

SOMATIC CHROMOSOMES OF A BLACK RHINOCEROS

(Diceros bicornis GRAY 1821)*

We have recently had an opportunity to examine the somatic chromosomes of a black African rhinoceros [Perissodactyla:Mammalia]; to our knowledge the chromosomes of none of the five species of rhinoceros usually recognized have been studied heretofore. This species is known to occur in the southern and eastern parts of Africa. This adult female specimen came from Kenya and was in the collection of the Philadelphia Zoological Society. Death was attributed to pulmonary abscess.

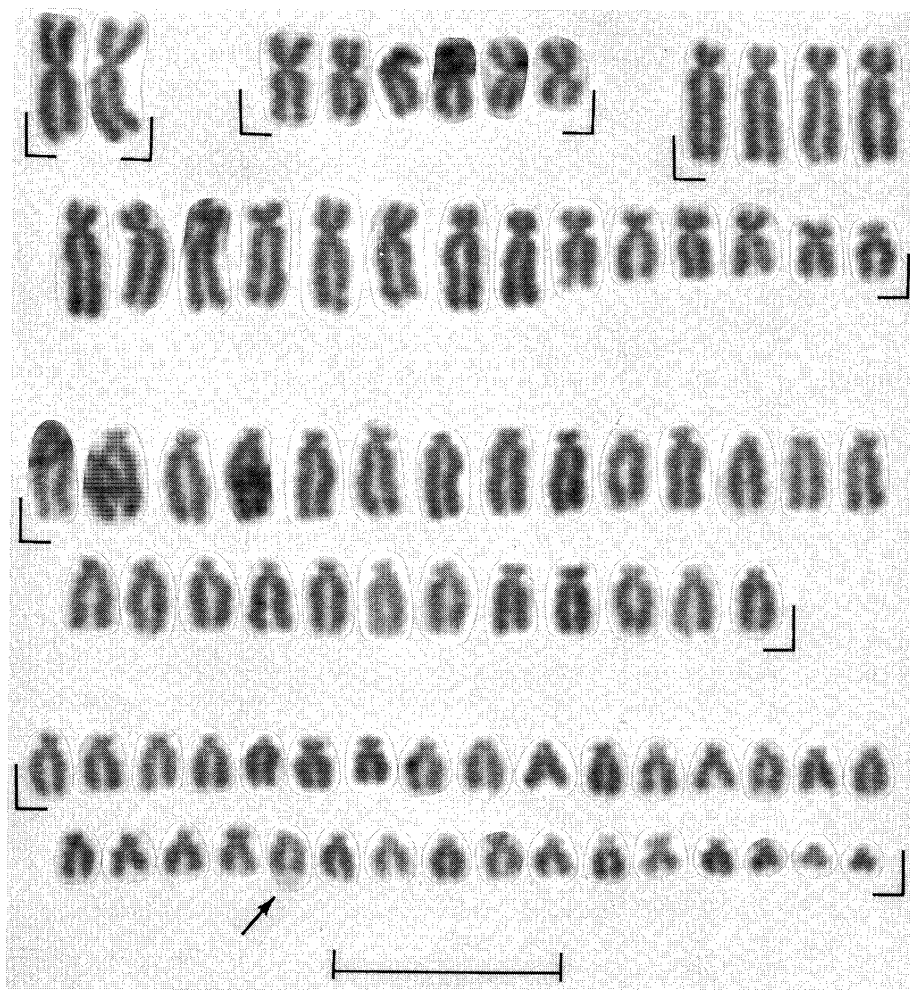


FIG. 1. Chromosomes of a black rhinoceros (acquisition 114M). Satellites (arrow) were consistently seen on one small acrocentric chromosome. Scale indicates $10\ \mu$.

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Cultures were established from areolar connective tissue, lung and dermis obtained at autopsy, and chromosome preparations were made from the second and third *in vitro* passages.

The modal number of chromosomes was 84. A representative karyotype analysis is illustrated in Fig. 1. On the basis of several such analyses, five distinct groups of chromosomes were recognized: a pair of large chromosomes with nearly median centromeres; three pairs of smaller chromosomes again with nearly median centromeres; a group of nine pairs of long chromosomes with submedian centromeres; and 58 acrocentrics which fell into two groups, the first of which comprised 26 longer chromosomes and the second the remaining 32. An attempt was made to identify the X chromosome according to its pattern of labelling with ^3H -thymidine. Unfortunately, the cultures ceased to thrive before clear radioautographic results could be obtained.

Two features of the karyotype are noteworthy. One chromosome, a small acrocentric, was seen to carry satellites on its long arms. This unusual location of satellites has also been seen by us in acrocentric chromosomes of two species of artiodactyl mammals (Chandra et al., 1967). Secondly, this diploid number of 84 is as far as we are aware the highest yet recorded for a mammal.

LITERATURE CITED

- Chandra, H. S., D. A. Hungerford, Joyce Wagner, and R. L. Snyder. 1967. Chromosomes of five artiodactyl mammals. *Chromosoma* 21:211-220.

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