

A NOTE ON THE SEX RATIO OF STEENBOK
RAPHICERUS CAMPESTRIS IN TRANSVAAL
LOWVELD MOPANE *COLOPHOSPERMUM*
MOPANE WOODLAND

by

L. G. OATES*

Abstract – Field observations on steenbok in Transvaal Lowveld Mopane Woodland reveal a 1 : 1 sex ratio. This is corroborated by field observations in the Kruger, Wankie and Kalahari Gemsbok National Parks.

Introduction

Recently Penzhorn (1971) and Rowe-Rowe (1971) published sex ratio data on steenbok (*Raphicerus campestris* (Thunberg)). Penzhorn worked in the Kalahari Gemsbok National Park and Rowe-Rowe in the Wankie National Park (Rhodesia) and the Kruger National Park. Both authors conclude from their data that steenbok populations have a 1 : 1 sex ratio.

A paper published by Van Bruggen (1964) inspired Penzhorn and Rowe-Rowe to make further observations and test their data for significant departure from 1 : 1 ratio. Van Bruggen's data collected in Kruger National Park revealed a preponderance of males over females. He appealed for more observations to be made in other areas.

I recorded sex ratios of steenbok during ecological studies on the Hans Merensky Nature Reserve, situated in the Letaba district of the north-eastern Transvaal (23°39'S 30°40'E) in dense Mopane (*Colophospermum mopane*) Woodland. The reserve is 5 183 ha in extent.

Material and Methods

Observations were made from a vehicle in conjunction with habitat preference studies of game animals on the Reserve. Observations were made at different times of day throughout all seasons, from the beginning of October 1969 to August 1971. Only the sexes of those animals which could be accurately asserted was recorded.

*Transvaal Nature Conservation Division, S.A. Lombard Nature Reserve,
P.O. Box 174, Bloemhof, Transvaal.

Results and Discussion

A total of 45 steenbok were sexed. This number is low when compared with totals of 48 over eight days (Penzhorn, 1971); 35 over two months and 39 over one month (Rowe-Rowe, 1971). The possible reasons for the relatively few recordings on Hans Merensky Nature Reserve are a lower steenbok population density and restricted visibility due to dense mopane woodland (trees and low scrub).

The sample of 45 steenbok contained 18 ♂♂ and 27 ♀♀ giving a ratio of 1 ♂ : 1,5 ♀.

Assuming that this sample was taken from a population with a sex ratio of 1 : 1, a chi-square test was done to determine significance of departure from this ratio. The chi-square test is based on a formula by Ostle (1964) for binomial data. It was concluded that the male:female ratio in this population does not depart significantly from the assumed 1 : 1 ratio ($X^2 = 1,42$).

For a significant departure at the 5% level from the 1 : 1 sex ratio in this case the X^2 values would have to exceed 3,84 (Snedecor and Cochran, 1967).

Conclusion

The 1 : 1 sex ratio found in steenbok on Hans Merensky Nature Reserve supports the assumption made by Penzhorn (1971) that steenbok populations in Southern Africa have a 1 : 1 sex ratio.

REFERENCES

- OSTLE, B. 1964. *Statistics in research*. 2nd ed. Ames: Iowa State University Press.
- PENZHORN, B. L. 1971. A note on the sex ratio of steenbok *Raphicerus campestris* in the Kalahari Gemsbok National Park. *Koedoe* 14: 61-64.
- ROWE-ROWE, D. T. 1971. Sex ratios of steenbok *Raphicerus campestris* Thunberg seen in two southern African national parks. *Koedoe* 14: 55-99.
- SNEDECOR, G. W. and W. G. COCHRAN, 1967. *Statistical methods*. 6th ed. Ames: Iowa State University Press.
- VAN BRUGGEN, A. C. 1964. A note on *Raphicerus campestris* (Thunberg, 1811): a challenge to observers. *Koedoe* 7: 94-98.