A NOTE ON RAPHICERUS CAMPESTRIS (THUNBERG, 1811): A CHALLENGE TO OBSERVERS

by

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Raphicerus campestris (Thunberg, 1811), a small antelope of the tribe Neotragini (subfamily Antilopinae), commonly known as the "Steenbokkie" or "Steinbok", occupies a wide range throughout southern and eastern Africa. It occurs as far north as Mts. Kenya and Elgon in Kenya (northern limit approximately 1° N.) but is unknown in the Congo Republic (fide Schouteden, 1944-1946), although it does occur in Northern Rhodesia south of the Kafue River (Ansell, 1960). In the west the steenbokkie reaches southern and southeastern Angola (see distribution map fig. 1).

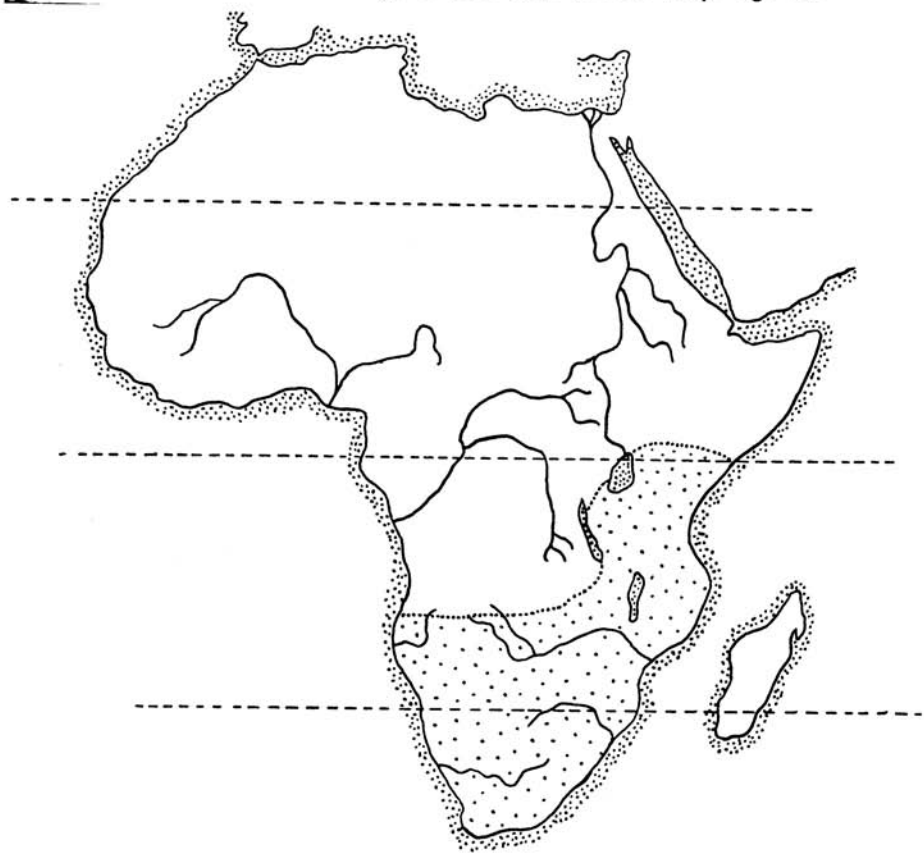

Fig. 1: Map of Africa showing the range of *Raphicerus campestris* (Thunb.); the species occurs all over the dotted area in suitable habitats.

A number of subspecies has been described, but there is no consensus of opinion about the status of these (see e.g. Allen, 1939; Ellerman, Morrison-Scott & Hayman, 1953). The typical race is distributed over the southern and southwestern Cape Province (Roberts, 1951; Ellerman, Morrison-Scott & Hayman, *loc. cit.*); most of East Africa is occupied by the well-defined race *R. campestris neumanni* (Matschie, 1894) (see e.g. Swynnerton & Hayman, 1950), but apart from this and the nominal subspecies, the status of the other races is rather uncertain.

According to Roberts (*loc. cit.*) two subspecies are likely to occur in the Kruger National Park, viz., *R. campestris zuluensis* Roberts, 1946 (southern and part of central districts) and *R. campestris capricornis* Thomas & Schwann, 1906 (northern and part of central districts). Only the last mentioned race is recorded by Brynard & Pienaar (1960).

Raphicerus campestris is easily recognized in the field; horns are present in the male only, so that there is no difficulty in distinguishing the sexes. It is one of the non-gregarious antelopes, which as a rule occurs singly or in pairs. The steenbokkie is fairly tame in the Kruger National Park and may be seen by tourists almost everywhere.

Unfortunately the knowledge of the biology of the smaller antelopes is very incomplete and therefore it seems worth while to draw the attention to the following observations on the present species. These observations have been made in the course of various trips to the Kruger National Park. In recording observations the writer was struck by the preponderance of males and consequently decided to investigate this further.

Table 1 gives the results of random observations in the period 1959-1962. The abbreviations "m/a" stand for "morning" and "afternoon", the only possible manner to divide the period of daylight, because of the absence of precise time records. In the case of pairs the sexes have been joined by a +.

TABLE 1

Date	m/a	Locality	♂♂	♀♀
9.IX.1959	m	Nahpe Road	1, 1, 1, 1, 1	1
10.IX.1959	m	Lower Sabi Road		1
11.IX.1959	m	Satara-Olifants R., main road	1, 1	
	m	Olifants R.-Letaba Circular Drive		1
	a	Letaba Circular Drive	1	
14.IX.1959	a	Punda Milia-exit	1	
15.IX.1959	m	Klopperfonteindam-Hippo Pool Pafuri	1	
23.XI.1959	a	Nahpe Road	1	
26.XI.1959	m	Letaba-Great Letaba R.	1	
	a	Punda Milia-Klopperfonteindam	1	
27.XI.1959	m	Punda Milia-Hippo Pool Pafuri	1	
5.IV.1960	m	Sabi R. Road, between Hippo Pool and Skukuza	1	
	a	Nahpe Road	1, 1, 1	+1
7.IV.1960	m	Doispanne Road	1	1, 1
27.IV.1962	a	Nahpe Road	1, 1	

Date	m/a	Locality	♂♂	♀♀
28.IV.1962	m	Randspruit Road-Gomondwane Road, from Nahpe Road junction to Crocodile Bridge	unsexed: 1, 1, 1	
29.IV.1962	m	Lower Sabi-Tshokwane	1	
	m	Tshokwane-Nwanedzi via Lindanda Road	1	
	a	Pumbe-Satara	1, 1, 1, 1	+ 1
	a	Neighbourhood of Satara	unsexed: 2	
30.IV.1962	a	Olifants R.-Bangu	1, 1	
1. V.1962	m	Tsavo-Shingwidzi	1	
3. V.1962	m	Madzeringwe Spruit	1	
4. V.1962	a	Machayi Pan-Masokosa Pan	1, 1, 1, 1	
5. V.1962	m	Machayi Pan area	1, 1, 1	1
7. V.1962	m	Doispanne Road	1	
	m	Hippo Pool Road from Doispanne Road junction to Pretoriuskop	1	+ 1
		Total	40 ♂♂	9 ♀♀
		Total unsexed	5	
		Grand total	54	

The following deductions may be made from Table 1:

A. Total sexed 49, viz., 40 ♂♂ (81.6%) and 9 ♀♀ (18.4%);

B. If all unsexed ♀♀, total 54, viz., 40 ♂♂ (74.1%) and 14 ♀♀ (25.9%);

C. If all unsexed ♂♂, total 54, viz., 45 ♂♂ (83.3%) and 9♀♀ (16.7%);

D. If unsexed specimens one pair and three ♂♂, total 54, viz., 44 ♂♂ (81.5%) and 10 ♀♀ (18.5%).

Unfortunately these data are unsuitable for statistic interpretation, so that we have to interpret them only in the present form. Comparing A with interpretation D of the unsexed specimens, we get almost the same figures: normally two specimens together form a pair, unless one happens to observe a female with lamb, which was not the case here. Conversely, interpretation D is the most likely one, being in accordance with the facts of A.

All this shows that roughly four males to one female have been observed by the author in the Kruger National Park during the months April, May, September and November of three different years. Taken according to months the same relation will always be found with slight variations:

April — 15 ♂♂, 4 ♀♀ (if interpretation D accepted: 19 ♂♂, 5 ♀♀);

May — 11 ♂♂, 2 ♀♀;

September — 10 ♂♂, 3 ♀♀;

November — 4 ♂♂, no ♀♀.

Consequently this rules out the question of different behaviour of the sexes in different times of the year.

The following factors may account for the preponderance of males in the above mentioned observations:

1. There are indeed more males than females of the steenbokkie in the Kruger National Park. It is known that in certain gregarious species of antelope (e.g., *Kobus leche* Gray) there are many more males than females.

2. The preponderance of males is only an illusion, because of probable significant differences in behaviour between the sexes. The females may lead much more secretive lives, so that they are easily overlooked in the field. It can be seen from Table 1 that all single females (7) have been observed in the morning, which might be an indication of a difference in behaviour; on the other hand, the total is far too small to allow conclusions to be drawn.

3. The number of males is equal to that of the females, but the number of observations is not sufficiently large to show this. Although this is probably the most plausible of all offered explanations, one may expect to find more than 9 (c.q. 10) females on a grand total of 49 (c.q. 54). It is certainly doubtful whether 49 (c.q. 54) observations can be considered an adequate number; however, the scope or importance of field observations is always limited to a certain extent.

4. The number of horned females is considerably higher than may normally be expected. This is most unlikely; as a rule females with horns in species in which these are only present in the males are extremely rare, indeed so rare as not to be represented at all in a "sample" as small as the one under consideration.

A perusal of the pertinent literature has only yielded the following remark by Shortridge (1934, p. 501): "As with Duiker, there appears to be an excess of females over males; it may be that the males divide their attention between two or more females frequenting adjacent areas." This remark is presumably based on field observations in South West Africa; it cannot be based on museum collections, because normally every collection is likely to contain more males than females for obvious reasons (e.g. on account of specimens presented by hunters and sportsmen).

It appears that the preponderance of males of *Raphicerus campestris* as observed by the writer in the Kruger National Park cannot be readily explained. More observations, also from other areas, where unfortunately the steenbokkie is not so tame, should be made and systematic collecting at certain places may be suggested as a means to solve this problem. It should be kept in mind that there is always a likelihood that this problem does not exist as such and can be solved simply by more observations, which will rectify the figures.

ADDENDA, MARCH 1964

After completion of the manuscript further data have been obtained in the course of an official trip to the Kruger National Park in February-March, 1964. The following data should be incorporated in Table 1:

Date	m/a	Locality	♂♂	♀♀
24.II.1964	m	N. of Letaba R. causeway	1	
	a	N. of Shangoni Koppies	1	
27.II.1964	m	near Machayi Pan	1	
	m	near Machayi Pan	unsexed: 1	
	m	Nyandu Bush	1	+ 1
			unsexed: 1, 1, 1, 1	
	m	near Beacon III, eastern boundary	1	
	a	S. of Shilowa Koppie	1	
29.II.1964	m	Sweni firebreak	1	
			Addition of 7 ♂♂, 1 ♀, 5 unsexed.	

Addition of 7 ♂♂, 1 ♀, 5 unsexed.

Revised total 47 ♂♂, 10 ♀♀, 10 unsexed, revised grand total 67.

Figures given under A (now 57, 47 ♂♂ = 82.5%, 10 ♀♀ = 17.5%), B (now 67, 47 ♂♂ = 70.2%, 20 ♀♀ = 29.8%) and C (now 67, 57 ♂♂ = 85.1%, 10 ♀♀ = 14.9%) show only slight differences which have little bearing on the general theme of the paper in its original form.

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