimen was shot near Steenberg (C.P.). Photo H. F. Roman.

According to the literature (Rzasnicki<sup>7</sup>, and Lundholm<sup>8</sup>) 22 skins, 1 head, 4 complete skeletons, and 8 skulls of the quagga are preserved in various museums, mainly in western and central Europe. The mounted skins are distributed as follows: Germany 10, Great Britain 3, Italy and the Netherlands each 2, Austria, France, South Africa, Sweden, and Switzerland each 1. Some of the German specimens may have been destroyed during the last world war; one of the skulls, belonging to the Albany Museum, Grahamstown, was lost in a fire. Museums in the Union now only possess one mounted skin (a foal from Beaufort West in the South African Museum, Cape Town) and one skull (no data, Transvaal Museum, Pretoria).†

In 1766 the famous Russian naturalist Pallas described a species of antelope which he named *Antilope leucophaea*. Later on this buck was recognized as a relative of the sable and roan antelopes and consequently was renamed *Hippotragus leucophaeus* (Pallas). This species, known among the Cape farmers of those days as the "bloubok", was one of the first mammals to be exterminated in South Africa. It seems that the bluebuck never occupied a large area in the Cape, since the scanty records available show that it occurred only in the Karroo districts in the southern parts of the Cape Province. Various early travellers and naturalists reported having seen this buck, but none of them mentions large numbers or even small herds. It seems virtually impossible now to obtain any exact information on the habits and biology of this species, which had already died out at the beginning of the 19th century.

There is a considerable amount of confusion about a supposed allied species, mainly due to inaccuracy of some early travelling hunters and misinterpretations of horns and skins. Roberts<sup>1</sup> recognizes this form as *Ozanna aethiopica* (Schinz). Few, if any, mammologists seem to have shared this opinion.

The bluebuck was a rather large bluish-grey animal with horns that were more or

† Moreover some skull material of uncertain origin (fossil or subfossil) is preserved in various South African museums (vide publications of Cooke cited by Lundholm<sup>(8)</sup> and Cooke<sup>(9)</sup>.)

less intermediate between those of the roan and the sable antelopes. It was characterized by the absence of manes on neck and throat; moreover, it showed none of the typical black and white contrasting patterns on the head that are to be found in the two related species. The horns were black and rather strongly ringed.

Unfortunately only five mounted skins (museums at Leiden, Paris, Stockholm, Upsala, Vienna), one skull (Hunterian Museum, Glasgow) and one frontlet with horns (British Museum (Natural History), London) of this species are preserved. Broom<sup>10</sup> gave a photograph of the skull. Some years ago the Paris specimen was figured in *African Wild Life* (Vol. 9, no. 2, p. 94, and *ibidem*, no. 3, p. 201, 1955) and I believe this is the first time a photograph of the Leiden specimen is published.



Fig. 3 - Male bluebuck (*Hippotragus leucophaeus* (Pall.) preserved in the Rijksmuseum van Natuurlijke Historie, Leiden. This specimen was shot near Swellendam (C.P.). Photo H. F. Roman.

The following information on the blue-buck in the Rijksmuseum van Natuurlijke Historie at Leiden is available. It is an adult male specimen, collected in the neighbourhood of Swellendam. Date and name of collector are unknown. Height at withers 119 cm=approximately 48 inches. Length of horns on the curve 56.5 cm=approximately 23 inches. Compared with known data of the other preserved specimens it is possibly the largest known example of this extinct species. The specimen is in relatively good condition; compared with the photograph of the Paris specimen (vide supra) it is much better preserved. The colours, however, may have faded somewhat, since it was probably exhibited in daylight in the 19th century.

The most important data on the bluebuck are to be found in Sclater & Thomas<sup>11</sup>, while a paper for the general public was published some years ago by the Rev. J. Oliver<sup>12</sup>.

Quagga and bluebuck were among the first mammals to be exterminated in South Africa. Since 1883 several other animals were brought to the verge of extinction. Times have changed, however, and although we must avoid any optimism regarding the ultimate fate of our wild life inheritance, there is some hope for the future.

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## The Radio Telescope and Lunar Probe

The radio telescope at the University of Manchester's Jodrell Bank Experimental Station will be used to track the lunar probe launched in the United States. Being fully steerable, the telescope is able to follow the probe throughout most of the time that it will be above the horizon.

The lunar probe carries a small transmitter, and the function of the radio telescope is to receive the signals that are emitted. There are two aspects. First the telescope will give the position of the lunar probe in space, and this data will be transmitted by teletype to America immediately. The advantage of using the radio telescope is that it has very great sensitivity and can therefore pick up these weak signals to great distances also, the beam width of the telescope is small enough to allow the position of the probe in the sky to be determined with considerable accuracy. If the probe does go out into space, it should be possible to track it for distances of one million miles or so. It is likely that the batteries in the probe would fail before it got out of range of the telescope.