Module # 8 – Component # 2

Small to Medium-Sized Antelope, The Warthog & Ostrich

Introduction

This Component covers animal behaviour under capture situations to help interpret the behavioural patterns seen and to predict each species’ reaction to the techniques described, particularly their vulnerability to capture stress in each situation.

Of interest will be behaviour not generally known to wildlife enthusiasts, unless they are directly involved in capturing.
Impala

<table>
<thead>
<tr>
<th>Demographic</th>
<th>Capture dosages</th>
<th>Tranquillisation dosages</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Adult rams</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 mg of M99 or 10–15 mg of Fentanyl and 30 mg of Azaperone</td>
<td>12–15 mg of Haloperidol 50 mg of Trilafon</td>
</tr>
<tr>
<td><strong>Adult ewes</strong></td>
<td>1 mg of M99 or 10 mg of Fentanyl and 30 mg of Azaperone</td>
<td>7–10 mg of Haloperidol 50 mg of Trilafon or use 40 mg of Azaperone when transporting nearby</td>
</tr>
</tbody>
</table>

**Characteristics**

- **Body weight**: Rams 50 kg and ewes 40 kg.
- **Social behaviour**: The breeding herd size can vary from 15 to more than fifty animals.
- **Habitat**: Savannah woodland. They prefer thickets when disturbed.
- **Mating season**: April–May.
- **Lambing season**: November–December.

**General Remarks Relating to Capture**

Impala form loose associations and, depending on their density in the area, generally form large groups at various times during the year. These groups can number several hundred animals.

When under pressure, the group huddles together until one of the older ewes – and not one of the rams – leads a break, with the remainder of the herd following. In practice, two or three ewes start out from the huddle and lean forward until one initiates the break. From this huddle, the impala file out in a run until the lead ewe stops and the remaining animals catch up, forming a new huddle to repeat the performance.

The break seldom occurs in the required direction, even when pressure is placed on the opposite side. It is virtually impossible to turn the animals while the break is in progress; rather, move away and wait until the animals stop before re-approaching the group. It is important to ignore the antics of impala males during this process. Concentrate on watching the ewes during the drive, as generally the ewes ignore the males and are unlikely to follow them.
Further in the drive, the impala will start to seek cover from the helicopter and tend to head towards thickets, particularly thickets around tall trees. This knowledge is useful in siting the boma mouth, so that the thicket is within and not without the boma, which would work against the operation.

When impala detect the scent of humans or come across something that frightens them, they tend to leap in huge bounds, often in several directions. Much like kudu, impala tend to run in the direction they are facing at the time, even running towards danger rather than away from it. They dislike moving through long grass and will tend to avoid it during the drive.

Impala must be brought under control as soon after capture as possible, because without drugs they quickly succumb to capture myopathy. They do not respond well to narcotics, particularly Etorphine. With this drug, they usually run off and suddenly collapse, often in the wrong position and with little obvious signs of being drugged. Narcosis differs between individuals – from a deep slumber with slow respiratory response to a condition of being quite alert. Fentanyl is a better choice for impala.

Impala males, even young males, are notorious for horning each other as soon as they are closely confined under stress. They must be removed, tranquillised and held for ten minutes before being released back into the herd. When capturing using the plastic boma method, the animals are placed in the crush and staff immediately run in, grabbing the males in the midst of the jumping females. They are taken out of the boma through the staff entrance. The females are loaded while the males are being blindfolded and tranquillised. After ten minutes, the males are pushed into the loading crate to rejoin the females. Their horns should be tipped and taped with rubber inner tubing.

Crate specifications are critical for impala as, given the opportunity, they will jump for the gaps, especially in conditions of low light. The crate should be designed to allow in maximum light during loading and then shutting down on the light during transport to quieten down the animals. Adjustable vents should be provided to regulate temperature, depending on the season and the time of day. It is important to ensure that there are no small gaps or sharp obstacles that may hook onto the animals. Even when tranquillised, they usually jump around a little while they are being loaded. A recent innovation is to use a small, separate hatch in one of the rear doors of the crate when loading, pushing individual animals through the hatch into the crate.

The preferred method of capture is the net boma used in the conventional way, except that experienced staff will handle two impala each, never more. Ten minutes after all the animals have been restrained, blindfolded and tranquillised, they are individually loaded by passing them through the small hatch. Occasionally, when using plastic bomas, the animals may refuse to go through the first gate. This situation can be prevented by incorporating a wing from the first gate side into the centre of the main gate area, providing a narrower channel they will immediately respond to.
Reedbuck

<table>
<thead>
<tr>
<th>Demographic</th>
<th>Capture dosages</th>
<th>Tranquillisation dosages</th>
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</thead>
<tbody>
<tr>
<td>Adult rams</td>
<td>2–3 mg of M99</td>
<td>14–16 mg of Haloperidol</td>
</tr>
<tr>
<td></td>
<td>30 mg of Azaperone</td>
<td>80 mg of Trilafon</td>
</tr>
<tr>
<td>Adult ewes</td>
<td>1,5 mg of M99</td>
<td>10–12 mg of Haloperidol</td>
</tr>
<tr>
<td></td>
<td>30 mg of Azaperone</td>
<td>80 mg of Trilafon</td>
</tr>
</tbody>
</table>

**Characteristics**

- **Body weight**: Rams 45 kg and ewes 33 kg.
- **Social behaviour**: Reedbuck normally occur in pairs or in a family group with an ewe and a lamb.
- **Habitat**: Long grass and riverbeds with reeds.
- **Mating season**: The whole year.
- **Calving season**: Peaks in December–May.

**General Remarks Relating to Capture**

Reedbuck are secretive animals that are usually seen in the evening or early morning. If they are not disturbed, they can be seen later in the day.

In ideal habitat, reedbuck can be numerous and disturbance to the area may reveal as many as 50–100 individuals in the system. Careful planning is required to capitalise on the capture of a reasonable number of animals.

Reedbuck occur individually or in small groups, readily coming together and separating. They are difficult animals to capture as they are not herd orientated. In many respects, they are similar to puku in that they are not easily driven in any set direction.

Generally, reedbuck are confined to a vlei system. They only leave the area under intense pressure and return as soon as the disturbance is over. They prefer to run up and down these vlei systems rather than away from them. When they detect danger they quickly go to the ground, keeping their heads low to escape detection. They will readily swim or hide in water if sufficiently threatened.

The capture of reedbuck represents a major departure from normal capture approaches in that the animals are not spotted before capture. Instead, an ambush is set without disturbing the animals, before blindly flushing the area to arouse them and chase them towards the boma.
Reedbuck are caught as individual animals, even in areas of good concentration, usually using a net boma, net lines or a combination of both. These must be set downwind on the vlei system, preferably at a point where the reedbuck are expected to channel through, in order to maximise the number of animals passing through. The net boma is set in the conventional manner and is camouflaged.

During the drive, a net gunner accompanies the helicopter to net gun animals that miss the system. The helicopter moves across the vlei in a zigzag motion, progressing forward towards the net system. As the animals jump up and join each other, they are all gently herded towards the nets with minimum chase.

They are caught and handled in the normal way with tranquillisers. Darting of reedbuck is seldom considered. Net gunning is generally straightforward and more successful if the animal is allowed to tire a little and is net gunned in the open.

Reedbuck are generally crated in individual, medium-sized crates, although females may be crated together in communal crates. Never mix males. Reedbuck generally do not do well in bomas, not taking well to supplementary feed. They are able to scramble up low walls and should therefore preferably be free-released.
**Bushbuck**

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<tr>
<th>Demographic</th>
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</thead>
<tbody>
<tr>
<td><strong>Adult rams</strong></td>
<td>1.5 - 2 mg of M99 or 15 mg of Fentanyl and 30 mg of Azaperone</td>
<td>15 mg of Haloperidol 80 mg of Trilafon</td>
</tr>
<tr>
<td><strong>Adult ewes</strong></td>
<td>1 - 1.5 mg of M99 or 10 mg of Fentanyl and 30 mg of Azaperone</td>
<td>10 mg of Haloperidol 80 mg of Trilafon</td>
</tr>
</tbody>
</table>

**Characteristics**

- **Body weight**: Rams 45 kg and ewes 30 kg.
- **Social behaviour**: The animals are solitary, or an ewe may be accompanied by her lamb. Rams are territorial.
- **Habitat**: Riverine areas in savannah woodland.
- **Mating season**: The whole year.
- **Lambing season**: October–November.

Bushbuck are also secretive animals, but prefer dense riverine bush habitat and thickets rather than the heavy grass reedbed like. They are not herd orientated, although ewes may be found in groups, particularly feeding at night. Bushbuck are strictly nocturnal animals, hiding during the day.

The capture of bushbuck is similar to that of nyala and reedbuck, in that the habitat is disturbed to dislodge the animals. They are then chased in the general direction of the capture nets rather than specific animals being targeted. Bushbuck respond well in areas where they are undisturbed, and tame easily where they are more frequently seen and approached.

Helicopters are of little help in driving bushbuck. Better results are achieved using beaters set in a line moving towards the concealed nets. It is useful, however, to maintain some semblance of order among the beaters proceeding towards the nets.

Bushbuck are seldom darted and drop lines are the preferred method of capture. The animals are caught in drop lines set across a thicket or riverine bush where they are known to frequent. Thickets sandwiched between open areas are ideal for an ambush position, provided the wind is in favour of the direction the animals are beaten towards the nets.
On capture, bushbuck should be placed in medium-sized crates after tranquillisation. If necessary, ewes may be accommodated together, but they must be separated from the bulls.

Bushbuck do not do well in pens and should be free-released. However, where they need to be penned, leafy branches should be hung from the boma wall to engender a sense of security.
Warthogs

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<thead>
<tr>
<th>Demographic</th>
<th>Capture dosages</th>
<th>Tranquillisation dosages</th>
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<tbody>
<tr>
<td>Adult boars</td>
<td>➢ 350 mg of Ketamine and&lt;br&gt;➢ 20 mg of Xylazine</td>
<td>➢ Combinations of 50 mg of Azaperone&lt;br&gt;➢ and 70–80 mg of Trilafon</td>
</tr>
<tr>
<td>Adult sows</td>
<td>➢ 250 mg of Ketamine and&lt;br&gt;➢ 15 mg of Xylazine</td>
<td>➢ No recommendations</td>
</tr>
</tbody>
</table>

Characteristics

- **Body weight**: Boars 60–105 kg and sows 45–70 kg.
- **Social behaviour**: These animals are solitary. A sow will be accompanied by her piglets.
- **Habitat**: Open savannah woodland.
- **Mating season**: May–July.
- **Breeding season**: November–December.

General Remarks Relating to Capture

Besides ostrich, warthogs are the only wild animals that are not affected by wind direction during capture and can be driven towards nets against the wind.

Warthogs are mostly caught using nets, either with drop lines or a net boma. They may also be caught using a net gun or a special tunnel net arrangement placed over their burrows at night.

A net boma or net lines are set in the conventional way near known concentrations of warthogs. The area is searched and as many groups of warthogs as possible are joined and driven toward the nets. As wind direction is not an issue and warthogs respond well to a helicopter, the pigs that either miss the nets or get through can be turned around and driven back through the nets.

Warthogs will quickly disappear down their burrows or those of other animals when they are chased. They are courageous animals and will quickly defend themselves as soon as they become aware that they are trapped. As warthogs are susceptible to both physical and heat stress, this matter requires attention during the capture process.
Once caught, extreme care needs to be exercised in removing the animal from the net. The warthog is grabbed by the hind legs and the animal twisted so that it has no leverage to attack. A large boot is placed over the flat section of the nose to pin the warthog down, while placing a noose over its nose to keep its mouth shut. The animal is then tranquillised and pushed through the small trap door into a mass crate. Under no account should warthogs be carried by the tusks, as injury to the handler is sure to follow.

All but the large boars may be placed in a communal crate, which they treat as an oversized burrow. They will lie stacked on top of one another, with all heads and tusks exposed to defend themselves if necessary.

Warthogs do not respond well to narcotics and require an almost lethal dose to anaesthetise them. A combination of Xylazine and Ketamine works better. Females and youngsters need not be tranquillised, provided they remain under control and are kept quiet.

As warthogs are able to scramble up high walls, the bomas should be constructed with an overhang to prevent their escape. The bottom of the boma must also be closed effectively, as these animals are proficient burrowers.
Mountain Reedbuck

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<thead>
<tr>
<th>Demographic</th>
<th>Capture dosages</th>
<th>Tranquillisation dosages</th>
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<tbody>
<tr>
<td>Adult rams</td>
<td>➢ 1-2 mg of M99&lt;br&gt;➢ 40 mg of Azaperone</td>
<td>➢ 10–12 mg of Haloperidol&lt;br&gt;➢ 50 mg of Trilafon</td>
</tr>
<tr>
<td>Adult ewes</td>
<td>➢ 1-2 mg of M99&lt;br&gt;➢ 40 mg of Azaperone</td>
<td>➢ 10–12 mg of Haloperidol&lt;br&gt;➢ 50 mg of Trilafon</td>
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Characteristics

- **Body weight**: 30 kg.
- **Social behaviour**: The breeding herd consists of 2–6 animals. Rams are solitary and bachelor herds may form, but are unstable groupings.
- **Habitat**: Restricted to mountainous and rocky outcrops.
- **Mating season**: The whole year.
- **Lambing season**: October–December.

Mountain reedbuck are generally smaller than the common reedbuck. They maintain more of a herd structure and tend to run in small groups, rather than scattering in all directions, like the common reedbuck, when driven by a helicopter.

They are best caught with a net boma in the terrain they most often frequent.

They are then tranquillised and transported in the normal fashion.
**Springbok**

<table>
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<tr>
<th>Demographic</th>
<th>Capture dosages</th>
<th>Tranquillisation dosages</th>
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<tbody>
<tr>
<td>Adult rams</td>
<td>➢ 10–15 mg of Fentanyl&lt;br&gt;</td>
<td>➢ 7-10 mg of Haloperidol&lt;br&gt;</td>
</tr>
<tr>
<td></td>
<td>➢ 20 mg of Azaperone</td>
<td>➢ 30 - 40 mg of Trilafon</td>
</tr>
<tr>
<td>Adult ewes</td>
<td>➢ 10–15 mg of Fentanyl&lt;br&gt;</td>
<td>➢ 10–12 mg of Haloperidol&lt;br&gt;</td>
</tr>
<tr>
<td></td>
<td>➢ 20 mg of Azaperone</td>
<td>➢ 30 – 40 mg of Trilafon</td>
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</table>

These animals are, however, seldom darted.

**Characteristics**

- **Body weight**: 26–40 kg.
- **Social behaviour**: Small breeding herds consist of up to 15 animals. In larger conservation areas, migratory herds of up to thousands of animals can be formed. Rams are territorial.
- **Habitat**: Open arid areas in a semi-desert environment.
- **Mating season**: The whole year.
- **Lambing season**: September–January.

**General Remarks Relating to Capture**

Springbok prefer open spaces and often congregate in groups of several hundred in favoured areas. Both sexes have horns, although those of the female are extremely fragile, often breaking with rough handling.

Often springbok are fenced in with jackal-proof fencing, particularly in sheep-bearing areas, which they may run up against. They can be extremely nervous and mobile, quickly covering distance.

Plastic bomas are used in the capture of this species. The author, however, believes that capture is more controlled and has fewer mortalities when using net bomas set off from the fence. As many springbok as possible are then rounded up with the helicopter, forcing them to run alongside the fence towards the boma. This can even be done upwind, provided that the boma is turned at right angles to the drive and set downwind to advantage.

In exceptionally open situations, the drive may be aided using a few vehicles or motorcycles. They join the drive from the side near the boma, keeping the animals against the fence 200 m from the boma main gate.

Springbok respond well to Haloperidol, and when it is used together with Trilafon, the animals can be transported over long distances.
**Blesbok**

Darting may be an option in confined situations, using light-impact darts such as the Telinject® or the 1 cc Pneu-dart®

<table>
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<tr>
<th>Demographic</th>
<th>Capture dosages</th>
<th>Tranquillisation dosages</th>
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<tbody>
<tr>
<td>Adult rams</td>
<td>3mg of M99</td>
<td>12–15 mg of Haloperidol</td>
</tr>
<tr>
<td></td>
<td>50 mg of Azaperone</td>
<td>50 mg of Trilafon</td>
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</tbody>
</table>

**Characteristics**

- **Body weight**: 70 kg.
- **Social behaviour**: The breeding group consists of 6–10 animals, with territorial bulls that will hold their territory for most of the year.
- **Habitat**: Open grass veld.
- **Mating season**: March–May
- **Lambing season**: November–December

**General Remarks Relating to Capture**

Blesbok are gregarious and can be found in large groups where there are large concentrations. Often they may be found mixed with tsessebe, particularly bulls, resulting sometimes in a crossbreed. In South Africa, a pure white offspring is occasionally produced, which is fairly sought after.

Blesbok generally favour more open ground, similar habitat to that of the tsessebe. They are best caught in a net boma set in a similar fashion to capturing tsessebe. They are held, blindfolded and tranquillised prior to release into a bulk crate for transport. Blesbok may also be caught in plastic bomas and then quickly restrained manually with sufficient personnel, either in the crush or mass crate.

Bulls may be net gunned where there are individual requirements. All blesbok must be tranquillised on capture.
Lechwe

<table>
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<tr>
<th>Demographic</th>
<th>Capture dosages</th>
<th>Tranquillisation dosages</th>
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</thead>
<tbody>
<tr>
<td>Adult rams</td>
<td>➢ An Etorphine combo of 4–5 mg of M99</td>
<td>➢ 15 mg of Haloperidol</td>
</tr>
<tr>
<td></td>
<td>➢ 30 mg of Azaperone</td>
<td>➢ 50 - 80 mg of Trilafon</td>
</tr>
<tr>
<td>Adult ewes</td>
<td>• 3 mg of M99</td>
<td>• 10 mg of Haloperidol</td>
</tr>
<tr>
<td></td>
<td>• 30 mg of Azaperone</td>
<td>• 50 - 80 mg of Trilafon</td>
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</table>

**Characteristics**

- **Body weight**: Bulls 100 kg and cows 80 kg.
- **Social behaviour**: Breeding herds form loose aggregations of up to thirty individuals, whereas bulls form small territories.
- **Habitat**: Swamps and swampy conditions.
- **Mating season**: The whole year.
- **Calving season**: July–August.

**General Remarks Relating to Capture**

Three subspecies – the red, black and Kafue lechwe – are found in the subregion, occurring in places in the northern reaches of Angola, Botswana and Zambia. They are all associated with swampy conditions and readily feed in shoulder-deep water.

Lechwe may be darted at extreme distances when tame. They have relatively thin, oily skins that are easily damaged by high-impact darts such as the Palmer® dart. They are best caught employing a net boma system in sparse vegetation, set on pathways the animals normally frequent.

The animals must be tranquillised upon capture.
Puku

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<tr>
<th>Demographic</th>
<th>Capture dosages</th>
<th>Tranquillisation dosages</th>
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</thead>
<tbody>
<tr>
<td>Adult bulls</td>
<td>No recommendation</td>
<td>➢ 12–15 mg of Haloperidol</td>
</tr>
<tr>
<td></td>
<td></td>
<td>➢ 50-70 mg of Trilafon</td>
</tr>
<tr>
<td>Adult cows</td>
<td>No recommendation</td>
<td>• 8-10 mg of Haloperidol</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• 50-70 mg of Trilafon</td>
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**Note:** The author has no experience in the capture of puku using drugs, as they are extremely difficult to approach to dart. The variance of the tranquillisation volume is dependant on length required.

**Characteristics**

- **Body weight:** Bulls 74 kg and cows 62 kg.
- **Social behaviour:** Breeding groups are unstable and vary from 5–30 animals.
- **Habitat:** Swamps.
- **Mating season:** The whole year.
- **Calving season:** January–June.

**General Remarks Relating to Capture**

Puku are often associated with lechwe, although they occupy smaller and drier swamp areas.

They are extremely difficult to drive as a cohesive herd, behaving in a similar fashion to reedbuck, with the herd often fragmenting all the way to the boma.

The net boma is the preferred method of capture, designed with as wide a mouth as possible and set up as close as possible to the animals before capture.

Puku must be tranquillised on capture.
Klipspringer

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<tr>
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</thead>
<tbody>
<tr>
<td>Adult rams</td>
<td>100 mg of Ketamine</td>
<td>5 – 7 mg of Haloperidol</td>
</tr>
<tr>
<td></td>
<td>3 mg of Xylazine</td>
<td>20-30 mg of Trilafon</td>
</tr>
<tr>
<td>Adult ewes</td>
<td>100 mg of Ketamine</td>
<td>5 - 7 mg of Haloperidol</td>
</tr>
<tr>
<td></td>
<td>3 mg of Xylazine</td>
<td>20-30 mg of Trilafon</td>
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Combinations of Ketamine and Xylazine are suggested, rather than the use of opioids

**Characteristics**

- **Body weight**: Rams 10 kg and ewes 13 kg.
- **Social behaviour**: Klipspringer occur in pairs or small family parties, with the ram being territorial.
- **Habitat**: Rocky outcrops.
- **Mating season**: The whole year.
- **Lambing season**: The whole year.

**General Remarks Relating to Capture**

Klipspringer are seldom darted, as they are likely to become lost. Net lines are used to capture them, and are set across the line of rocky outcrops across their natural line of escape. Ideally, this should be towards the end of a row of shallow, underlying granite outcrops. Small mesh nets should be used (100 × 100 mm).

Capture is undertaken in the conventional way, using net lines and a row of beaters across the rocky outcrop, maintaining position at right angles to the drive and searching out every hidden crevasse. The beaters make a noise to disturb the hiding klipspringer and chase them towards the nets. Provided that not too much pressure is placed on the animals, they generally will stay with the rocky outcrop rather than run away from it.

Klipspringer are crated in small crates and travel well. At the release site, the animals should be placed in a small, round boma with a significant overhang to prevent them from jumping out.
Oribi

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<tbody>
<tr>
<td>Adult rams</td>
<td>➢ 100 mg of Ketamine</td>
<td>➢ 5 - 7 mg of Haloperidol</td>
</tr>
<tr>
<td></td>
<td>➢ 5 mg of Xylazine</td>
<td>➢ 20-25 mg of Trilafon</td>
</tr>
<tr>
<td>Adult ewes</td>
<td>• 100 mg of Ketamine</td>
<td>• 5 - 7 mg of Haloperidol</td>
</tr>
<tr>
<td></td>
<td>• 5 mg of Xylazine</td>
<td>• 20-25 mg of Trilafon</td>
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</table>

Oribi are seldom darted

**Characteristics**

- **Body weight**: 14–20 kg.
- **Social behaviour**: Oribi form pairs or small groups consisting of a territorial adult ram and up to four ewes.
- **Habitat**: Open short grassland for feeding, and taller grass for cover.
- **Mating season**: May–June.
- **Lambing season**: October–December.

**General Remarks Relating to Capture**

Oribi, unless tame and unmolested, tend to lie low until disturbed, making planned capture of specific targeted animals difficult.

Capture is best effected by employing drop nets set strategically throughout the area. The nets are manned while beaters move through the area to chase the animals up. They are then guided into the nearest net. Standard capture nets have too great a mesh size to trap oribi. These small animals are successfully caught in nets of 100 × 100 mm or smaller.

Alternatively, oribi may be caught in open areas using a net gun with an appropriate net mesh size of 80 × 80 mm from 2 mm twine. Oribi may be crated either in small individual crates or in a mass crate with a lot of bedding.
Duiker and Steenbok

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<tr>
<th>Demographic</th>
<th>Capture dosages</th>
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</thead>
</table>
| Adult rams & Ewes | ➢ 4–8 mg of Fentanyl  
➢ 20 mg of Azaperone                                                                 | ➢ 2 – 4 mg of Haloperidol  
➢ 15 – 20 mg of Trilafon |

Or for Darting  
• 100 mg of Ketamine  
• 5 mg of Xylazine

Characteristics

- **Body weight**: Rams 18 kg and ewes 21 kg.
- **Social behaviour**: These are solitary animals. Ewes may be accompanied by their lambs.
- **Habitat**: A wide distribution, but they prefer savannah woodland.
- **Mating season**: The whole year.
- **Lambing season**: The whole year.

General Remarks Relating to Capture

Duiker and steenbok are generally caught by accident rather than by design, as they are secretive and lie down most of the day. They are most often caught in nets in the same way as oribi and klipspringer.
**Ostrich**

**Characteristics**

- **Body weight**: 50–150 kg (2–3 m in height).
- **Social behaviour**: These animals are gregarious, and pair off to breed.
- **Habitat**: They prefer arid and more open country.
- **Mating season**: All year round, although egg laying peaks in July–September, with an incubation period of 39–53 days.
- **Reproductive season**: 9–12 eggs per nest.

**Capture and tranquillisation dosages**

Darting and tranquillisation of ostrich are not recommended, as the muscle groups are small compared with those of other wildlife species. Heavy dosages are needed to achieve satisfactory sedation.

Wild ostrich are seldom caught in southern Africa now that the ostrich industry is flourishing. Most translocation involves domesticated birds, which are less wary than their wild counterparts.

Ostrich rely on sight and their ability to escape from and outrun predators. When under pressure, they tend to remain in open ground. They have a good herding instinct and are easily driven by helicopter. Although they see well, they are unable to smell; therefore, boma direction in respect to wind is not an issue.

Never use a top cable in the boma, which ostrich will easily spot and avoid. Beware of fences close to the boma, which the birds will crash into and injure themselves.

When a breeding male’s neck is red and swollen with blood, it is vulnerable and damage is often fatal. Females and young are easier to handle but, like most species, aggressive males quickly back down in a capture situation. The birds are susceptible to capture myopathy, requiring positive control and skilful handling to reduce stress. Avoid capturing ostrich in hot ambient temperatures exceeding 25 °C.

The net boma is the method of choice for capturing ostrich. The boma is set in the conventional way, but without using a top cable. Instead, the plastic is run out from either side and held up by additional staff. The birds invariably run directly into the nets. Ideally, the curtain should be run across open ground between two anthills to camouflage the plastic.

Drop nets must be used to prevent the birds from all crashing in one place, as in the confusion they follow one another into the net. Even one bird remaining uncaught, will run into another already caught rather than into an open section of net.
Once captured, the birds are blindfolded. If sufficient staff are present, the ostrich are allowed to get up and are walked up a ramp into either single or communal crates. Semi-domesticated ostrich may be caught and loaded conventionally with the drop boma system.

Ostrich males attack by striking forward and down with their large toe whilst the head is held up. To walk the birds, hold them on either side while holding the head down so that they are unable to kick. Captured ostrich must be blindfolded when either walked or carried to the means of transport. Carrying is facilitated by sitting the birds down and tying a rope from one large toe under the wings across the back to the other toe, thus preventing them from standing.

Over the last five years, over 5000 adult ostriches have been successfully exported around the world. During these exports, crates, loading facilities and a fail-safe procedure have been developed, resulting in a near 100% success rate when moving adult ostriches.

In the past, various crate designs and materials were used, culminating in the current design, measuring 2800 × 1970 mm at the base, 1400 mm high to the shoulder and bending inwards to a top measurement of 1800 × 1650 mm at a height of 1800 mm from the base.

The whole unit is bolted and screwed onto a wooden pallet made of 30 mm pine planks 120–150 mm wide, set on purloins beneath to provide a total crate height of 1900 mm. A swing door is placed on the outside up to the shoulder above, which is a top-hinged flap closing down to the shoulder to seal the crate. A subdivision is placed within the crate, dividing it in half. Half of the subdivision is a door to gain access to the other half.

The sides are constructed from steel tubing covered in weld-mesh. The mesh, in turn, is covered with 13 mm foam rubber and plastic to present a soft surface in order to reduce injuries to the birds. The floor is covered with sacks partly filled with wood shavings and stapled to the floor to provide good footing and absorb litter from the birds. The roof is covered with shade cloth to provide ventilation while reducing strong light.

Each of 12 crates is tied to aluminium aircraft pallets that secure directly to the aircraft floor. The thirteenth crate is manufactured 100 mm less in length and 100 mm less in height on the right side to fit in the last pallet position for DC8 and 707 cargo aircraft. Each pallet is loaded with six female ostrich or three females and two males (five mixed ostrich). The males are separated from the females.

The secret of successful export is careful planning. The ostrich are loaded from the quarantine pens and transported to the airport, arriving as the aircraft is ready and prepared for loading. The birds are transferred to the crates, which have been set up beforehand on their respective pallets on roller beds. After weighing, the crates are transferred onto the mobile loading platform and rolled into and down the length of the aircraft. They are locked in final position.
The transfer of the birds into the crates should be smooth and controlled, using a specially adapted, wide loading ramp. The ramp should be the full height of the delivery vehicle crate on one side, dropping to the level of the crates on pallets and rollers on the other. Experienced staff enter the transport crate and, together with the quarantine staff already in the crate, walk selected ostrich down the ramp into the crate. When full, the crate is closed and sealed. This process continues until all the crates have been loaded.

Figure 8.1 Crates for exporting ostriches.