

## **Studies in Native Animal Husbandry. (11) An Ambo Bull Described.<sup>(1)\*</sup>**

By J. H. R. BISSCHOP and H. H. CURSON, Veterinary Research  
Officers, Onderstepoort.

### **INTRODUCTION.**

IN a previous study Groenewald and Curson (1934) recorded a few observations on several head of "Ovambo" cows introduced from South-West Africa Protectorate in 1929. Therein a casual reference was made to the conformation of the bull. In this study more details will be given of the male, the animal in question being Bull D.O.B. 5010, which is shown in Groenewald and Curson's paper as a seven months calf (see Fig. 10).

### **DESCRIPTION OF BULL D.O.B. 5010 (16.10.33).**

#### **GENERAL APPEARANCE.**

The bull, for his age, i.e. 21 months, is small, and appears to be a little loosely built. The most striking features are:—

(a) *Head*.—Very masculine and on large side, with massive horns. From the appearance of the head one would expect a larger and more masculine body.

(b) *Body*.—Relatively narrow, especially over the anterior ribs. The topline shows an appreciable dip just behind the withers.

(c) *Hump*.—Well defined, small in size, and situated in front of the withers.

(d) *Hindquarters*.—Show a fairly marked droop of rump from hookbones to pinbones with a rather high and prominent sacrum which gives the rump a roofy appearance.

(e) *General Quality*.—The bull has clean, well placed limbs, hard, small bones and a long, slender tail.

---

\* Professor Hans Schinz of Zurich has kindly pointed out that Ambo is preferable to Ovambo in describing cattle of this type. The prefix "ova" merely signifies the plural of Ambo. See his paper "Geographische Namengebung Südwesafrikas" in *Petermann's Geographischen Mitteilungen*, 1933, Heft 7/8.

## DETAILED DESCRIPTION.

## I. Head.

Large, of moderate length, masculine, dry, and features well defined.

(a) *Forehead*.—Very wide over the poll. The width here is probably exaggerated by a profusion of fairly long and rather coarse hair around the base of the horns. From the poll the forehead tapers slightly in width to its lower border. In depth it is a shade shorter than the facial (nasal) length. The forehead, which is broad and dished between the eyes gives the head its strong masculine appearance.

(b) *Face*.—The ridge of the nose is broad and well let down on to the muzzle, this adding to the masculine appearance of the head.

(c) *Profile*.—The line from the poll to muzzle is slightly undulating, being highest halfway down the nose and depressed a little between the eyes.

(d) *Eyes*.—The bull is practically blind in both eyes. The off eyeball has shrunken and lies well back in the orbital cavity. The near eye is also atrophied but to a lesser extent. The supraorbital arches are fairly heavy but do not hang over the eyes as much as in the Afrikaner.

(e) *Muzzle*.—In comparison with the size of the head, the muzzle could be deeper and wider. It is grey black in colour. The nostrils are large and normal in shape.

(f) *Lips*.—The upper lip is somewhat heavy in comparison with the lower lip and to the size of the muzzle. The hairless parts of the lips are dark in colour.

(g) *Horns*.—Very massive and practically circular on cross section. The dorso-ventral diameter at base is a shade greater than the antero-posterior diameter. The average diameter is about  $4\frac{1}{2}$  inches. This diminishes, however, rapidly to about  $2\frac{1}{2}$  inches at the junction of the upper and middle thirds of their length. The tips of the horns are moderately thick.

The horns leave the head at right angles to the length axis of the body in an outward and slightly upward direction. For the lower third of their length they pass outwards, upwards and slightly backwards. From here they change to an outward, upward and slightly forward direction.

The horns at their base are of a deep flesh colour with a dark tinge. From the base to the first annular ring each becomes lighter in colour, but then again darkens to a dull greyish black at the tip. The texture of the horn fibre is moderately fine.

(h) *Ears*.—Of good size, somewhat pointed and placed at 90 degrees to the long axis of the body, in a slightly downward direction. The texture of the ear and of the skin is thin. The auricle is open, with trim edges and fairly short hair.

*II. Neck.*

Moderate in length, and of fair depth. The sides are sufficiently covered.

(a) *Upper Border*.—Straight and practically horizontal from poll to hump. At the junction of neck and poll, the upper border rises abruptly on to the poll.

(b) *Hump*.—Situated in front of the withers and is well defined. Its anterior axial border passes up from the upper border of the neck to the apex of the hump at an angle of approximately 40°. From the apex to the withers the posterior axial border falls at an angle of about 30° to the horizontal. The hump is on the small side and is well attached to the neck.

(c) *Lower Border*.—(1) *Throat latch*—well defined. (2) *Neck veins*—well defined. (3) *Dewlap*—Is heavy. It commences from two folds about three inches behind the chin. It shows only a slight taking in at the throat latch and passes downwards between the front legs, where it splits into two folds which pass backwards and outwards to behind the elbows.

The skin of the dewlap appears to be thick and the lower edge is somewhat filled and has a saccular appearance. The skin of the neck appears to be thick and on the sides falls into a series of vertical folds from the poll backwards, the second fold being the widest, i.e. about 3½ inches.

*III. Withers.*

Of fair width. In movement the withers are a little loose, the shoulder blades showing above the topline.

*IV. Front Limbs.*

Well placed, but could be a little wider apart, when viewed from the front.

(a) *Shoulders*.—Of moderate length and width; are evenly covered. They are attached somewhat loosely to the body, producing the loose withers already described.

(b) *Arms*.—Fair length. Placed rather obliquely. Show good musculature.

(c) *Forearms*.—Rather long, well muscled, with the elbows a little close to the body.

(d) *Knees*.—Of good size, well placed and of good conformation and bone.

(e) *Cannons*.—Moderately long, showing good hard bone and dry tendons.

(f) *Fetlocks*.—Of good size and quality, well placed.

(g) *Pasterns*.—Fairly straight and short.

(h) *Feet*.—Rather long and pointed, and low at the heels.

V. *Body.*

Of good length, and moderate depth, but too narrow over the anterior ribs.

(a) *Topline*.—Straight, but narrow and lacking in musculature, especially in the development of the *M. latissimus dorsi*, which falls away on either side of the spine and gives the topline a roofy appearance. The back passes evenly over into the loin which, however, could be better attached to the rump.

(b) *Thorax*.—Fair depth, but lacking in spring of ribs, especially just behind the shoulders. Brisket poorly defined.

(c) *Abdomen*.—Fair capacity, but a little pot bellied.

(d) *Hind Flank*.—Well let down.

(e) *Underline*.—Runs horizontally backwards to the prepuce which is prominent. From here the underline cuts up sharply to the scrotum.

VI. *Hindquarters.*

(a) *Rump*.—Of good length with a rather high sacrum which gives it a roofy appearance.

(b) *Hookbones*.—Too near together, a little prominent and situated about five inches higher than the pinbones.

(c) *Thirls*.—Although too near together, are wider than the hookbones.

(d) *Pinbones*.—Low set and too near together.

(e) *Tail*.—Is set rather low down on a clean tail root. It is long and slender. The coccygeal vertebrae reach to the hocks, and the tail ends in a large switch.

VII. *Hind Limbs.*

(a) *Thighs*.—The upper thighs show a fair width when viewed from the side but are narrow when seen from behind. The twist is cut up and the upper thighs show no rounds. The gaskins are long, narrow and lack musculature.

(b) *Hocks*.—Good size and quality. Well placed.

(c) *Lower Limbs*.—As in front limbs.

VIII. *Sexual Organs.*

(a) *Scrotum*.—Proportional in size to body, testes well carried.

(b) *Prepuce*.—Shows very long preputial hairs.

IX. *Colour.*

A uniform light dun, which on the head and over the shoulders and withers takes on a slightly darker tint. The skin appears to be dark in colour and blue black spots show up through the hairy coat.

TABLE I.

Sex.	D.O.B. Nos.	Approximate age of animal when measured.	Date when measured.	Weight of animal when measured or description of condition.	Length of body. (Point of shoulder to tuber ischii).	Height at withers.	Height at hook-bones (tuber coxae).	Depth of chest.	Width of chest. (Across back—behind shoulder).	Width between hookbones.	Width between thirns. Trochanter I femur.	Width between pin-bones (Tuber ischii).	Heart girth.	Length of head.	Width between eyes.	Length of croup.	Greatest height over tuber sacrale.
Cows.....	3586	—	4/4/30	Condition excellent	131.5	114.8	116.3	62.0	31.6	42.7	30.8	15.0	167.8	46.0	17.0	45.3	118.5
	3587	10 years	4/4/30	Condition excellent	131.0	108.1	112.1	60.3	39.6	44.5	32.1	13.0	168.3	45.5	17.0	43.8	115.3
	3588	11-12 years	4/4/30	Condition poor.	—	118.1	120.8	58.3	29.0	42.8	30.8	10.0	155.0	45.3	17.0	45.8	123.6
	3584	10 years	10/6/30	Condition good	133.0	119.0	124.0	63.0	37.5	44.5	36.5	10.5	172.2	45.5	18.0	44.0	123.0
Average for the 4 cows.	—	Over 10 years	—	—	131.8	115.0	118.3	60.9	34.4	43.6	32.5	12.1	165.8	45.6	17.3	44.7	120.1
Bull.....	5010	1 year 11 months	1/1/34	650 lb.* fair condition	128.0	118.0	122.0	53.5	28.5	34.0	35.0	8.7	142.0	46.3	16.5	41.5	—†

\* The bull whose weight on 25/6/34 was 863 lb. was slaughtered the following day as an exhibit for the Transvaal Museum, Pretoria.

† Dr. Emilio Martins of the Angola Veterinary Service, informs us (6/9/34) that cattle of the Ambo type occur in West Angola south of the Benguela Railway. To the east would naturally be the area occupied by cattle of the Bechmana type (Curson 1934). See *Pecuarie* (Angola), p. 73, 1930-32.

X. *The Hairy Covering.*

Is short and laid smoothly close to the body. Along the upper border of the neck from withers to poll the hair is longer. On the forehead and around the base of the horn there is a profusion of long, rather coarse hair.

XI. *Condition.*—Fair.

XII. *Weight.*—See Table I.

XIII. *Age.*—Born 3.2.32.

XIV. *Body Measurements.*

For comparison the measurements of females (full grown) are included in the table given below.

REFERENCES.

- CURSON, H. H. (1934). Bechuana or Mangwato Cattle. *Farming in South Africa*, September, 1934.
- GROENEWALD, J. W., AND CURSON, H. H. (1933). Studies in Native Animal Husbandry. (6) A Note on Ovambo Cattle. *Onderstepoort J. Vet. Sc. & Animal Indust.*, Vol. 1, No. 2, pp. 601-620.

APPENDIX.

*Further Useful References in Studying African Cattle.\**

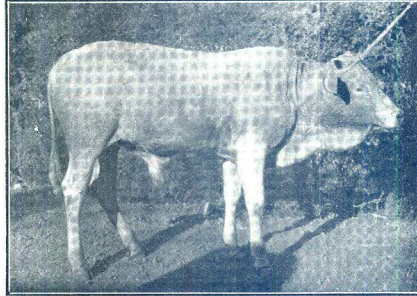
(Taken from Dr. H. Epstein's "The Origin of Africa's Indigenous Domestic Animals". In preparation.)

- ADAMETZ, L. Die Wanderungen der Hamiten.
- ADAMETZ, L. (1898). Studien über *Bos brachyceros Europaeus*. *Journal für Landwirtschaft*.
- ADAMETZ, L. Untersuchungen über das Rind der Wahima-(Watussi)-Stämme.
- ANTONIUS, O. Grundzüge einer Stammesgeschichte der Haustiere.
- BAKKER, D. L. (1909). Studien über die Geschichte, den heutigen Zustand und die Zukunft des Rindes und seiner Zucht in den Niederlanden. Maastricht.
- BAUMANN, O. (1894). Durch Massailand zur Nilquelle, Berlin.
- BOSMAN, A. M. (1924). The Origin of the Africander Cattle of South Africa. *Journal of the Department of Agriculture*, Pretoria, November, 1924.
- DARWIN, CHARLES. Animals and Plants under Domestication.
- DURST, J. U. (1899). Die Rinder von Babylonien, Assyrien, und Ägypten und ihr Zusammenhang mit den Rindern der alten Welt. Zürich.
- DURST, J. U. (1899). Animal Remains from the Excavations at Anau, Turkestan.
- DE KOCK. Economic History of South Africa.
- DRAKE-BROCKMAN, R. E. (1912). British Somaliland. London.
- DUBOIS (1897). Sur le rapport de l'encéphale avec la grandeur du corps chez les Mammifères. *Bull. de la Soc. d'Anthropolog. de Paris*.
- EPSTEIN, H. The Red Africander Cattle. In the Press.

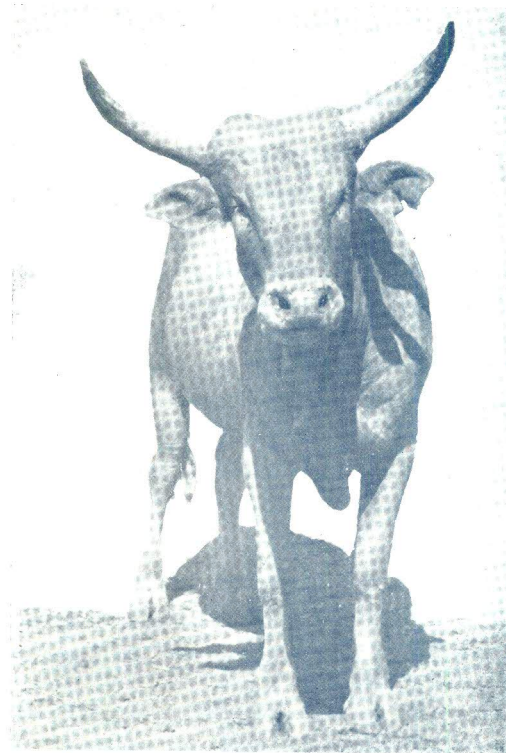
\* See Appendix 3 of Groenewald and Curson (1933) for previous list.

- EPSTEIN, H. Descent and Origin of the Africander Cattle. *Jl. Heredity*, 1933.
- FRIEDRICH ADOLF (Duke of Mecklenburg), (1913). From the Congo to the Niger and the Nile. London. Vol. 1.
- GANS, H. Banteng und Zebu und ihr gegenseitiges Verhältnis.
- HARTMAN, R. (1864). Die Haussäugetiere der Nilländer. *Annalen der Landwirtschaft*. Band 44.
- HILZHEIMER, M. Der Ur in Ägypten.
- HOLM, A. (1912). Africander Cattle. *The Agric. Journal of the Union of South Africa*, Vol. IV, No. 5, November, 1912.
- HOERNLE, A. (1923). South-west Africa as a primitive culture Area. *The South African Geographical Journal*, Vol. VI.
- HOMMEL, F. (1885). Geschichte Babyloniens und Assyriens. Berlin.
- IGUCHI. Journal of the College of Agriculture. Hokkaido Imperial University, Sapporo, Japan, Vol. LX.
- KELLER, CONRAD. (1896). Das afrikanische Zebu-Rind und seine Beziehungen zum europäischen Brachyceros-Rind. Zürich.
- KELLER, CONRAD. (1902). Die Abstammung der ältesten Haustiere. Zürich.
- KELLER, CONRAD. Das afrikanische Zebu-Rind.
- KELLER, CONRAD. Die ostafrikanischen Inseln.
- KLAT, B. (1913). Über den Einfluss der Gesamtgrösse auf das Schädelbild. Leipzig.
- LYDEKKER, R. The Ox and its Kindred.
- MÜLLER, R. (1903). Die geographische Verbreitung der Wirtschaftstiere. Leipzig.
- NEHRING, A. (1889). Riesen und Zwerge des Bos primigenius. Sitzungsberichte der Gesellschaft Naturforschender Freunde zu Berlin.
- POHLIG, H. (1911). Bovidés fossiles de l'Italie. *Bull. soc. Belge de Géologie*. Tome XXV.
- RIPLEY, M. (1900). The races of Europe. London.
- RUTIMEYER, L. Die Fauna der Pfahlbauten der Schweiz.
- RUTIMEYER, L. Versuch einer natürlichen Geschichte des Rindes, Vol. II.
- STOW, G. W. (1905). The Native Races of South Africa. London.
- SCHAPERA, I. (1930). The Khoisan Peoples of South Africa. London, 1930.
- SCHULZE, L. (1907). Aus Namaland und Kalari. Jena.
- SCHWEINFURTH, G. (1918). Im Herzen von Afrika. Leipzig.
- SMITH-HAMILTON. (1827). The Animal Kingdom. London, Vol. IV.
- VAN RIJNEVELD. (1804). Aanmerkingen over de Verbetering van het Vee aan de Kaap de Goede Hoop.
- VON PRITZWALD, S. F. P. Rassengeschichte der Wirtschaftstiere.
- ULMANSKY. (1918). Die Andalusische Rinderrasse. *Mitteilungen der landwirtschaftlichen Lehrkanzeln der Hochschule für Bodenkultur in Wien*. Band 2.

EXPLANATION OF FIGURES.



(1) Bull. D.O.B. 5010 as a seven months calf. Taken September, 1932.

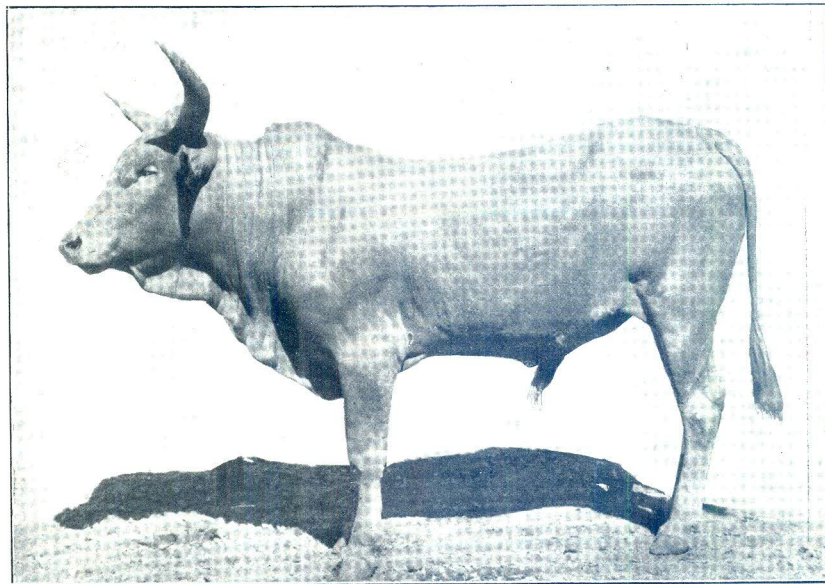


(2) Bull. D.O.B. 5010. Front view. Taken March, 1934.





(3) Bull. D.O.B. 5010. Back view. Taken March, 1934.



(4) Bull. D.O.B. 5010. Side view. Taken March, 1934.