Enrichment Suggestions for Captive-born, Hand-reared Caracal Held in Captivity

March 2010

Deborah Wettlaufer and Liesl Smith
Cheetah Outreach, Cape Town
Enrichment

Animals in captivity have a lot of time on their hands. Whereas wild animals would fill their time with activities such as hunting, searching for water or shelter, protecting their territory or searching for a mate, captive animals very often are provided all of these. This could potentially create problems such as boredom, frustration, stereotypic behaviors and stress. Undesirable behaviours include self-injurious actions like excessive grooming; abnormal behaviours such as regurgitation and reingestion; aggressive behaviours; and stereotypic behaviours. Behaviour is an important indication of welfare and enrichment enhances welfare of animals in captivity.

Enrichment becomes a valuable and necessary practice by creating activities or providing stimulation that maximizes their quality of life and leads to inquisitive behavior. By enriching the animal’s environment, you empower the animal to have control over its environment and you give the animal a choice. Ignoring something is still a choice.

Apart from the fact that enrichment provides methods of passing time, the added physical and mental stimulation might also cause better reproductive success and improve visitor’s experiences since the image of healthy and well-adjusted animals are promoted.

Different forms of enrichment used for captive animals today include:

- Enclosure Design
- Feeding or foraging
- Visual and Auditory
- Olfactory
- Novel Objects and Toys
- Exercise
- Social Interaction/Tactile
- Behavioural Conditioning

Enrichment should be considered part of the daily husbandry routine at all responsible animal care facilities. An efficient enrichment programme can be more important than the size of the enclosures the animals are kept in. Environmental enrichment is not a luxury but a management tool.

When developing an enrichment programme at a captive facility, the habits, behaviours and nature of the species, and the personality of the specific individual need to be considered.

Enrichment suggestions for the caracal include the following:
**Enclosure Design**

Enclosures should be designed in order to address the needs for space, shade, shelter, privacy, stimulation, elevation and where appropriate, public viewing.

When designing enclosure layouts the following should be incorporated:

- **Shade**
  Structures providing shade are an essential element in every enclosure.

- **Shelter**
  Waterproof huts not only serve as sleeping quarters and as a hideaway, but also provide a lookout post to the animal. The inside is filled with straw for warmth and comfort.
- Water
  Water should be provided in solid, non-toxic containers. Containers should be placed in an easily accessible and shaded area. All water containers should be disinfected on a regular basis and the same container used for the same cat preferably.

- Logs
  Big logs can be packed at angles to one another. Alternatively flat pieces of logs can be stacked loosely on top of and against one another. Logs provide an often-visited area to many cats.

- Vegetation
  In the wild caracals prefer woodlands, thickets or scrub and stony outcropping. In open savannah, they will often seek out hiding places among dense riverine thickets and only venture out to open grassland at night to hunt. In captivity it’s important to provide enough vegetation and cover in the enclosure, whether in the form of shrubs, tall grass or piles of dead branches. The caracal at Cheetah Outreach particularly likes lying in or chasing objects in patches of tall grass. She also enjoys hiding under piles of branches.
Platforms encourage jumping behaviour and provide an elevated place for caracals to view their surroundings or get off the ground when wet or muddy.

When planning to build a platform the following should be considered:
1) Non-toxic, safe materials should be used.
2) The platform should be placed in such a position as not to allow any jumping or climbing over fences or other structures. The platforms are all erected on a flat, open section of grass, well away from any fences, huts or any other structure.
3) There should be no protruding or sharp objects. There should be no objects that could cut, injure or get the animal entangled.

Concealed, private areas should be provided in all caracal enclosures. Logs, areas of shade cloth, palm fronds and other tree branches, reeds or simple bamboo walls can be used to provide these. Caracals in the wild often spend the hot hours of the day hiding in burrows,
hollow trees, dense thickets or rocky outcrops, and in captivity, enjoy small enclosed spaces, such as small crates or portable dog houses.

- **Security**
  Caracal enclosures should be roofed to prevent escape.

- **Vertical Space**
  The enclosure should offer vertical space to accommodate jumping and climbing behaviour.
- **Manipulating Enclosure Layout**
  Gates separating adjacent enclosures might be opened to provide more space and opportunities for enrichment.

- **Habitat Modifications**
  Habitat modification by moving and changing exhibits inside the enclosures might provide stimulation.

**Feeding**

- **Elevating Food**
  Caracals are agile climbers and have remarkable jumping powers. Fast bounds can take a caracal several metres up into a tree or over rocks after dassies and other prey. Placing meat on a sloping tree limb or platform encourages the caracal to climb or jump for her food.
- **Hanging Food from Top of Enclosure or Pole**
  Caracals use their jumping ability to catch birds in the air, leaping high and batting sideways with their paws or using both paws together to snag the bird from the air. Hanging food from top of enclosure encourages this natural bird hunting behaviour. Hanging food at top of a post encourages climbing and grabbing for food.

- **Bungee Feeder**
  Hanging a large bone or large bloodsicle with meat from a bungee cord prolongs feeding by encouraging the caracal to grab, hold, pull, rip and try to drag away the attached food. The caracal at Cheetah Outreach loves bloodsicles and a large bloodsicle attached to the bungee feeder will keep her occupied for 30 minutes or more. She has figured out how to hold it so she can lick it without it moving but when the meat is exposed, she tries to rip it off, like meat on a carcass, and to carry it off. A bone attached to the bungee feeder causes much excitement and will stimulate the caracal to jump, leap and stand on hind legs to get at the bone.

  It is essential that a piece of PVC pipe or hosepipe go over the bungee for safety, to prevent it from tangling around the caracal’s neck or bouncing back at her face.
Meat Inside Watermelon
Placing pieces of meat inside a hollowed-out watermelon encourages the caracal to use her cognitive skills to get the meat out. The caracal at Cheetah Outreach has learned to roll the watermelon by putting her head under it and pushing until meat comes out of the holes.

Meat in Cardboard Boxes or Toilet Paper Rolls
Placing pieces of meat inside a cardboard box or toilet paper roll encourages the caracal to search for food and prolongs the length of feeding activity.

Whole or Partial Birds with Feathers
In the wild caracals take birds on a regular basis, from doves to kori bustards and eagles. Feeding with feathers encourages natural stalking and jumping behaviour as well as plucking before eating. Feeding should be supervised and remnants from the carcass removed. The origin and health status of the animal offered should be known.
Day-old Chicks
Dead baby chicks can supplement normal diet and add enrichment by throwing or hanging for a caracal. Chicks should be de-yolked prior to feeding.

Whole or Partial Large Carcass Feeding
Whole or partial carcasses can provide hours of stimulation and encourage natural hunting and feeding behaviour, including pouncing, attacking with claws, biting, dragging ‘prey’ into cover, and plucking and licking fur. The origin and health status of the animal offered should be known and the session supervised.
- **Whole Squirrels, Rats and Mice**  
  When available, whole carcasses of natural prey such as squirrels, rats and mice can be given (guts should be removed). Apart from providing roughage, whole carcasses provide much stimulation, encouraging natural hunting and eating behaviour, such as pouncing, tossing prey, licking and plucking fur. Whole carcasses also increase the length of feeding activity.

- **Meat with Fur**  
  Sections of horsemeat and rabbit with fur can be given. Apart from providing roughage, meat with fur also changes the texture of the food and increases the length of feeding activity.

- **Horse, Turkey or Other Large Bones**  
  Bones prolong feeding and keep the caracal occupied for up to an hour or more. Bones should always have a fair amount of meat on them or alternatively only be given after a meal.
- **Bloodsicles**
  These are made by freezing blood and a few pieces of meat in small plastic containers and can be offered on warm days. A variation is substituting whole mice for meat.

- **Raw Eggs**
  Raw eggs are a great treat for a caracal. Giving the egg intact encourages the caracal to use her cognitive skills to open it up. The caracal at Cheetah Outreach usually licks the egg for a while, then picks it up and bites it open. When the egg is gone, she continues to lick the inside of the shell, sometimes eating some of the shell too.
Visual and Auditory

Objects that provide visual and auditory stimulation include the following:

- **Outside Stimuli**
  Outside stimuli includes passing trains, motorbikes, running children, other animals, laborers, bicycles and wheelchairs. Having visual access to some of these not only provides mental stimulation, but can also provide good exercise since some animals will chase some of these objects and show much interest.

- **Other Animals**
  Walking different types of animals on their leads past the caracal enclosure or walking the caracal past their enclosures provides much interest and stimulation. The caracal normally follows the animal along the fence, and depending on the animal, tries to sniff it (serval she is familiar with), stalk and chase it (prey animals like bat-eared foxes or meerkats) or hisses and spits at it (predators like cheetahs, jackals or Anatolian dogs). Be careful not to allow the animal, especially bat-eared foxes or meerkats, too close to the fence, since the caracal may try to grab the animal through the fence.

Adjacent enclosures containing serval and jackals also provide much stimulation for the caracal at Cheetah Outreach. She sometimes charges the fence, and hisses and spits at the jackals or sits and watches the serval.

Olfactory

- **Moving Animals Between Enclosures**
  The caracal can be moved into a foreign or lesser-known enclosure. It is important that the enclosure has a fenced roof to prevent escape. If this is not possible the animal should be walked on a harness and lead. Intense sniffing and investigating may be observed.
Moving Objects between Enclosures.
Some of the exhibits can be moved from one enclosure to another, such as a portable dog house, splash pool or piles of branches. The health status of all animals should always be known. Objects should never be moved from a sick or compromised animal to the enclosure of a healthy animal.

Novel Objects and Toys

Toys encourage caracals to play and release pent-up energy. Some toys will encourage natural behaviours such as stalking, pouncing, throwing object and batting it in the air, plucking and biting, jumping and leaping in the air. When there is no supervision, toys should be taken away and be put out of reach, to avoid being ingested.

Favourite toys for caracals include soft toys, rubber Kong toys, rope toys and balls. They also respond well to any toy that has feathers attached. When choosing objects for animals to play with, care should be taken that these objects are non-toxic and preferably organic in nature.

Never leave any toys unsupervised with an animal.

Soft and Rubber Toys

Playing with soft toys brings out many natural hunting behaviours in caracals: raking prey with hind legs, enfolding prey with both fore and hind legs, clamping jaws on prey’s neck or throat, worrying prey by shaking, kicking and pulling on it, and plucking prey before eating. The caracal at Cheetah Outreach prefers soft toys to all other novel objects, except bird feathers, and has been observed engaging in all of these hunting behaviours when given a soft toy to play with.

Inside stuffing as well as solid objects such as button eyes should be removed before allowing the animal to play with a toy. Care should be taken that the caracal doesn’t open up soft toys through plucking or biting.
❑  Balls
Caracals respond well to balls. It can either be thrown with a rolling motion for the caracal to chase or placed in an empty plastic splash pool from which she can try and retrieve it.

❑  Mop and Rope Toys
The caracal at Cheetah Outreach enjoys stalking, chasing, attacking and biting a mop or rope toy, which brings out her hunting instincts. Care should be taken that the caracal doesn’t rip off pieces of mop or rope toys and swallow them.

❑  Plastic Bottles
These can be offered loose or attached to a whip to chase after.
Blanket
The caracal at Cheetah Outreach enjoys playing with a blanket. She stalks it, pounces or leaps for it, kicks and bites, and plays tug-of-war with it and a handler. She only plays with a blanket under observation of a handler to ensure that she doesn’t chew pieces off or swallow them.

Feathers
Caracals react strongly to feathers since birds are a favourite prey in the wild. Guinea fowl and other wings can be attached to a whip to encourage chasing and jumping or thrown to be played with. It is imperative to make sure these are disease- and parasite-free. This can be done by freezing, washing, microwaving or leaving the objects in the sun.
- Plastic Splash Pool
  Empty pools can be covered with vegetation to encourage the caracal to hide inside. Toys can be placed inside for the caracal to play with.

- Cardboard Boxes
  Cardboard boxes are often stalked, kicked and bitten. The caracal at Cheetah Outreach also enjoys getting inside larger boxes as she enjoys small spaces. Any harmful substances such as staples or plastic tape should be removed first and caracals should be carefully supervised while playing to make sure they do not eat and ingest part of the cardboard.

Exercise

Exercise is essential and is a part of husbandry that cannot be compromised on. Not only does the activity help to maintain a healthy physical condition, but it also provides excellent mental stimulation. Exercise can be provided by the following means:
Toys
Soft toys are some of the caracal’s favourite toys. Stuffed toys can be thrown for the caracal to retrieve and play with. Playing with soft toys results in much exercise through chasing, jumping, pouncing, kicking and throwing of toys.

Never leave any toys in the animal’s enclosure without supervision.

Whip with Novelty Item
A plastic bottle, Kong toy, soft toy or bird wing can be attached to a whip and used to encourage chasing and jumping behavior.

Hanging Novelty Items
Powerful hindquarters can launch a caracal 3 metres into the air from a sitting position. Objects such as soft toys or bird wings can be attached to the top of the enclosure or the top of a post to encourage jumping and climbing.
Walks
Walks can provide the handler with many opportunities to enrich a caracal’s life. New and different environments can provide a variety of smells and sights to investigate. The caracal at Cheetah Outreach enjoys exploring different areas of the facility on walks, watching birds out on the adjacent vlei, and interacting with other small carnivores through the fence.

Social interaction/Tactile

Interaction with Staff/Volunteers
For animals kept in captivity and thus exposed to people, it is to their benefit to view humans positively. This greatly minimizes one of the main stresses in captivity.
Interaction with Other Animals
Seeing, smelling and interacting with other animals through a fence or at a distance can greatly enrich a captive caracal’s life. This should be a positive experience for the animals and not lead to anxiety. Care should be taken to assess the demeanor and behaviour of all animals carefully.

Interaction with the Public
Individuals that work with the public should be selected carefully and must only include animals that are temperamentally suited to having interaction with the public. The caracal at Cheetah Outreach loves human attention and often seeks out strangers to rub against. Visits with the public include allowing a few people into her enclosure to visit her or touch encounters with small groups of visitors while on a walk. Only one person at a time should be allowed to approach the caracal and a handler must always be present.
Behavioral Conditioning

Behavioral conditioning is very important since it provides mental stimulation and challenges cognitive skills. It also strengthens the bond between care-taker and animal. The level of conditioning depends on the individual and might be one or all of the following:

- Lead Walking
  Lead walking begins at an early age in order for young cats to get accustomed to the restricted feeling of harness and lead. Lead walking is important for all ambassador cats.
Station Holding
Station holding entails the use of verbal commands and hand signals to teach an animal to jump on an object and remain there until released with a reward. Station holding can be used to facilitate feeding, slow down eating, control an animal while people are doing husbandry duties in an enclosure as well as provide mental stimulation. The caracal at Cheetah Outreach learns quickly and enjoys these sessions.

Clicker Conditioning
This type of conditioning is used to shape behavior by means of positive reinforcement. Use of a clicker can be extremely helpful in situations where you might have to manipulate the animal’s movements, such as on a film set. It is essential that the handler display a good sense of timing when using a clicker.

Transportation
Crates may be used to transport animals to the vet or in the event of a fire or other emergency. Reinforcing familiarity with crates can be done by feeding inside the crate on a rotational basis. This will ensure that the animal does not harbor negative feelings toward the crate. This is very often the case since the crates are used to transport them to the vet and represent negative experiences. Crates should always be disinfected before being moved to a different enclosure. Crates will also be needed in the event of a fire and being able to load the animals quickly and without resistance might mean the difference between life and death. By increasing the length of time the animal stays in the crate you can train them to accept the crate as a safe place for flying etc.