

STUDIES ON THE FOOD AND FEEDING BEHAVIOUR OF THE  
REEDBUCK *REDUNCA ARUNDINUM* BODDAERT, 1785 IN THE  
KRUGER NATIONAL PARK

by

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*Abstract*—Feeding behaviour of the reedbuck was observed near Pretoriuskop and in the Shawu vlei in the Kruger National Park from March 1967 to April 1968. Grazing behaviour, rumination, grazing sites and competition with other herbivores are discussed as well as an analysis of the food species.

*Introduction*

This paper reports on part of a field study on the reedbuck, on which the author was engaged in the Kruger National Park (KNP) from March 1967 to April 1968. The main study area was the district of Pretoriuskop in the south-west of the park and the Shawu vlei north of Letaba. These areas are the obvious and most important reedbuck habitats in the KNP. By the presence of tall but open grassveld and permanent water the principal conditions for good reedbuck habitats are satisfied. In these areas reedbuck ♂♂ establish territories in which they live in pairs (♂ + ♀) or in families. For further details see Jungius (1970).

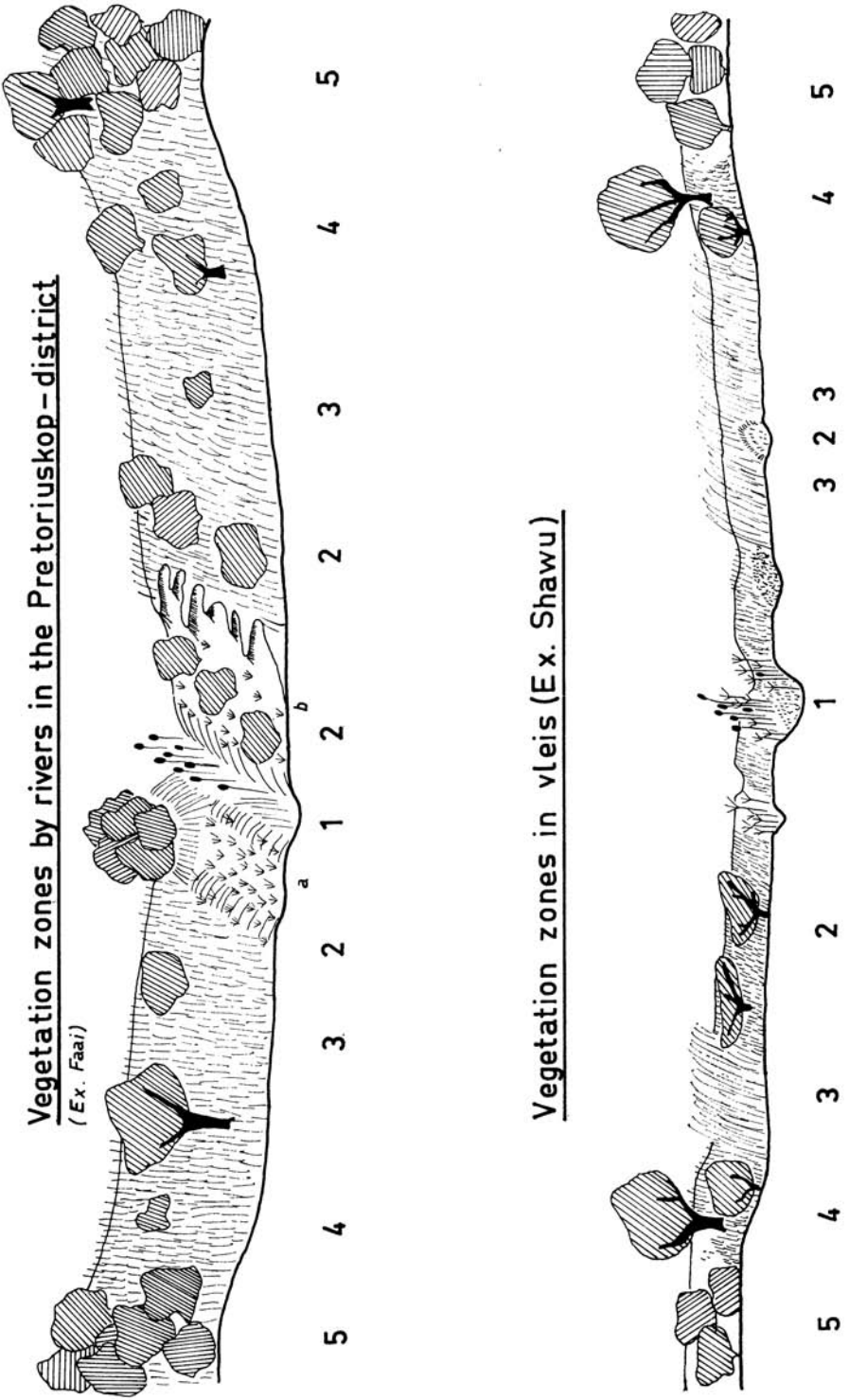
*The Vegetation of the Study Areas*

A detailed account of the vegetation of the KNP has been given by Van der Schijff (1957). The main conditions of the selected study areas are as follows:

- (a) Around Pretoriuskop the characteristic vegetation is long grass savanna-woodland and tree-savanna (Van der Schijff, 1957; Pienaar, 1963). This veld type is of "sour" nature (Acocks, 1953; Annual reports of the Warden 1903-1913; Pienaar, 1963) and can be regarded as a typical example of a fire climax community (Pienaar, 1963; Brynard, 1965). The visually dominant element is the tall thatch grass *Hyparrhenia dissoluta* (13,55%). The most numerous grass is *Elyonurus argenteus* (18,16%) followed by *Heteropogon contortus* (8,18%), *Andropogon amplexans* (8,18%), *Schizachyrium semiberbe* (7,42%),

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Fig. 1.



*Pogonarthria squarrosa* (6,39 %), *Panicum maximum* (4,86 %) and others (Van der Schijff, 1957).

The country presents an undulating aspect with prominent insular mountains, numerous rivers, spruits and other drainage lines. The gentle slopes of these valleys are not covered by uniform vegetation but can be divided into different zones (Fig. 1):

1. The central river-zone where *Phragmites communis* dominates. Besides reeds, hydrophytic grasses and herbs are common, e.g. *Leersia hexandra*, *Imperata cylindrica*, *Cymbopogon validus*, *Commelina* sp, *Polygonum* sp, etc.
  2. Non-deciduous gallery bush which borders the rivers usually at small dams. Sometimes a 5–10 m wide terrace or river-bank can extend in front of it (1a), covered with grasses and herbs. In dongas (1b) this zone can be up to 100 m wide.
  3. Upland, tall grassveld supplants the gallery bush.
  4. At about 200 m from the river, bush and trees start invading the grassland.
  5. After 300 m *Terminalia sericea* occurs, bush encroachment increases, and the tops of the hillsides are normally covered by bush.
- (b) *Vleis* are common in the northern districts of the KNP; they constitute wide but shallow and poorly drained grassy valleys in which *Sporobolus robustus* predominates. Trees and shrubs are very rare. Most vleis are surrounded by Mopane veld in which the Mopane bush *Colophospermum mopane* is most numerous. Like the hillsides of Pretoriuskop the vegetation of the Shawu vlei can be separated into the following zones (Fig. 1):
1. Erosion channel: deepest drainage line of the vlei. Dominant plant species are *Cyperus* sp and, at some places, *Phragmites communis*. Among grasses *Diplachne fusca* and *Sporobolus virginicus* predominate, and may form lawns in most depressions.
  2. Zone of semi-tall grasses: *Ischaemum brachyatherum* and *Chloris gayana*. Some shrubs occur here and there (*Acacia* sp, *Albizzia* sp). It is an important grazing and browsing site during winter.
  3. Zone of tall grass: *Sporobolus robustus* is the predominant element (1–2,50 m) and provides cover for the reedbuck. The width of this zone is variable.
  4. Transition zone between vlei and Mopane veld: 20–40 m wide. *Cenchrus ciliaris* and *Sporobolus robustus* are the most numerous grasses. Characteristic shrubs occur which are not to be found in the open mopane veld.

### *I. Feeding Habits and Grazing Sites of the Reedbuck*

#### 1. General observations

The reedbuck feeds mainly on grass, but as in all grazing herbivores,

the diet is not exclusively grass. Herbaceous vegetation, leaves and young branches of trees and shrubs, are also used so that the effective nutritional basis is much increased. However, the amount of use of the single plant groups and the season for their main preference differ a lot. Grass makes up the bulk of the diet throughout the year, independent of the season. Herbs and other grasslike plants are used now and then throughout the year but are preferred only during winter, when the quality and the supply of grass decreases considerably due to dry conditions. Leaves rank very low in preference. They are only browsed on to a small amount during winter in areas where the grass is very poor as in vleis.

Reedbuck graze singly, in pairs, families or in groups; the distance between individuals (individual distance) varies considerably. On open, burned veld this distance can be 2–50 m. The reaction of following each other is mostly released between 40–50 m, particularly in lambs in relation to their mothers and ♂♂ in relation to ♀♀. In tall grass this distance varies between 2–30 m. Here the animals stay closer together to prevent losing each other in the dense cover. The areas and distances covered during grazing are usually limited. The variation in area or distance covered depends on the quality of the forage and can be from 30 to 200 m. Areas covered varies between 5 × 5 m and 30 × 60 m.

Observation No. 1 ..	<i>Time of grazing (minutes)</i>	<i>Meters covered during grazing</i>
	60	56
	15	7
	5	7
	200	200

Usually grazing starts immediately after the animal gets up. Frequently it stops without transition, since the animals just lie down where they are. Food is taken either just above the surface or at head level, depending on the height of the plants. Only when browsing do the animals stretch but without lifting their forelegs off the ground. For tall grass reedbuck have developed specialized feeding methods. At head (*vide* fig. 2) or shoulder level, very often with the neck stretched the animal reaches out with an extended tongue for single leaves or stems, which are then folded in the middle and pulled into the mouth. Particularly the tips of leaves, or single leaves which are sprouting laterally at the culms, are taken in this manner. This method of feeding can be observed frequently when reedbuck graze in tall grass and can be considered as a method of detecting predators, because the head and sense organs are well exposed. Noises, scents and visual signals can be received much better and quicker. On burnt areas, for instance, it was observed that short pasture is grazed on in a different way. The leaves are seized with the lips and torn off by tossing the head.

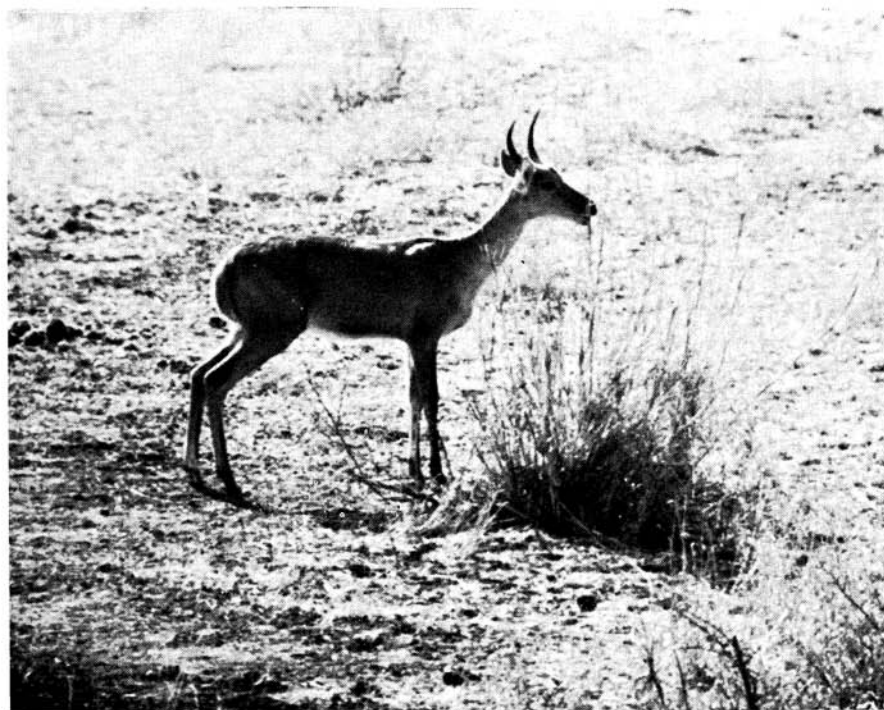


Fig. 2. Young reedbuck ram grazing *Sporobolus robustus* (Shawu, September 1968).

When the reedbuck is grazing on short or tall grass, it remains stationary or slowly takes a few steps forwards, mostly stopping after half the normal stride length (*vide* fig. 3). If the forelegs stand parallel to each other, they are slightly straddled. This feeding and chewing with the head near the ground may last up to one minute. Usually it is interrupted by the animal looking up suddenly, while keeping on chewing and turning the ears in different directions. After a few seconds the head is lowered again and grazing continued. Only when alarmed does this watching period last longer.

For this sequence of "grazing - watching - grazing", the following points can be noted: the watching periods of ♀♀ are longer and more often repeated; in ♂♂ they are shorter and less frequent. This behaviour pattern corresponds well with the other fundamentals in the behaviour pattern for avoiding predators, when ♀♀ are much more vigilant than ♂♂ (Jungius, 1970).

	<i>Grazing</i>	<i>Watching</i>
Observation No. 2: ..	♂♂ 30-45 minutes	5-8 seconds
	♀♀ 15-35 minutes	8-13 seconds



Fig. 3. Reedbuck female grazing in dry river bed, in typical position, *Phragmites* zone (Faai River, Pretoriuskop, July 1968).

Apart from watching, grazing is also interrupted by grooming, urination and defecation.

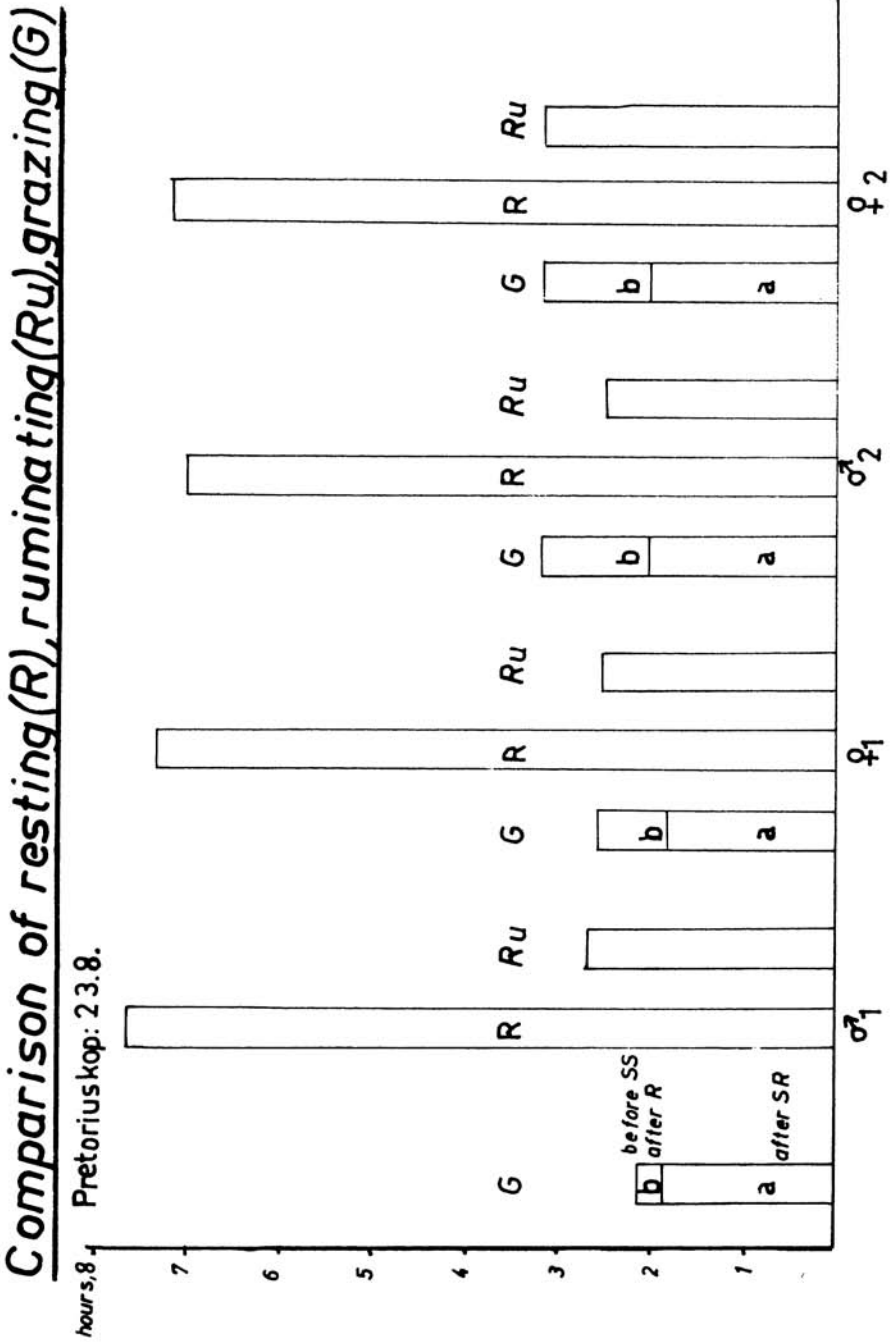
## 2. Rumination

At the cessation of grazing, reedbuck retire into cover to rest and ruminate. Exceptionally, rumination can also take place in reedbuck which are alarmed. In this case they start ruminating when they have calmed down after a long period of watching before finally lying down. The duration of rumination varies in adults from 2–3 hours. During this period the animals do not chew continuously but at intervals of a few minutes to one hour.

In Fig. 4 the duration of rumination is compared with the duration of resting and chewing and it clearly shows that nearly the same pattern emerges in the four animals observed. This pattern has been confirmed by many other observations and, therefore, it can be supposed that it is characteristic for reedbuck and an innate part of their behaviour. In these four reedbuck as well as in others the longest chewing period was always at the beginning of rumination. The chewing periods vary from 45–60 minutes.

Moreover it seems as if the number of chewing motions is also charac-

Fig. 4.



teristic for the species, just as the duration of rumination is. Adult ♂♂ chew each cud 41–53 times. If the chews are counted per minute, whether for one cud or more, an average of 45–60 chews could be recorded (maxi-

mum 67 times, minimum 41). Young animals chew the cud much faster than adults.

Observation No. 3 (animals less than 12 months old):

Each cud was chewed 55–70 times (max. 75 times, min. 51 times),  
Chewing motions per min.: 68–80 (max. 83 times, min. 65 times),

These data are closely related to those of exceptionally small antelopes like klipspringer (89 times/min.) and steenbuck (94 times/min.). Walther (1968) records 12–39 chewing motions per cud for Dorcas gazelle and 20–43 chewing motions per cud for Dibatag.

Apart from being characteristic for a species, the number of chewing motions is also determined by the composition of the food. In the National Zoological Gardens, Pretoria, I had the opportunity of observing two reedbuck in captivity for two days. The ♀ (1,5 years old) chewed each bolus with 84 chewing motions, with an average of 73 chews per minute. This intense ruminating seems to be related to the different food. The forage consisted mainly of dry lucerne and pellets. Fresh lucerne was only given once a day (Brand, pers. comm.). This example demonstrates how careful one must be in interpreting observations made in zoos; it is not always possible to apply these results to animals living in the wild.

### 3. *The grass conditions around Pretoriuskop*

The grassland around Pretoriuskop belongs to the “sour” veld (Pienaar, 1963). This veld type occurs in areas of high rainfall (Pretoriuskop: 600–700 mm/annum). It is termed “sour” because the pasture becomes unpalatable at a comparatively early stage in its growth (as the grasses flower and set seed) and is unable to carry stock during the winter months. A further characteristic is the rapid decrease in nutritive value as the grass grows taller and the fact that the pasture does not provide favoured grazing for livestock when the grasses are mature or dry (Botha, 1945). This unpalatability is believed to be linked with a high fibre content (Scott, 1955).

On account of this, excellent grazing is only provided in spring and early summer. But the biased nature of the value accorded this veld type by stock-breeders is well proven in areas where game and cattle are kept together on the same pasture or under the same grazing conditions. Particularly during the dry season it becomes obvious that all game species are well fed according to the seasonal circumstances while cattle are lean and sometimes even show signs of malnutrition.

Cows feed mostly on grass, selecting some species which they prefer and leaving unused others which are less palatable. Especially if the range is overstocked this leads to overgrazing, with the result that cattle will not thrive. Wild herbivores, on the other hand, feed on different levels and different plants of the vegetation. Thus they use the range



more efficiently than stock and the grazing pressure (under natural population densities) is well distributed (Dasmann, 1964). In a broader sense we can infer that only a few species always seem to occupy certain ecological niches (Odum, 1962), which they use without severe competition from other herbivores. Moreover game moves around more freely than livestock and thus travel to new grazing areas. Others are even able to retreat into those regions which are totally closed to domestic animals, but where they still thrive (see below). With the beginning of the dry season, when the quality of the pasture rapidly decreases, the reedbuck still does not show any sign of malnutrition. As a result of the low nutritive value of the grass the periods of grazing are prolonged and activity is shifted to places where the best pasture is to be found.

#### 4. *Grazing sites of reedbuck around Pretoriuskop*

(a) *Tall grassveld.* Utilization of grazing sites depends on the availability of palatable grasses and cover. The tall grassveld extends over the hillsides down to the river banks.

Unlike other antelope, zebra and livestock, reedbuck are adapted to use this biotop even when the grass has reached its greatest height, at which stage most of the other herbivores leave this habitat. These include species inhabiting the open grassveld (wildebeest, zebra etc.), which wander off partly because of decreasing food quality, but mainly because of the dense vegetation which renders orientation difficult and impedes the detection of predators. As a result conditions improve for reedbuck the taller the grass grows (climax from February to April), as the habitat is left nearly entirely to it without any competition, particularly in very dense areas. Apart from antelope that occasionally traverse this habitat the only competitors are grey duiker, steenbuck, bushbuck and kudu. These species live in the gallery forest (or gallery bush) that fringes the rivers, in isolated bush patches on the hillsides or in areas of tree savanna that have been heavily encroached by bush. Their home ranges border on reedbuck territories or include them so that their grazing sites overlap with those of the reedbuck. But as these species are 90 % browsers, or feed on herbaceous vegetation (Van Wyk, *pers. comm.*; Brynard and Pienaar, 1960; own observations) they in no way compete with reedbuck for food.

The situation is different in the case of the waterbuck and sable antelope. The latter particularly very often use the same habitat as the reedbuck. Both sable and waterbuck are grazers and can be taken to be competitors with the reedbuck in tall grass veld. However, they move about a lot and their home ranges include more than one reedbuck territory; thus their immediate influence on the grazing sites of any one particular reedbuck family or reedbuck pair is very low, and because food is abundant due to low grazing pressure this competition is not severe (see below).

Under the seasonal climatic changes utilization of the tall grass veld

proceeds as follows: during the dry season reedbuck prefer grazing along rivers and in the dry river beds. After the first rains they leave these feeding grounds, which are characterized by *Phragmites communis* (so-called *Phragmites* zone, or zone 1) and tend to graze only the young and sprouting "sour" grasses along the river banks (1a) and in the vicinity of the gallery bush (2) (*vide* Fig. 1). This forage is very palatable and, at this early stage, of high nutritive value.

The time when utilization of the hillsides starts depends on the availability and the development of cover. If there is no cover, reedbuck are only rarely observed grazing there during the day. This area is only traversed by them when moving from the resting places (Fig. 1, zone 5) to the grazing sites and vice versa. Only after the grass had grown do reedbuck leave those areas which still provide the best shelter (rivers, gallery bush, bush zone at the hill-tops) and return to the tall grass veld of the slopes. This return takes place at different times of the year, depending on the development of the dominant tall grass species. If *Trachypogon spicatus* is dominant, cover is provided very soon after the first rains because the flowering stems of this species grow rapidly. As a result sufficient shelter is provided by November/December. In the case of *Hyparrhenia dissoluta* the conditions are different, because this grass reaches its maximum height rather late, around February. When reedbuck start frequenting the slopes as well (Fig. 1, zone 3 and 4), zone 1a and 2 are not neglected, but are still visited occasionally for grazing and resting.

As it gets cooler in June-July, increasing migration activity of reedbuck along the slopes can be observed. In the morning, between 05:00 and 06:00 hours, the greatest drop in temperature occurs (Pretoriuskop Rest Camp: between +1°C and +10°C, average minimum temperature was 6,8°C, the average maximum temperature was 8,2°C). In the field temperatures drop to below 0°C at certain locations, e.g. in the valleys which often become white with hoar-frost. In these areas reedbuck, before sunrise, move up the slopes where it is warmer and stay there during the first hours of the day. During the morning, or in the afternoon they start grazing down-slope and remain near the river or in zone 3.

The composition of the grasses is nearly the same everywhere so that the animals' diet does not change although they move from one grazing site to another. Decisive shifting of grazing sites, away from the slopes into or near the river (zone 1 and 2), occurs with increasing drought conditions. In fact the slopes are still used, but less and less from June onwards and finally the river zone (1 and 1a) is clearly favoured. Due to this, the food composition changes. From now on the forage is not only made up of grasses, but also to a large extent of hygrophil monocotyledons and herbs. By using this zone, the reedbuck take over a new food resource, which they exploit heavily without competition, despite the presence of waterbuck. This is of great importance during winter when other herbivores start concentrating along the hillsides of all permanent rivers and waterplaces (see below).

(b) *Burnt veld*. If fire has destroyed the reedbuck's habitat it leaves. If isolated grass patches remain, which provide cover and grazing, reedbuck will concentrate there and not move away, using the dry vegetation that has been left (*vide* fig. 5). Among this dry matter, *Panicum maximum*



Fig. 5. Reedbuck concentration: the animals graze on an insular grassy patch, the only food supply on burnt veld under drought conditions (Shawu, Windmill No. 5, September 1968).

plays an important role. This grass has a high moisture content and grows mostly under trees or in the shade of shrubs. By virtue of this the damage done to it by fire is low compared to the other species. An immigration of reedbuck onto burnt veld has not been observed, although it has frequently been stated (Vesey-Fitzgerald, 1960; Van der Schijff, 1957) that they are attracted to these areas by green shoots which appear a few days after a fire, even without rain.

This statement is based on faulty observations. Before the tall grass has been removed by fire the observer saw no reedbuck or only a few in this area, but after the fire had destroyed the cover reedbuck seemed to be very numerous. In the course of my studies I was able to observe that there are more reedbuck in a certain area before a fire than afterwards; it is just that because of the cover they are difficult to spot. After a fire the tall grass is removed, the country is very open, and those reedbuck that remain in their territories are easily seen. Another argument against an immigration is the fact that this species is very territorial (site-attach-

ment, see Jungius, 1970) and hardly ever leaves its territory with its dense cover of tall grass to graze on open veld where it is much more exposed to danger and an easy prey for its enemies, particularly cheetah and hunting dog, which easily run down this slow antelope if it is removed from its protective habitat (Jungius, 1970).

#### *Competition on burnt veld*

Young grass shoots which sprout after a fire are very palatable, of high nutritive value and attract large herds of herbivorous ungulates (*vide* fig. 6). These animals concentrate on the "burns" and compete with the

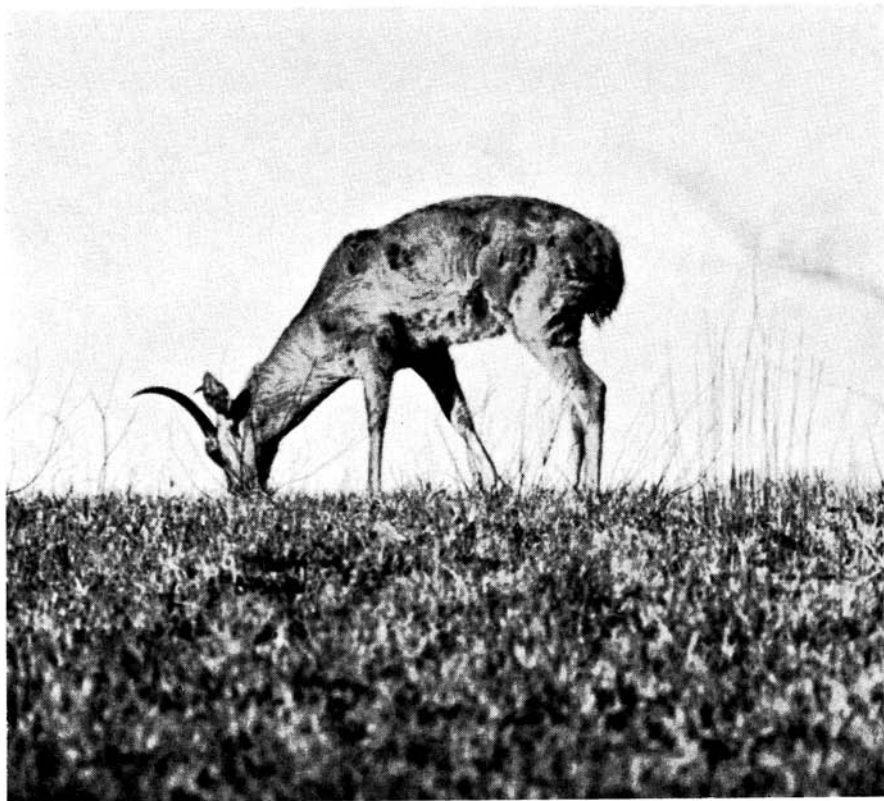


Fig. 6. Reedbuck ram grazing on burnt veld with fresh green sprouts (slopes of the Faai River, Pretoriuskop, July 1968).

reedbuck which were dominant in this area while the tall grass was there, but which now become outnumbered by other species. The following observation may explain this case: In an area of tall grass veld between the Faai and Shlanguin Rivers (2 000 m long, 800 m wide = 1,6 km<sup>2</sup>) there were found, besides other species, 14 reedbuck, nine wildebeest and four zebra, but no impala. After this area had been burnt on 19 July 1967 a considerable change took place. Some of the reedbuck left, only

nine staying; wildebeest, zebra and impala moved in when the first green grass shoots became visible. After a rainfall of 6,5 mm on 25 July, the appearance of the countryside changed completely and the species-composition was as follows:

29 June	..	48	wildebeest	15	zebra	0	impala
6 July	..	38	„	18	„	20	„
24 August	..	35	„	33	„	110	„
4 September		56	„	25	„	50	„
7 September		77	„	27	„	0	„

All these species concentrated on the slopes, particularly in zones 3 and 4, and sometimes also in zone 5. The reedbuck, which does not readily associate with other species (Jungius, 1970) retired into areas where it was less disturbed and used the slopes only when none of the other species was in the vicinity (during the night?, in the morning, and in the evening). Under these conditions reedbuck frequented the lower parts of the slopes, and stayed along the rivers and near gallery bush (zone 1, 1a, 1b). As the dry season advanced, similar behaviour was also observed in reedbuck in the tall grass veld. On burnt ground this shifting took place much earlier, because of the destruction of cover and the severe competition of other ungulates, and not by reason of decreasing nutritive value of the pasture as in the undisturbed tall grass veld.

The effect of excessive grazing by large herds on the slopes during the winter and the low precipitation from October to February (1967/68) gave rise to very poor grazing conditions on all burnt plots until February. "Useless" grasses like *Loudetia simplex*, *Elyonurus argenteus* and *Pogonarthria squarrosa* were dominant. *Hyparrhenia dissoluta*, which is normally visually the predominant grass, had not yet developed its flowers. As a result natural cover was still absent and the reedbuck stayed for a relatively long time near spruits and rivers, using the rich pasture along the river banks. They also stayed in the open parts of the gallery bush (zones 1a and 2), but avoided the *Phragmites* zone. This behaviour contrasted with the grazing habits during wintertime, when the whole area around the river was used.

Under the permanent grazing pressure of the reedbuck on these areas during the dry season and later, the grass was kept short. But because of the low number of animals the pasture was not damaged by trampling, as it was along the hillsides.

After heavy rains in February/March 1968 cover started to develop on the slopes. The reedbuck now left the rivers and returned to the tall grass veld of zones 3 and 4.

### Summary

1. Fire destroys large parts of cover and pasture.
2. By reason of poor forage and inadequate cover the reedbuck partly leave this area.

3. As soon as new grass grows, wildebeest, zebra and impala are attracted.
4. Reedbuck retire into the riverine area. This takes place earlier than under normal conditions in the tall grass veld.
5. The competitors use zones 3 and 4, the reedbuck zones 1 and 2.
6. Because of overgrazing, grazing conditions are poor on the slopes until the rains have started.
7. By reason of this, reedbuck stay near the rivers for a long time; longer in fact than in other areas of the tall grass veld, which has not been burnt and which was not overgrazed.
8. After the first rains zone 1 is not used any longer. Grazing is shifted to zones 1a and 2.
9. As soon as cover develops on the slopes, reedbuck return to the hillsides.

##### 5. *Grazing conditions at the Shawu vlei*

At the Shawu vlei observations were only undertaken during April, September and December. Another attempt at observations in February had to be given up because of heavy rains.

Unlike the "sour" veld around Pretoriuskop, the grasses of this community belong to the "sweet" type, which is to be found in all areas of low rainfall (Letaba, south of the Shawu: 427 mm/annum). These grasses are called "sweet" because the majority of them are palatable not only in the young stage, but throughout the winter as well. They maintain their high nutritive value all year round, unless heavy rains occur in winter (which is very unusual), in which case rapid leaching of nutritive components takes place from the leaves (Scott, 1955).

Unlike the "sour" veld of Pretoriuskop, most grasses are annuals which retain a high nutritive value throughout the year. A further difference with the Pretoriuskop veld is that other grazing sites are preferred, different species are consumed and a considerable amount of browsing takes place.

##### 6. *Grazing sites of the reedbuck at the Shawu-vlei*

In places where no burning took place, the whole width of the vlei was utilized and the adjacent Mopane veld as well. It could not be observed whether any one zone was preferred to another.

South of windmill no. 5 a block of Mopane had been burned. Due to the absence of rain no green grass was sprouting. Unevenly distributed over the area were some patches of grass which had not been destroyed by fire and had dried up. Most of the ground was absolutely bare of vegetation. The result was that no concentration of game occurred on these "burns" as was the case at Pretoriuskop. The whole area was avoided for grazing purposes. Only those reedbuck which had migrated to this waterplace lived here (migration and site-attachment see Jungius, 1970);

occasionally they grazed in the dry grassy patches, but in the main the burnt veld was the favoured resting site for them. For grazing they moved into the adjacent Mopane block which had not been burned or into the vlei. Consequently there was a big difference with the conditions at Pretoriuskop, where sufficient pasture existed everywhere and only the absence of cover made the use of the hillsides difficult for the reedbuck. At Pretoriuskop movement between resting places (5) and grazing sites (1 and 2) was not a result of poor grazing conditions at the upper regions of the hillsides (5), but was caused by the absence of good cover which offered the animals suitable bedding sites at the grazing sites.

## II. Food of the Reedbuck

### 1. Pretoriuskop district (Table 1)

All information of the food composition was obtained from field observations on feeding animals. It was possible to employ this technique without any difficulty because reedbuck mostly feed alone, away from other antelope.

After reedbuck had been observed grazing (through 8 x 30 binoculars and a 40 x spotting scope) the area was examined more closely and the feeding routes of the animals were reconstructed by following their tracks. Specimens of those plants which had been consumed were collected or identified in the field, and their relative abundance was noted. Grasses which could not be identified because they did not flower were marked. All plants around the species in question were removed, leaving the tuft isolated, and a numbered post was erected. When the flowers developed after the first rains, identification was possible. In this way all species could be positively identified.

#### (a) Grasses on the slopes:

1. *Andropogon amplexans*: Perennial (P), 60–120 cm. Grows everywhere on hillsides in the open grassland; grazed all year round, particularly after the first showers in September and until February. In the flowering stage, December/January, and later it is only utilized occasionally. When it dries up only green leaves and sprouts are taken out of the tussocks. Dry parts are ignored.

In green plants the leaves are taken; after the flowers have appeared, the reedbuck feed on the closed sprouts and young leaves. The grass is bitten off 30–50 cm above the ground.

2. *Andropogon schirensis*: (P), 60–120 cm. Grows in the open grassveld; less common than *A. amplexans*. Only young plants are heavily grazed after the first rains between September and November and until the grass starts flowering. Only leaves are taken. Later it is eaten sporadically. During an observation on May 3 leaves were seen to be taken.

3. *Chloris gayana*: (P), 40–60 cm. Not very common; only found near water courses. This grass is very palatable and also widely cultivated as

a pasture and hay grass. It is of no importance in the diet of the reed-buck. Very often other grasses are utilized in its vicinity but *C. gayana* is ignored. This is very interesting, because it is known from other antelopes that this particular grass is preferred, e.g. in the waterbuck (Herbert, 1970).

4. *Cynodon dactylon*: (P), with rhizomes, relatively high in protein. It is considered palatable and can stand close grazing and trampling. It is interesting to note that it is only occasionally eaten by the reedbuck. Very often single leaves and sprouts are picked out of the dry tufts. Large quantities are never grazed, as reported for other antelope like waterbuck (Herbert, 1970).

5. *Digitaria* sp: Many *Digitaria* spp are among the best-known pasture grasses in South Africa. They are resistant to drought. Especially important are the so-called "woolly-finger" grasses, which have been cultivated from *D. eriantha*. All species are well known because of their poisonous HCN content.

*D. erecta*: (P), rare, once seen to be grazed on in November.

6. *D. eriantha*: (P), 30–40 cm, fairly common. Only green stems are grazed on occasionally during the dry season. In January/February its utilization increases and sometimes it is heavily grazed on in large areas.

7. *D. pentzii* var *stolonifera*: (P), stoloniferous, scattered distribution. Not eaten in any quantity only occasionally in autumn and spring. Ignored during the dry season.

Because of its high moisture content and nutritive value it is considered to be an important pasture grass, but not for the reedbuck.

8. *D. monodactyla*: (P), 20–60 cm. Typical "sour" grass, but not common; leaves of young plants are consumed from September to November in selected areas.

9. *Eragrostis capensis*: (P), 120 cm, not common. Once in October some young leaves were seen to be taken.

10. *E. curvula*: (P), 30–120 cm, partly common. Fairly good fodder grass; heavily grazed on in those areas where it is common, particularly leaves and young sprouts.

11. *E. galpinii*: (P), 90 cm, partly common, sometimes very numerous in depressions. On those areas, heavily grazed on from June–September. Either leaves, sprouts or the whole upper part of the plant are taken.

12. *E. superba*: (P), 30–90 cm, good fodder grass. Not common. Once seen to be eaten in May when some leaves were taken.

13. *Eriochloa borumensis*: (P), 120 cm, usually grows in wet places. In areas where it is common it is grazed heavily.

14. *Heteropogon contortus*: Annual (A) or (P), 20–70 cm. Typical constituent of "sour" veld. This species is the third most abundant grass of the whole area, particularly on hillsides and along river banks. It is considered a good fodder plant before the flowering stage (December–January) and constitutes one of the main grazing grasses for the reedbuck. It is utilized all year round, mainly in the young stage, on burned areas,