

## DYSTOCIA IN A GIRAFFE *GIRAFFA CAMELOPARDALIS*

V. DE VOS\*

*Veterinary Investigation Centre, P.O. Box 12, Skukuza, 1350*  
and

O. BOURQUIN

Subdivision: *Nature Conservation, P.O. Box 517, Bloemfontein 9300.*

*Abstract* – Dystocia in a free-living giraffe *Giraffa camelopardalis* in the Willem Pretorius Nature Reserve is described. Posterior presentation and a unilateral engaged hock flexion posture caused a complete obstacle to parturition. Both parties, maternal and foetal, died as a result of the condition.

Dystocia implies some obstacle to parturition whereby the young can not be delivered by maternal effort alone (Benesch and Wright 1957). It is classified as maternal when the essential cause lies in the mother and foetal when the young one is primarily responsible. Although dystocia is recognized as a common condition in domestic species, the literature is poor concerning reports on the occurrence in wild animal species. The uniqueness of this condition in wild animals, therefore, warrants this report on the occurrence of foetal terminal dystocia in a free-living giraffe.

The Willem Pretorius Nature Reserve consists of an area of 12 091 ha and supports about 20 species of the larger game animals (Bourquin 1973). A total of five giraffe was introduced during March 1963 and has bred up to a number of 14 at the commencement of an event which led to this report.

Annual game capturing operations were conducted during May 1973. During a reconnaissance flight with a helicopter, which formed part of the catching procedure, a dead giraffe was observed lying in a woody area not far from the Allemanskraal Dam. The animal, an adult female, was found on its side with legs and head extended. Part of a foetal leg protruded from the vaginal opening (Fig. 1). Moderate signs of ante-mortal agonal movements were present.

On opening the carcass a full term foetus was found to be stuck in the reproductive canal (Fig. 2). Death was attributed to complications arising

---

\*Present address: *Division of Nature Conservation, Private Bag X404, Skukuza, 1350.*

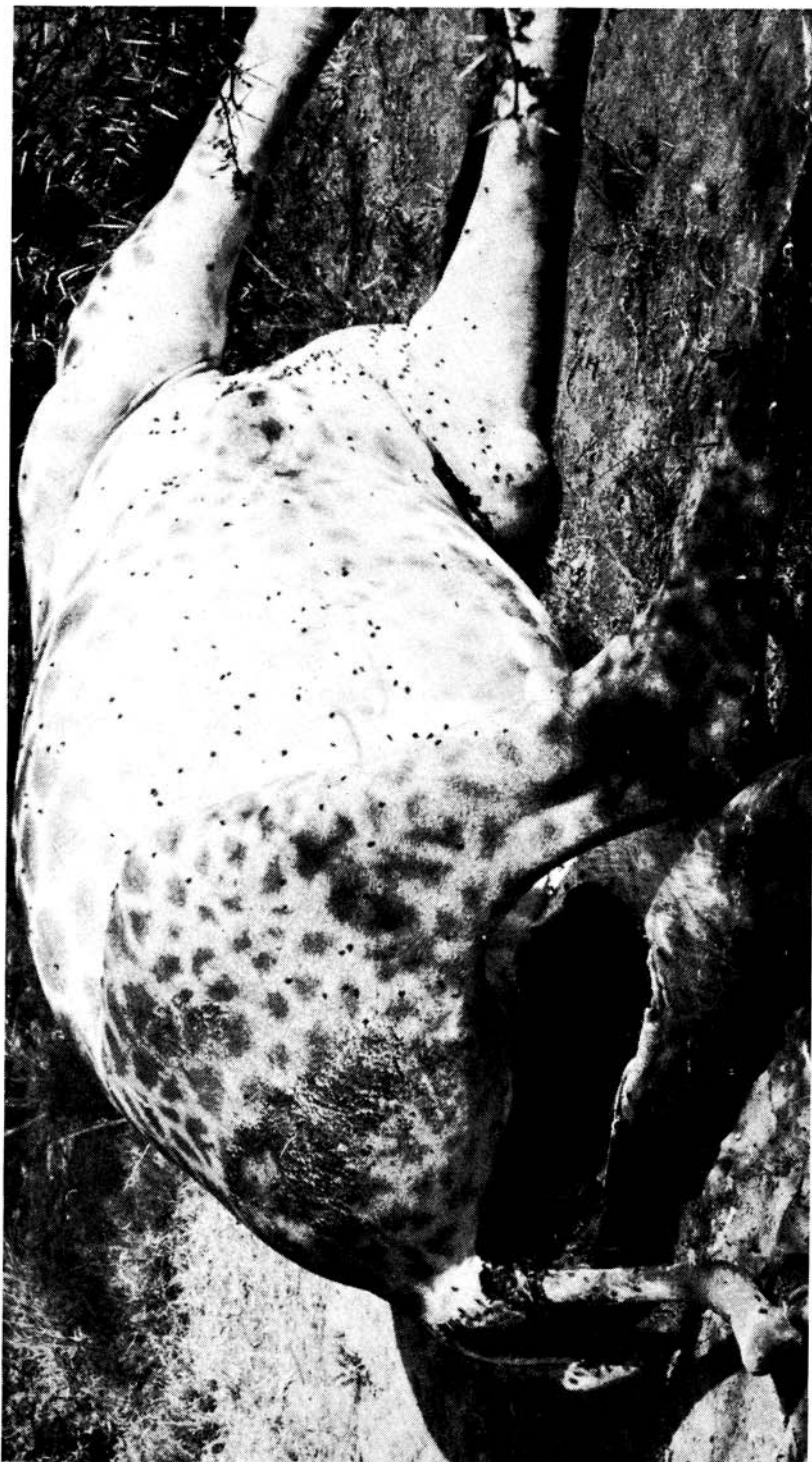


Fig. 1. A female giraffe carcasses with the leg of an unborn calf protruding from the genital opening.  
Scavengers have already taken their toll off the right hind leg of the cow.



Fig. 2 Giraffe carcass opened up to show the cause of dystocia. Inset: A diagrammatical representation of the unborn calf in situ. 1. Left hind leg in an engaged hook flexion posture. 2. Right hind leg with flexion of hip and knee joints. 3. Genital opening of cow. 4. pelvis.

from dystocia. The foetus was presented at the pelvic inlet with the right tarsal joint in a flexed position (Fig. 2). The tuberosity of the os calcis was jammed against the pelvic roof resulting in impaction of the digit in the pelvis, validating the use of the term "unilateral engaged hock-flexion posture", as described by Benesch and Wright (1957) for domestic animals, as the ultimate cause of dystocia in this case. The right knee and hip also failed to assume full extension proportions, resulting in further impaction of the foetus.

Posterior presentation (the foetal hind extremity directed towards the maternal pelvis) is considered (Benesch and Wright 1957) as abnormal in uniparous domestic species. More space is required for the hind limbs to undergo full extension than is the case with the fore. Therefore, the longer the limbs, the more complications can be expected. No other land mammal equals the size of the giraffe at birth (Hediger and Klages 1968). This is mainly due to the typical long-legged build and elongated neck of the species. Posterior presentation must, therefore, be considered as abnormal in the giraffe. This is further substantiated by a number of observations on the normal and successful birth process of the giraffe (Germanos 1907; Schlott 1952; Lang 1955; Hediger 1955; Pournelle 1955; Iles 1957; Gyzen 1958; Backhaus 1961; Robinson, Gribble, Page and Jones 1965; Bourliere 1970). Without exception anterior presentations are described.

#### *Acknowledgements*

The authors wish to thank the Directors of the Sub-division Nature Conservation of the Orange Free State Provincial Administration and Veterinary Services, Agricultural Technical Services, for permission to publish this paper.

#### REFERENCES

- BACKHAUS, D. 1961. *Beobachtungen an Giraffen in Zoologischen Gärten und freier Wildbahn*. Bruxelles: Institut des Parcs Nationaux du Congo et du Ruanda-Urundi.
- BENESCH, F. and J.G. WRIGHT. 1957 *Veterinary obstetrics*. London: Bailliere, Tindall and Cox.
- BOURLIÈRE, F. 1970. *The natural history of mammals*. New York: Alfred A. Knopf.
- BOURQUIN, O. 1973. Utilization and aspects of management of the Willem Pretorius Game Reserve. Paper presented at the Sth. Afr. Wildl. Mgmt. Ass. Symp. on Wildlife Conservation and Utilization, Pretoria. Ms.
- GERMANOS, W. 1907. Geburt einer Männlichen Giraffe im Zoologischen Garten zu Athen. *Zool. Gärten*. 48: 73-75.

- GIJZEN, A. 1958. Quelques observations concernant la naissance et la croissance de girafes (*Giraffa camelopardalis antiquorum* (Swainson)), an Jardin Zoologique d'Anvers. *Mammalia* 22: 112-120.
- HEDIGER, H. 1955. *Studies of the psychology and behaviour of captive animals in zoos and circuses*. London: Butterworths.
- HEDIGER, H. and J. KLAGES. 1968. *Born in the zoo*. London: Collins. St. James's Place.
- ILES, G.T. 1957. Giraffes in the Zoological Gardens, Belle Vue, Manchester, 1929-1954. *Zool. Garten. Leipzig (N.F.)* 23(1/3): 162-177.
- LANG, E.M. 1955. Frühgeburt und künstliche Aufzucht einer Giraffe. *Schweiz. Arch. Tierheilk.* 97: 198-205.
- POURNELLE, G.H. 1955. Notes on the reproduction of a Baringo giraffe. *J. Mammal.* 36: 574.
- ROBINSON, H.G.N., W.D. GRIBBLE, W.G. PAGE and G.W. JONES. 1965. Notes on the birth of a reticulated giraffe (*Giraffa camelopardalis antiquorum*). *Int. Zoo Yearbook* 5: 49-52.
- SCHLOTT, M. 1952. Erfahrungen bei der Giraffenzucht. *Zool. Garten (N.F.)* 19(5): 171-180.