Koedoe 21:195—196 (1978)

CHROMOSOME ANALYSIS IN THE KRUGER NATIONAL PARK: THE CHROMOSOMES OF THE BLUE WILDEBEEST *CONNOCHAETES TAURINUS*

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2001

Introduction

The blue wildebeest *Connochaetes taurinus* is a member of the tribe Alcelaphini. The present report details the findings of the study of the chromosomes of a male and female blue wildebeest. It is published because so few similar studies have been reported in this species.

Material and Methods

After drug immobilisation of the animals, sternal and iliac crest bone marrow was aspirated. The marrow aspirate was treated according to the method of Wallace & Fairall (1965), whereby satisfactory chromosome preparations can be obtained in primitive surroundings. Both animals studied were obtained from the central area of the Kruger National Park, Republic of South Africa.

Results and Discussion

In both animals the chromosome preparations were of rather poor technical quality.

A study of the dividing cells revealed a modal diploid number of 58 in 28 cells from the male and nine cells from the female. In the female, with the exception of a pair of very large submetacentric chromosomes, all chromosomes were acrocentric. The acrocentric chromosomes varied from large to small (Fig. 1).

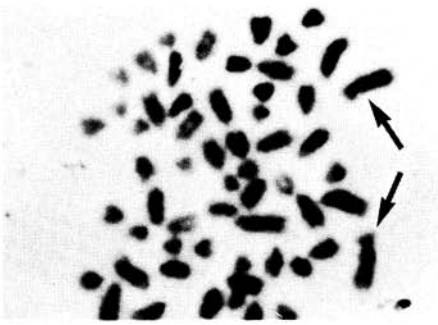

Fig. 1. Metaphase from female blue wildebeest. The metacentric chromosomes are arrowed.

A study of metaphases in the male also revealed a pair of very large submetacentric chromosomes of similar size and morphology to those seen in the female. For the rest, all the chromosomes were acrocentric, varying in size from large to small. On direct, critical visual observation the largest acrocentric chromosome was seen to have no homologous partner, and was tentatively identified as the X chromosome. Similarly, a minute acrocentric too appeared to have no partner, and was tentatively identified as the Y chromosome.

The chromosome arm number (N.F.) was 60 in both animals.

This study confirms the diploid number, general morphology of the metaphase chromosomes and the chromosome arm number as reported by Gerneke (1967) and Wurster & Benirschke (1968). The above-mentioned workers found themselves unable to identify the sex chromosomes, but the present study allows for a tentative identification of these; that is the X is a large acrocentric and the Y a minute acrocentric.

The other member of the genus *Connochaetes* (*Connochaetes gnou,* the black wildebeest), has the same diploid number, general morphology and N. F. as the blue wildebeest (Wurster & Benirschke 1968).

Acknowledgements

I would like to express my appreciation to the National Parks Board of Trustees for permission to undertake this study. I would also like to express my thanks to members of the Division of Nature Conservation who provided the animals for the study. The study was financed in part by a University of the Witwatersrand Council Research Grant.

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