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Deon Furstenburg

## Mountain Reedbuck *Redunca fulvorufula* (Afzelius, 1815)

Afrikaans	<b>Rooiribbok</b>
German	<b>Bergriedbock</b>
French	<b>Redunca de montagne</b>
isiZulu	<b>Inhlangu</b>
isiXhosa	<b>Inxala</b>
seSotho	<b>Letlabo</b>
seTswana	<b>Phele</b>
Shona	<b>Nhlangu</b>
Tshivenda	<b>Davhu</b>

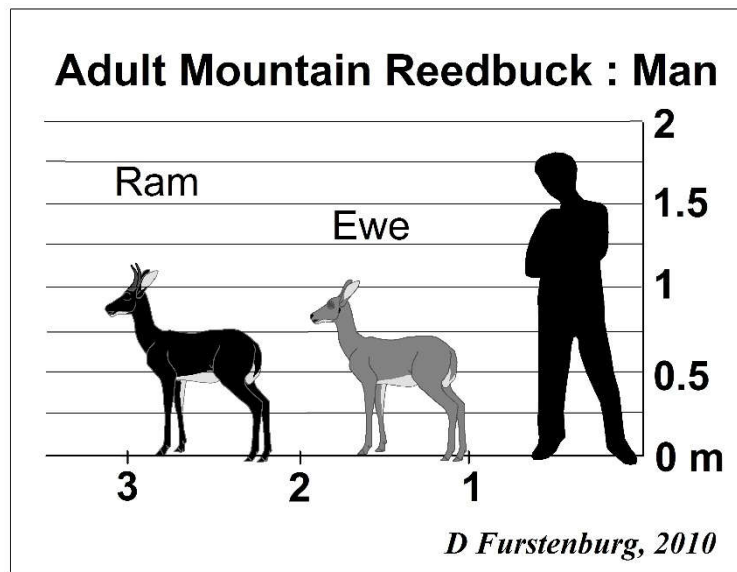


Photo: Sam Bash, adult southern mountain reedbuck ram

**IUCN Conservation Status:**

- Southern mountain reedbuck and Chanler's mountain reedbuck = Least concern (LC).
- Adamane or western mountain reedbuck = Critically endangered (CR)

In the South African context no other animal's name has elicited as many controversies between the English and Afrikaans interpretations as that of the southern mountain reedbuck. Its name got to be confused with the grey rhebok *Pelea capreolus* (Afr. vaalribbok) and the southern reedbuck, *Redunca arundinum* (Afr. rietbok). In the past the southern mountain reedbuck had also been called "rooibok", "rooi-rhebok", "roy-reabuck" and "reebuck". It is the antelope that survived the European hunting onslaught of the 18<sup>th</sup> and 19<sup>th</sup> century in South Africa, as well as modern livestock farming, the best. That is because of its ability to thrive on outcasted broken marginal habitat.

<b>Taxonomy</b>	Kingdom:	ANIMALIA
	Phylum:	CORDATA
	Class:	MAMMALIA
	Supercohort:	LAURASIATHERIA
	Cohort:	FERUNGULATA
	Superorder:	CETARTIODACTYLA
	Order:	RUMINANTIA
	Suborder:	PECORA
	Superfamily:	BOVOIDEA
	Family:	BOVIDAE
	Sub-family:	Antilopinae
	Tribe:	Reduncini
	Genus:	<i>Redunca</i>
	Species:	<i>fulvorufula</i>

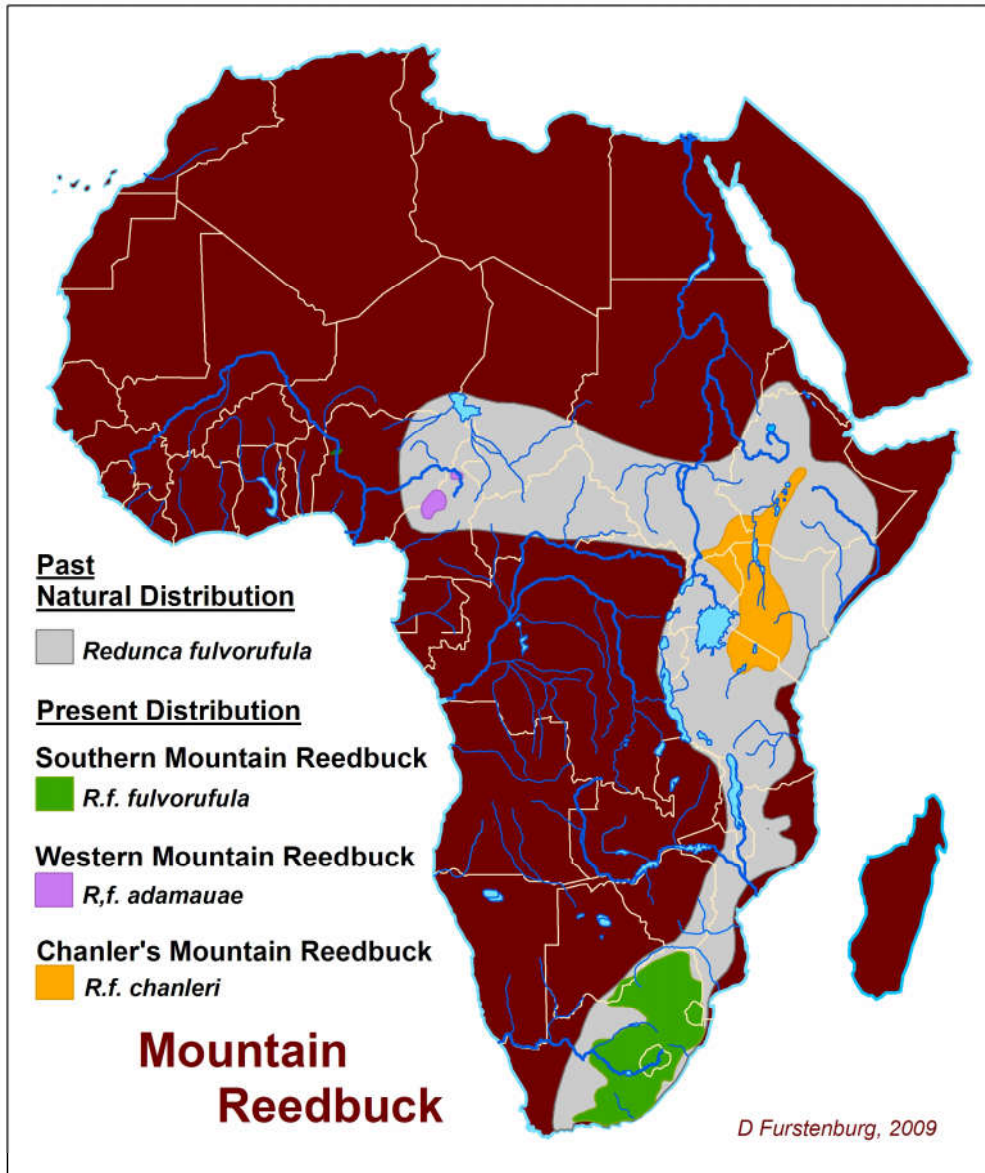
The genus *Redunca* comprise three species which include

- *R. arundinum* the southern or common reedbuck of central and southern Africa
- *R. redunca* the bohor reedbuck of eastern and sub-saharan northern Africa, with five sub-species
- *R. fulvorufula* the mountain reedbuck with three sub-species
  - *R.f. chanleri* Chanler's mountain reedbuck of eastern and north-eastern Africa
  - *R.f. adamauae* the western or Adamane mountain reedbuck of Cameroon and Nigeria
  - *R.f. fulvorufula* the southern mountain reedbuck of South Africa.

The tribe Reduncini also include the genera *Kobus*, which host the waterbucks and *Pelea* which is the grey rhebok *Pelea capreolus*. Take special note that there is no close relation

between the grey reebuck and the reedbucks, as is often interpreted by people by the names of these bucks.

## Distribution



The southern mountain reedbuck is widely distributed across several fragmented hills and mountain ridges in Swaziland, Lesotho, southern Botswana, and in South Africa in the provinces of the Eastern Cape, Free State and Mpumalanga, the mountain ridges of the Drakensberg Escarp, the Magaliesberg, the Lebombo, the hills and koppies in the southern district of the Kruger National Park and the hills along the catchment of the Limpopo River. No record exist for any recent occurrence in Nabibia, Zimbabwe or Mozambique. The most south-western appearance follow a line through Camarvon, Beaufort Wes, Prince Albert, Outeniqua and Knysna. The greatest population was in the Eastern Cape, numbering an estimate of 3755 in 1955. In ancient times the mountain reedbuck had a continuous

distribution from Nigeria, through the Sahel and down East Africa to South Africa. Human development and past global climate change has split the continuity into the present isolation of the three extant subspecies.

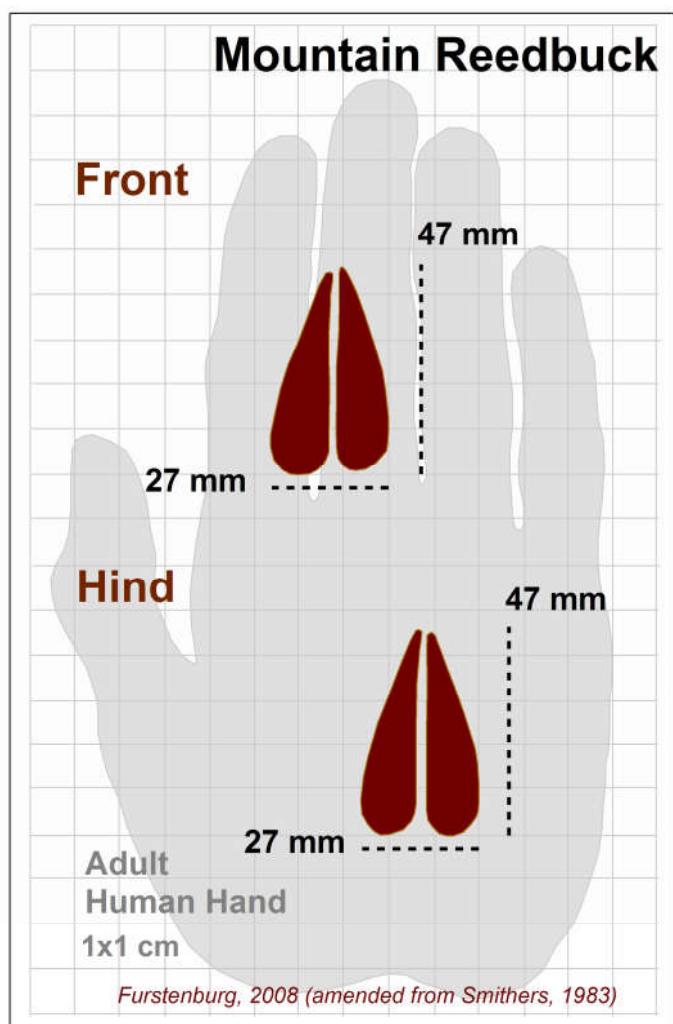
### **Description**

Mountain reedbuck are mainly yellowish grey of colour on the upper parts of the body with a reddish tan on the shoulders and neck, and white on the underside. The hair is slightly fluffy around the neck, especially the throat area. It has long narrow ears with round tips which differ from the spiky-tipped ears of the grey rhebuck. Typical for both the mountain reedbuck and the southern or common reedbuck is a 20 mm dark brown spot below the ear which covers a scent gland, and is absent for the grey rhebuck. The bohor and southern reedbuck both have a prominent white patch on the throat which is inconspicuous with the mountain reedbuck and absent with the grey rhebuck. A dark brown blaze directly above the nostril and along the front of the front legs are only found with the southern reedbuck. The tail is short, wide and fluffy and white on the underside.

Adult rams are slightly larger, average 76 cm shoulder height, and 2 kg heavier than adult ewes, average 70 cm shoulder height. The body mass of rams are 24-36 kg and ewew 18-34 kg.

### **Spoor**

The spoor is that of a split-hoofed antelope but narrow and lengthened, 27x47 mm, and sharply tapered towards the front. Front and hind spoor are equal in size.



## Information table

Mountain Reedbuck information table			
Characteristic		Ram	Ewe
Adult body weight	kg	24 – 36	18 – 34
Adult shoulder height	cm	76	70
Sexual maturity age	months	6 – 10	9 – 14
Social maturity age (1st mating)	months	24 – 26	18 – 24
Gestation period	days		240 – 250
1st Lamb born at age	years		2,1 – 2,6
Lambing interval	months		9 – 14
Rutting season		Year round (peek in Apr – May)	
Lambing season			Year round (80% Oct – Dec)
Weaning age	days	90 – 100	
Gender ratio: entire population (natural)		1	1,2
Gender ratio: entire population (production)		1	3,5 – 4

Mating ratio: adults (natural)		1	2
Mating ratio: adults (production)		1	6 – 8
Lamb birth ratio		1	1
Maximum lifespan	years	8 – 12	8 – 12
Home range	ha	30 – 40	50 – 70
Territory range	ha	18 – 32	None
Large stock grazing unit (adult)	LSU	0,11 per animal (95% of diet)	0,11 per animal (95% of diet)
Browsing unit (adult)	BU	0,26 per animal (5% of diet)	0,26 per animal (5% of diet)
Maximum stocking load	5 ha per animal (at 600 – 900 mm rain)		
Minimum habitat size required	ha	60	
Annual population growth	25 – 35% (mean 29%)		

## Trophy

Only the ram possesses well developed horns which are 13-18 cm long, heavily grooved for two thirds of the length, with sharp tips and the anterior half bend forward by 60-80°. When viewed from the front the horns are slightly V-shaped. The horns of the southern or common reedbeek are more than double the length and less bend, where as the horns of the grey rhebeek are straight and parallel.

Southern Mountain Reedbeek trophy records					
Rowland Ward (XXVII edition 2006)					
Minimum qualifying value = 6 <sup>7</sup> / <sub>8</sub> " (17.46 cm)				Measuring method 7	
Rank	Inch	cm	Locality	Year	Source
1 <sup>st</sup>	10"	25.4	Cape Province, RSA.	1972	J.A. Harding
2 <sup>nd</sup>	9 <sup>1</sup> / <sub>2</sub> "	24.13	Piet Retief, KwaZulu-Natal, RSA.	1994	Gunter Weber
3 <sup>rd</sup>	9 <sup>1</sup> / <sub>4</sub> "	23.50	Eastern Cape, RSA..	1986	Suburban Guns
4 <sup>th</sup>	9 <sup>1</sup> / <sub>4</sub> "	23.50	Former Northern Cape, RSA.	1983	R. Morian
5 <sup>th</sup>	9 <sup>1</sup> / <sub>8</sub> "	23.18	Middelburg, Mpumalanga, RSA.	1995	J.J. de K. Roux
Western (Adamese) Mountain Reedbeek ( <i>Redunca fulvorufula adamauae</i> )					
1 <sup>st</sup>	3 <sup>1</sup> / <sub>4</sub> "	8.26	Cameroon	1995	R.N. Cabela
Chanler's Mountain Reedbeek ( <i>Redunca fulvorufula chanleri</i> ); Minimum qualifying value = 6 <sup>1</sup> / <sub>8</sub> "					
1 <sup>st</sup>	9 <sup>5</sup> / <sub>8</sub> "	24.45	Ethiopia	1993	E. Bermel
Safari Club International S.C.I.					
Minimum qualifying value = 11" (27.94)				Measuring method 1	
1 <sup>st</sup>	18 <sup>1</sup> / <sub>8</sub> "	46.04		1995	C. Gunther
Confederation of Hunters Associations of South Africa CHASA					
Minimum qualifying value = 7 <sup>1</sup> / <sub>4</sub> " (18.42 cm)				Measuring method (A)	
1 <sup>st</sup>	9 <sup>1</sup> / <sub>2</sub> "	24.13	Piet Retief, Mpumalanga, RSA	1995	G. Weber

## Habitat requirement

Basic parameters for a habitat to be suitable are a uneven topography of hills, ridges and mountains with lots of stones and rocks and a lush cover of medium height to tall grass. Short grass terrain, other than the new flush on recently burnt veldt, are mostly avoided.

New growth on burnt veldt is highly favored and temporarily attracts mountain reedbuck from neighboring home ranges. Mountain reedbuck like to graze in the ecotones between the foot slopes and adjacent plains, up to a maximum distance of 1 km from the slope. Mountain plateaus are frequently roamed but the bucks return to the slopes for cover and refuge.

The vegetation may vary from open savannah with a lush mixedgrass herbaceous layer to a pure grassland of sourveld. Sweetveld are seldom inhabited mainly because sweetveld habitats are mostly associated with dry and semi-arid climate. Annual rainfall must be in the range of 400-900 mm and surface water for daily drinking must be available. Mountain reedbuck rarely moves further than 2 km from any drinking sources. They occur at altitudes from 100-1 600 m. Closed woodland, thickets, and forests are not suitable.

### **Behaviour**

Mountain reedbuck are diurnal and most activity takes place within two hours after sunrise and two hours before sunset. Late afternoon they tend to move down the slope onto the adjacent plains for grazing. They spend most of the night close to the foot of the slope and move early morning up the slope to hide on high ground during the day time. When alarmed a sharp high tone whistle are frequently uttered. If approached they either lie down in tall grass with only the ears sticking out, until the gap has closed to 40 m or less, or stand guard for a short time, before fleeing hastily. They tend to run some distance parallel along the mountain slope in a sequence of a few short stretches of 20-300 m each and then make their way down to the foot of the mountain where they take cover between brush or in tall grass. Between the short runs they make frequent stops for a quick look back at the intruder. This differs from the grey rhebuck which often share the same environment, but generally runs uphill when scared. Mountain reedbuck generally run several hundred meters per flight, and with continued pursuits will flee 2-4 km in <20 min. They run in a galloping-like mode with long paces and the tail curled upwards and forward as to flush the white underside to follower members of the group.

### **Feeding & Nutrition**

Mountain reedbuck are primarily grazers that periodically will take small quantities browse. They are selective towards new growth and the softer green parts of medium height to tall grasses of both mixed and sour grassland. Dried leafs and the fibrous swards of old grass are avoided, though mountain reedbuck do consume a diet of much higher crude fibre content and less protein than that of the highly selective antelope such as springbok and impala. Due to the poorer nutritional value of the dietary grasses mountain reedbuck tend to lose up to 20% of its body mass during the dry winter seasons. They do not easily move to new grounds when the food recourses become depleted but limit their breeding whilst older individuals might die off.

Important dietary grasses include red-grass *Themeda triandra*, thatch-grass *Hyparrhinia* spp. and *Aristida* spp. The short sweet-grass *Cynodon dactylon* and *Eragrostis obtusa* which are highly favoured by most other antelope are not readily eaten by mountain reedbuck.

### **Territory & Home range**

Socially mature rams, 2.5 years and more, are solitary and territorial. Territories are permanent and vary in size from 18-32 ha. Alarmed animals may abandon the territory temporarily but return soon after the disturbance has vanished. Demarcation is done mostly by aggressive body display rather than scent marking; thus they do not use dung mounds of repeated defecation. Family groups stick to home ranges of 30-70 ha which are stable and overlap 2-3 ram territories. Both territory and home range sizes vary in relation to the prevailing veld condition, fodder abundance and animal density.

### **Social structure**

Mountain reedbuck are semi-gregarious occurring mostly as small family groups of 3-6 individuals. Occasionally and in some environments multi-family groups of up to 40 members may form. Strict family bonding does not exist and members frequently exchange between adjacent families. The social structure comprise

- Non stable family groups of adult ewes and their lambs, <15 months
- Small sub-adult bachelor groups, 1-2.5 years
- Solitary territorial adult rams, >2.5 years

Young rams become sexually mature at 9-15 months when they are aggressively chased away from the families by the territorial rams. They then join bachelor groups until they reach social maturity at 2.5 years when they establish their own territories.

The natural population structure as determined in the Loskop Dam Nature Reserve in Mpumalanga is: adult territorial rams 33%, adult ewes 36%, sub-adult males 23% and sub-adult females 9%.

### **Reproduction**

Mating occur at any time of the year but with a peak in April-May. When a family crosses the territory of a dominant ram he will try to retain them as long as possible and will mate with any adult ewe that comes into oestrus. There is no strict lambing season although the majority of lambs appear during the summer rainy season of September to March with a peak in October-December when 80% are born. A ewe starts to lamb at approximately two years after a gestation of eight months. Only singles are produced, twins are not known for mountain reedbuck. After a miscarriage a ewe immediately regain oestrus. The lamb is



hidden for the first eight weeks and visited only by the mother for suckling. After each suckle it gets moved to a different hiding.

### Production

The mean annual population increase as measured over six years in the Mountain Zebra National Park is 29%. This park host many black-backed jackal and caracal which are major predators to especially young mountain reedbuck. Lamb mortalities vary from 10-80% depending on the abundance of predators in the area.

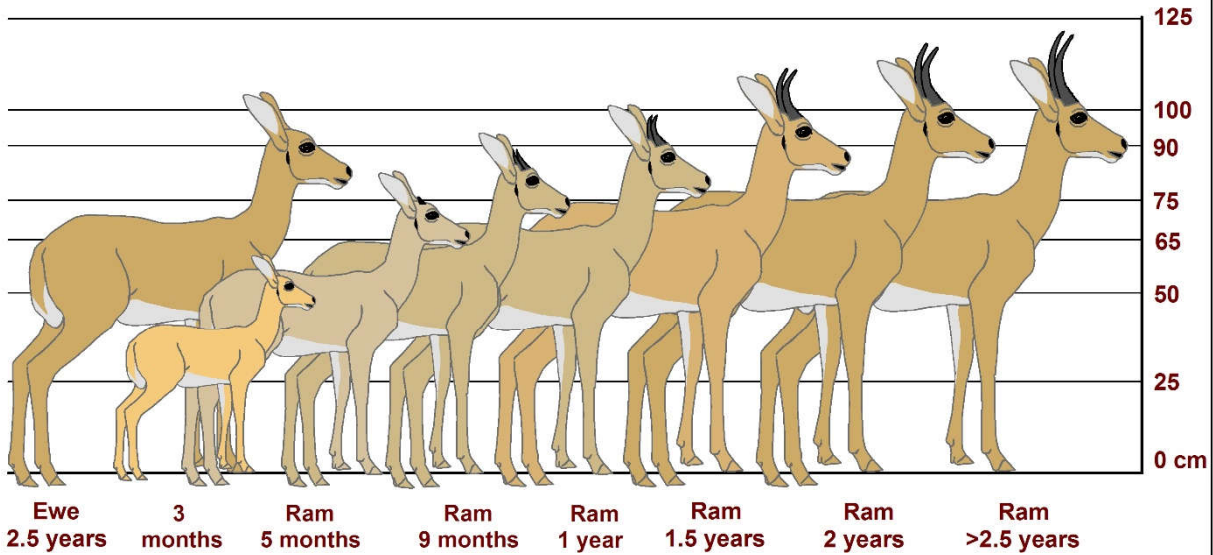
Recommended density for mountain reedbuck for maximum production in optimal habitat is 5 ha/animal and an adult mating ratio of 1 ram to 6-8 ewes. Take note that the density needs to be calculated only according to the proportion of the optimum mountain habitat on the ranch and not for the total size of the ranch.

Mountain reedbuck is a productive antelope suitable for exploitation for red meat production in environments that are otherwise marginal to less suitable for live stock production. The meat is soft, fine textured and tasty, and the carcass dresses at between 50-57%. The best harvesting and culling period is one month after the peak of mating, thus in June. Sub-adult rams should be culled at eight months. Be careful never to cull more than 25% of any particular sub-colony as mountain reedbuck are redundant to move from higher populated areas to re-occupy empty or less populated habitats. They do not disperse easily into new areas other than their own home range or to unfamiliar ground. Therefore culling operations need to be done evenly across the entire land or ranch.

Occasional lenient stocking of the habitat with bulk grazing cattle improves the long-term quality of the fodder and improves the breeding and production of mountain reedbuck.

<b>Mean age related growth rate for Mountain Reedbuck</b>		
<b>Age</b>	<b>Live body mass (kg)</b>	<b>Projected horn length (cm)</b>
Birth	2,2	0
6 months	10 – 12	2
10 months	23 – 26	4.5
14 months	26 – 29	6 – 8
17 months	29 – 31	8 – 11
20 months	30 – 33	9 – 13
24 months	30 – 33	11 – 16
30 months	30 – 33	14 – 20

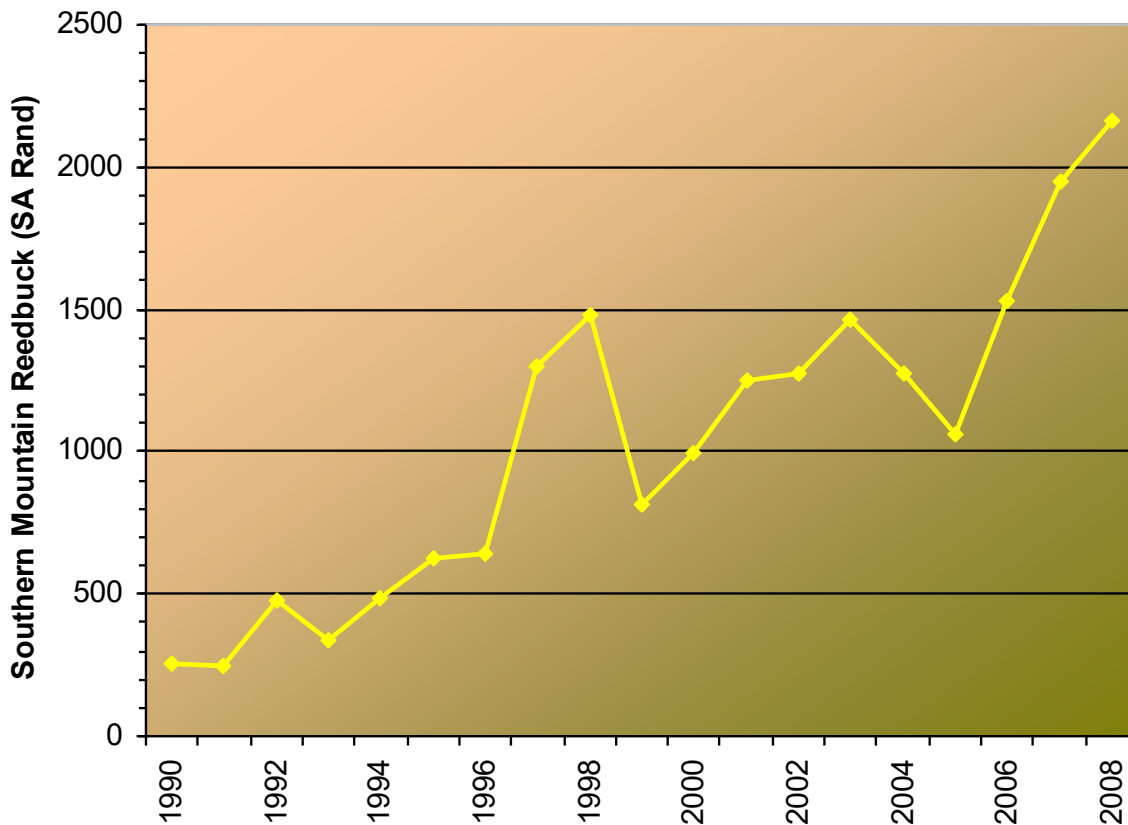
### Mountain Reedbuck growth formation



*D. Furstenburg, 2010*

### Trend in mean annual Mountain Reedbuck prices

(Data from: Vleissentraal; T. Eloff, Univ. Potchefstroom; Cloete & Taljaard, Univ. Free State)



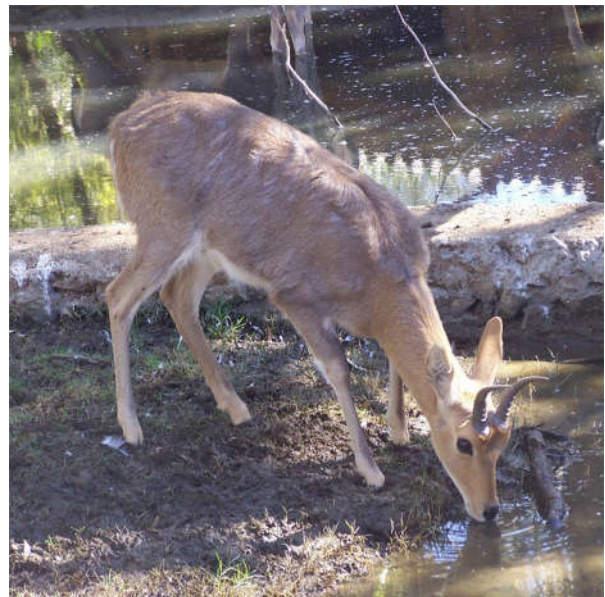
## Bibliography

- Ansell, W. F. H. 1972. Part 2, 15 Family Artiodactyla. In: J. Meester and H. W. Setzer (eds), *The Mammals of Africa: An Identification Manual*, pp. 1-84. Smithsonian Institution Press, Washington, DC, USA.
- Du Plessis, SF, 1969. *The past and present geographical distribution of the Perrisodactyla and Artiodactyla in Southern Africa*. M.Sc. Thesis, University of Pretoria.
- Estes, RD, 1991. *The behaviour guide to African mammals including hoofed mammals, carnivores, primates*. University of California Press, California.
- Furstenburg, D, 2006. Rooiribbok. *Wild & Jag* 12(5).
- Irby, LR., 1975. Meat production potential of mountain reedbeek. *S. Afr. J. Anim. Sci.* 5, 67-76.
- Irby, LR., 1976. *The ecology of mountain reedbeek in southern and eastern Africa*. PhD thesis, Texas A&M University, USA. 248 pp.
- Irby, LR. 1977. Studies on mountain reedbeek populations with special reference to Loskop Dam Nature Reserve. *S.Afr. J. Wildl. Res.* 7: 73-86.
- Irby, LR., 1979. Reproduction in mountain reedbeek (*Redunca fulvorufula*). *Mammalia* 43, 191-213.
- Irby, LR, 1981. Mountain reedbeek activity patterns in the Loskop Dam Nat. Res. *S.Afr. J. Wildl. Res.* 11:115-120.
- Irby, LR, 1984. Food selection by mountain reedbeek in the Loskop Dam Nat. Res. *S.Afr. J. Wildl. Res.* 14:29-32.
- IUCN SSC Antelope Specialist Group 2008. *Redunca fulvorufula*. In: IUCN 2009. IUCN Red List of Threatened Species. Version 2009.2. <[www.iucnredlist.org](http://www.iucnredlist.org)>.
- Kingdon, J, 1997. *The Kingdon Field Guide to African Mammals*. Princeton University Press, Princeton
- Kingdon, J, 1989. *East African Mammals; An atlas of evolution in Africa – Bovids, Vol 111D*, University of Chicago Press, Chicago.
- Mason, DR, 1977. Notes on social, ecological and population characteristics of mountain reedbeek in the Jack Scott Nature Reserve. *S.Afr. J. Wildl. Res.* 7:31-35.
- Norton, P.M., 1989. *Population dynamics of mountain reedbeek on three Karoo nature reserves*. PhD thesis, University of Stellenbosch, South Africa. 242 pp.
- Norton, PM & Fairall N, 1991. Mountain reedbeek growth and age determination using dentition. *J. Zool. London* 225:293-307.
- Nowak, RM, 1999. *Walker's Mammals of the World 6<sup>th</sup> edn*. Johns Hopkins University Press, Baltimore.
- Oliver, MDN, Short, NRM & Hanks, J, 1978. Population ecology of Oribi, grey rhebeek and mountain reedbeek in Highmoor State Forest Land, Natal. *S.Afr. J. wildl. Res.* 8:95-105.
- Rowe-Rowe, DT, 1983. Habitat preferences of five Drakensberg antelopes. *S.Afr. J. Wildl. Res.* 13;1-8.
- Skoad, CJ, 1987. *Historical Mammal Incidence in the Cape. Vol 1 & 2*, Government Printer, Cape Town.
- Skinner, JD, & Chimba CT, 2005. *The Mammals of the Southern African Subregion, 3<sup>rd</sup> edn*. Cambridge University Press, Cambridge.
- Skinner, J.D., 1980. Productivity of mountain reedbeek *Redunca fulvorufula* (Afzelius, 1815) at the Mountain Zebra National Park. *Koedoe* 23, 123-130.
- Skinner, J.D., 1984. Selected species of ungulates for game farming in southern Africa. *Acta Zool. Fennica* 172, 219-222.
- Smithers, RHN, 1983. *The Mammals of the Southern African Subregion, 1<sup>st</sup> edn*. University of Pretoria, CTP Book Printers, Cape Town.
- Taylor, W.A., 2004. *Factors influencing productivity in sympatric populations of mountain reedbeek and grey rhebok in the Sterkfontein Dam Nature Reserve, South Africa*. Ph.D. Thesis, University of Pretoria.
- Ungulates of the World, 2008. <http://www.ultimateungulate.com>.
- Ward, R, 2006. *Rowland Ward's Records of Big Game, 27<sup>th</sup> edn*. Rowland Ward Publications, Johannesburg.
- Wikipedia Encyclopedia, 2010. *Redunca* <http://en.wikipedia.org>.
- Wilson, DE & Reeder, DM, 1993. *Mammal Species of the World, 2<sup>nd</sup> edn*. Smithsonian Institution Press, Washington. 1 207 pp.: <http://nmnhwww.si.edu/msw/>

## Gallery



Photo: Sam Bash, adult southern mountain reedruck ram



Photos: Deon Furstenburg

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