Module # 2 – Component # 2

Reedbuck (Common, Bohor & Mountain)

*Redunca arundinum*  Common reedbuck  
*Redunca redunca*  Bohor reedbuck  
*Redunca fulvorufula*  Mountain reedbuck

**TRAITS**

Tan to gray-brown, medium-sized antelopes with a round bare spot below each ear, white underparts and underside of bushy tail.

**Horns**: males only, shorter than in *Kobus*, with slight to moderate forward hook. Males 10% - 20% bigger with thicker necks and more defined markings than females; calves darker and longer-haired.

**Scent glands**: the sub-auricular bare spot (hair-covered in some common reedbucks and large inguinal glands in both sexes. The measurements in table 6.2 are from Kingdon (1982).

<table>
<thead>
<tr>
<th>Table 6.2: Reedbuck Measurements and Coloration</th>
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<tr>
<td><strong>Weight (kg)</strong></td>
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<td><strong>Male</strong></td>
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<td>68 (51–80)</td>
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**Bohor reedbuck**  Yellower; no leg stripe; white throat patch

| 43–55 | 36–45 | 75–89 | 69–76 | 20–41 (hooked) |

**Mountain reedbuck**  Markings less developed

| 30 (22–38) | 29 (19–35) | 65–76 | 14–38 (hooked) |
DISTRIBUTION

Bohor and common reedbucks occur in suitable floodplain and drainage-line grassland throughout the Northern and Southern Savanna respectively, overlapping only in southern Tanzania. The mountain reedbuck has a peculiar disjunct distribution, occurring only in the hills and mountains of Ethiopia and East Africa, southern Africa, and the Adamana Mountains of Cameroon. Montane habitat between East and Southern Africa is occupied by the common reedbuck, suggesting a greater ecological similarity between these 2 species than between the bohor and the mountain reedbuck.

ECOLOGY

Common and bohor reedbucks frequent grassland habitats tall enough to hide them. Most common reedbucks inhabit drainage-line grassland, whereas bohor reedbucks are most abundant on wide floodplains. The mountain reedbuck frequents rolling, grassy hills and steep, rocky slopes above 1500 m. All 3 are grazers, though they eat some forbs and also browse woody vegetation to some extent in the dry season when no green grass is available. Studies of the common reedbuck's feeding ecology and of the mountain reedbuck's digestive system indicate that reedbucks can subsist on grasses that are either inaccessible or unpalatable to most other antelopes. Thus, few plains species venture into the tall grassland or onto the steep slopes frequented respectively by these 2 species. Reedbucks may forgo drinking when on green pastures; the mountain reedbuck is considered comparatively water-independent, whereas the common reedbuck cannot survive more than a few days without drinking late in the dry season.

SOCIAL ORGANIZATION

Reedbucks bridge the gap between solitary and gregarious territorial social systems. The common reedbuck lives typically in monogamous pairs, whereas the mountain reedbuck lives in small herds numbering 3 to 6 and up to 8 females and young. If we understood why and how the transition from one form of organization to the other occurred, new insight into the evolution of gregarious habits might be gained. However, the common assumption that living in social groups is the more advanced condition and that solitary habits represent the ancestral condition has been challenged in this case, for in morphology and ecological and social adaptability the mountain reedbuck seems to be the least advanced of the three. Conceivably monogamy is a secondary development in the reedbucks.

The monogamy of the common reedbuck is adapted to patches and strips of grassland tall enough to provide concealment, such as those occurring along drainage lines in woodland. But the pair bond is comparatively loose; there is no mutual grooming and no territorial marking ritual. Male and female remain apart much of the time, especially during the 4 months after a calf is born.
A female is often accompanied by 2 successive offspring. Daughters mature and leave the territory in their second year, up to a year earlier than sons, which are tolerated by their fathers almost to maturity. In most bovids males disperse first.

Dry-season drought and fires often drastically alter the habitat and force changes in reedbuck social organization. Loss of cover, forage, and watering points forces some animals to vacate their ranges and seek these necessities elsewhere, leading to concentrations near remaining waterholes, in unburned grassland, and on post-burn flushes. Reedbucks forced or tempted into the open associate in temporary herds which, however, disperse when disturbed instead of fleeing in a group like most herding species. Territorial males will tolerate displaced female immigrants and, when territories are subject to constant traffic (e.g. by reedbucks going to water), intolerance of other males and the size of the territory may both diminish. But even on neutral ground adult males avoid one another. The nearest thing to a bachelor herd of common reedbucks is an adult male accompanied by a sub-adult that has left its mother. Groups consist of females with young accompanied by no more than 1 adult male, and rarely number over 7 animals.

The bohor reedbuck appears to have similar habits in similar habitats, but on closer examination often turns out to be polygynous rather than monogamous. A male's territory may include the ranges of up to 4 females. As long as there is cover to hide in, the females stay separate; lacking it, they and their offspring band together in groups of up to 10 head. Territorial males of this species allegedly drive their sons away soon after their horns appear (at c. half a year).

These immature males associate in twos and threes in border areas between territories until they mature in their fourth year. Territorial males may tolerate and even associate with bachelors in the absence of females.

This pattern of social organization changes drastically where the bohor reedbuck reaches high population densities, as on the vast floodplains of Southern Sudan, where up to 110 reedbucks / km² congregate on the greenbelts bordering the rivers during the dry season, in aggregations numbering in the hundreds. Territorial organization and perhaps even family groupings break down, and a whole aggregation seems to become a single macro-herd perhaps comparable to a wildebeest aggregation. But the structure and behaviour of reed-buck aggregations remain to be studied. At other times and places sexual segregation is preserved: gatherings of over 100 males have been recorded in Tanzania's Rukwa Valley. Clearly, the traditional view of these 2 reedbucks as asocial and monogamous needs to be revised. That it is the prevailing pattern indicates that dispersion in pairs is adapted to the conditions that prevail through much of the Southern and part of the Northern Savanna. But given conditions that can sustain a higher population density, the bohor reedbuck, at least, is capable of changing to a gregarious form of social organization. The largest known concentration of mountain reedbucks, on the other hand, was about 50, whereas a population density of 5 - 7 animals/km² is average.

Two measured common reedbuck territories bordering a permanent waterhole covered respectively 48 and 60 ha in the summer, but became compressed to 35 ha apiece in the winter following increased intrusions by other reedbucks to reach the...
water. In Serengeti N.P. bohor reedbuck territories were estimated at 25 - 60 ha, each shared by 1-5 females. Mountain reedbuck territories of only 10 - 15 ha were recorded at Kekopey Ranch, Kenya, but averaged 28 ha in the Loskop Dam Reserve, (Gauteng Province, South Africa). Here female ranges averaged 57 ha (36 - 76) and included the territories of up to several males. This emancipation of females from the territory of individual males is perhaps the most significant difference in the social organization of mountain reedbuck compared to the other species.

**ACTIVITY**

Although daytime activity of the common reedbuck has been studied, apparently all 3 species are primarily active at night, a period for which there is little firm information. The reedbucks studied in Kruger N.P. were most nocturnal during the rains and early dry season, when their nightly activities were extended by 1 –2 and a half hours after dawn and an hour or less before dark. The animals remained inactive, lying up in high grass or the shade of a tree through the day, apart from interruptions to stand, stretch, and groom. A total of 2 – 3 hours of the 7 and a half - 9 hour rest period was spent chewing the cud.

As the dry season advanced and grass quality declined, the reedbucks rested less and grazed more during the day. Between August and late October, reedbucks could be seen grazing and moving at all hours. High temperatures and low humidity of the vegetation and air forced them to go to water more often (frequency uncertain). Finally these animals were feeding most of the day, from early to late morning, midday and afternoon until nearly 1600 h, and again after dark. Thus, reedbucks feeding on low-protein / high-fibre grass compensate by eating and drinking more, and this seasonal change in activity appears to apply to all 3 species

**TERRITORIAL BEHAVIOUR**

Perhaps because reedbucks do not scent-mark their territories, the borders are not sharply defined. In the common reedbuck, family members freely trespass 100 – 200 m into their neighbours’ land, the boundaries of which fluctuate depending on the pugnacity of the owners, environmental conditions, and local population density.

*Advertising:* posing in *erect posture, whistling, stotting +popping, defecation posture.*

Reedbucks clearly employ visual and vocal modes of advertising territorial status, and may also use olfactory signals undetected by human observers.
Bucks stand in the **erect posture** ("proud posture" of Jungius 1971a) (fig. 6.1), positioning themselves for maximum visibility (e.g., on mounds during resting / ruminating periods). At the sight of another reedbuck, a buck standing in the **erect posture** may utter a shrill, reedy whistle, expelling air through his nose with such force that his whole body shakes. After whistling 1 – 3 times, he often makes a few **stotting** bounds, throwing the hindquarters high and landing on his forelegs first (cf.impala *show-jumping*). The neck is raised showing the white throat patch but the tail, contrary to most accounts, is normally held down. Both **whistling** and **stotting** are also performed in response to predators, and the distinctions between the two forms of behaviour are unclear (more under Anti-predator Behaviour).

Even though these displays are not strictly territorial, they certainly serve to advertise a reedbuck's presence. The act of defecation, too, is made conspicuous by curling up the tail to reveal the white underside and could therefore also be a display, but perhaps not of territorial status, as both sexes defecate in the same stance. Secretions of the sub-auricular and inguinal glands may also advertise status and identity, either through traces left on resting places and passageways or by scent wafting through the air, for instance during **stotting** accompanied by **popping** of the inguinal glands (explained under Anti-predator Behaviour).

**AGONISTIC BEHAVIOUR**

**Dominance/Threat Displays**: erect posture, low-horn presentation, head-nodding, angle-horn, head-turned-away, defecation, chasing.

**Defensive/Submissive Displays**: head- low/chin-out posture with tail out (fig. 6.2); lowered fore quarters; lying-out.

**Fighting**: boxing, clash-fighting, pushing, twist-fighting.

Encounters between territorial males and their neighbours or intruding strangers may include any of the above dominance and threat behaviours plus **displacement grazing** and **grooming**, and **chasing**. **Low-horn presentation**, which places the animal in the combat attitude, and a slow, deliberate approach are a prelude to fights. The forward hook of the horns combined with strong forward-downward blows in **clash-fighting** makes combat perhaps more dangerous than usual; fighting was considered responsible for one third of male deaths in a Natal (South Africa) population where common reedbucks live at unusually high density.

During play fights and chases, young reedbucks have been seen to lower their forequarters in the manner of dogs inviting play (cf.klipspringer). There may be an element of submission in this posture, for young males and females approaching to sniff noses with an adult male sometimes behave in the same way.
REPRODUCTION

Reedbuck do not have a strict breeding season, though, as usual, there is a rainy-season breeding peak. Female mountain reedbucks may conceive at 1 year and reproduce at intervals of 9 – 14 months. Gestation is thought to be around 7 and a half months.

SEXUAL BEHAVIOUR

Lowstretch with empty licking and tail spread; responsive urination by female and urine-testing; foreleg-lifting; preliminary mounting.

Reedbucks reproductive Behaviour has not been studied closely enough to describe differences between the species. The following is a general account.

Females approached by a male in low-stretch adopt the head-low posture (fig. 6.3), then squat and urinate in the same posture adopted during defecation. Sometimes a male intent on sniffing a female's vulva flicks his tongue while approaching. An unresponsive female may run away while the male is occupied in urine-testing, and is seldom pursued.

During the mating march, the male persistently noses and licks the female's rump and makes repeated mounting attempts, but rarely foreleg-lifts. In rearing he rests his forequarters on the female's croup but without clasping her, thereby pushing her forward unless she stands firmly – signalling readiness to mate. A female common reed buck courted by an outside male thwarted his mounting attempts by circling, moving out from under him, and even kicking. Courtship terminates with a single thrust during which the male clasps her flanks tightly. He then dismounts, the pair stand immobile for some seconds, and the male may lick her neck and rub his head on her body. The female often licks her own flanks and back, then they resume grazing.

PARENT/OFFSPRING BEHAVIOUR

Female common reedbucks seek seclusion beginning a month before calving and during the lengthy concealment period (1 and a half - 2 months) remain close to the calf (usually within 20 – 30 m). Last year's calf resists separation, even when chased, and its presence may be tolerated following parturition. The newborn calf is suckled only once a day and probably once or twice at night. The mother comes right up to her calf when retrieving it, apparently without signalling visually or vocally.

First she licks it, from rump to head, stopping when the calf begins nursing (2 and a half - 4 minutes). Young over 4 months old are no longer licked but can still solicit grooming by approaching, touching noses, and raising the head to indicate the spot to be groomed (usually the head or ears). After an activity – play period of 10 – 30 minutes the calf seeks a new hiding place.
Those older than 2 months graze alongside their mothers but run for cover if alarmed. The female rejoins her mate when the calf is about 4 months old; even then calves withdraw into cover to rest more often and feed less often than adults.

**ANTIPREDATOR BEHAVIOUR**

Skulking, lying-out, alert posture, whistling, stotting +- popping, snorting.

A disturbed reedbuck may whistle intermittently for as long as a quarter – half an hour, especially at night after getting wind of, say, a stalking leopard. In the bohor reedbuck, whistling may precede and follow, and often accompanies and emphasizes, the typical rocking gallop. Stotting, in which the reedbuck bounds up and down almost in place, represents a higher state of excitation and usually involves 3 - 8 jumps. According to Jungius, the common reedbuck does not whistle while galloping, but instead a snorting sound is produced at each jump as the head is thrown back and air is forced through the nostrils. A number of observers have heard fleeing reedbucks make strange popping sounds, which they attributed to the sudden opening of the pocket - like inguinal glands.

At the height of a bound, disturbed common reedbucks of both sexes have been seen to throw the hindlegs backward and outward, which coincided with a double pop at each jump.

Lacking endurance, the reedbuck’s strategy is to disappear into cover as soon as possible. In an emergency it dashes in a flat run, interspersed with long bounds. If already in cover, adult as well as young reedbucks will often lie close until a man or other predator gets within a few meters. If a standing reedbuck sees a predator but thinks itself undetected, it will crouch or, if on the edge of cover, skulk into hiding. Reedbucks are more likely to be hunted successfully by leopards than other antelopes that avoid cover. They are also relatively easy and hence preferred prey for cheetahs and wild dogs during the dry season when cover is scarce.

Despite the absence of armament, mother reedbucks may vigorously defend their fawns – which are feeble runners for at least the first month. Females have been known to charge and tree a troop of baboons, and to rescue a calf about to be caught by a domestic dog by kicking out while jumping over the dog. The latter is an old and possibly unreliable story. Mountain reedbucks take advantage of their ability to bound rapidly up steep slopes and over stony ground, but also lie out like the other two species when there is enough cover for concealment.

**SOURCES**