



Enrichment Suggestions for Captive-born, Hand-reared Bat-eared Foxes Held in Captivity

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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 bat-eared foxes include the following:

Enclosure Design

Enclosures should be designed in order to address the needs for space, shade, shelter, privacy, stimulation 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. The bat-eared foxes at Cheetah Outreach have a choice of shade inside their large concrete shelter or outside under the shade cloth.



☐ Shelter

A waterproof shelter serves as sleeping quarters and a hideaway. Besides a large concrete shelter with a crate and areas of straw, we also provide our bat-eared foxes with a wooden dog house filled with straw.



❑ 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.

❑ 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, especially when covered with pieces of bark, provide areas to hide food in to encourage foraging and prolong feeding.



❑ Vegetation

Bat-eared foxes in the wild often lie in thick bush during the heat of the day so we've provided our foxes at Cheetah Outreach with a patch of tall grass that they enjoy hiding in.

❑ Areas for Digging

Bat-eared foxes often dig their prey, especially insects, out of the ground so providing them with an area to dig in encourages natural foraging behaviour. A sandbox allows us to bury insects without them escaping and provides much stimulation for the bat-eared foxes.



❑ Space

Bat-eared foxes are very active animals, covering a lot of ground during foraging, and very playful, even as adults. Our foxes need enough open space to chase each other around their enclosure at high speed or chase after objects attached to a whip.



❑ Privacy

Bat-eared foxes are most active at night as well as dawn and dusk, normally sheltering underground or in thick vegetation during the hottest hours of the day. A shady, cool private area where the bat-eared foxes can rest during the day or retreat to when frightened should be provided. We provide our bat-eared foxes with a large concrete shelter that stays cool during the heat of the day and hides them from any outside viewers.



❑ Security

Bat-eared foxes are good diggers, rapidly digging prey out of holes and sometimes digging their own burrows, and bat-eared foxes in captivity often exhibit a spontaneous digging impulse so their enclosures must be built to prevent digging out under fences. The bat-eared fox enclosure at Cheetah Outreach has fencing extended under the ground.

❑ Habitat Modifications

Habitat modification by moving and changing exhibits inside the enclosures might provide stimulation. Bat-eared foxes are very curious animals and will spend time sniffing and investigating any new object they encounter.

Feeding

❑ Live Insects

Wild bat-eared foxes are primarily insectivores, with over 80% of their diet composed of insects. Not only are insects nutritious for them but giving them live provides much enrichment for bat-eared foxes in captivity.



❑ Large Bones

The occasional large turkey drumstick, horse or donkey bone provides a treat to the bat-eared fox as it prolongs feeding and allows them to chew meat directly off the bone. The bat-eared foxes at Cheetah Outreach will spend up to 30 minutes working on a turkey or horse bone until it is completely clean.



❑ Bungee Feeder

Hanging a large bone or large bloodsicle with meat and fruit from a bungee cord not only prolongs feeding but also promotes exercise and stimulation by encouraging the bat-eared foxes to chase, jump and lunge at the moving bone or bloodsicle. The hanging bone or bloodsicle also provides a cognitive challenge to the foxes as they grab, pull and hold in an effort to stabilize the bone or bloodsicle in order to chew or bite at it. The bat-eared foxes at Cheetah Outreach have figured out how to hold the bone down on the ground with a paw and then rip the meat off until the bone bounces away. It is essential that a piece of PVC pipe or hosepipe go over the bungee for safety, to prevent it from tangling around the fox's neck or bouncing back at its face.



❑ Burying Food

While foraging, bat-eared foxes spend much of their time digging for food and use the 20-cm claws on their forefeet to dig prey out. Burying insects in a sandbox where they can't escape encourages our bat-eared foxes to search for and dig up their food.



❑ Hiding Food

Bat-eared foxes are foragers and hiding food in their enclosure encourages this natural feeding behaviour. At Cheetah Outreach fruit is often placed in holes that have been drilled in logs, hidden under bark or scattered around the enclosure. Meat, fruit or other treats are sometimes placed inside toilet paper rolls, pine cones or papier-mâché balls to encourage our bat-eared foxes to retrieve food by either grabbing with teeth or paws. Hiding live insects encourages them to use their excellent hearing and digging abilities.



❑ Day-old Chicks

Dead baby chicks can supplement normal diet and add enrichment. Chicks should be de-yolked prior to feeding.



❑ Eggs

Bat-eared foxes are omnivores and enjoy a varied diet. They eat eggs in the wild so we give them raw eggs with a small hole so that they can lick the contents out. Eggs provide much stimulation and prolong feeding for up to 10 minutes.



Visual and Auditory

Objects that provide visual and auditory stimulation include the following:

❑ Outside Stimuli

Passing trains, motorbikes, running children, other animals, laborers, bicycles and wheelchairs. Having visual access to some of these not only provides mental stimulation but also increases activity as the bat-eared foxes run back and forth in their enclosure to get a better look at outside activity or to hide from it.

❑ Other Animals

Walking different types of animals on their leads past the bat-eared fox enclosure provides much interest and stimulation. The bat-eared foxes will even get up from a nap and come out of their shelter to watch an animal being walked by.

Olfactory

Bat-eared foxes have an excellent sense of smell and much time is spent sniffing, rolling in, rubbing against and urinating on objects.

❑ Providing Scents

Rubbing scents on objects in their enclosure encourages bat-eared foxes to use their noses to seek the smells out, sniff, lick, rub and roll on objects. Our bat-eared foxes have responded well to liver paste, fish gel and various spices, such as cinnamon and cloves, squirted or rubbed on logs and under bark or even in pine cones. We also give them straw from other animal enclosures, which they sniff and dig in.



❑ Moving Animals Between Enclosures

The bat-eared foxes can be moved into a foreign or lesser-known enclosure. If the enclosure is bat-eared fox-proof (underground fencing to keep them from digging out), they may be let off their leads. At Cheetah Outreach, the bat-eared foxes are let off their leads in the large exercise enclosure but must be supervised to keep from digging out. Playful behaviour, running around the enclosure, and intense sniffing, investigating and rolling may be observed.



Moving Objects Between Enclosures

Some of the exhibits can be moved from one enclosure to another, such as a small dog house or piles of branches or straw. 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

Bat-eared foxes are naturally curious and playful animals so any novel objects that encourage them to search, sniff, probe with nose or paw, play with or squabble over provides good enrichment. Novel objects are a good way of hiding food and encouraging foraging behaviours as well as providing exercise.

Never leave any toys unsupervised with the animals.

Papier-mâché Balls

Balls with holes in them arouse the curiosity of bat-eared foxes and encourage them to probe inside with noses. Dry cat food in a papier-mâché ball makes a rattling noise and attracts their attention. Pieces of meat or fruit inside encourages much sniffing.



❑ Balls and Rubber Kong Toys

Throwing these objects will encourage the bat-eared foxes to chase after and play with them. They have sharp teeth so the tougher rubber Kong toys work best. Throwing the toys for them not only gives them exercise but also encourages play with each other.



❑ Feather Duster

The bat-eared foxes at Cheetah Outreach respond well to feathers of any kind. They will chase after, jump for and pull on an ostrich feather duster.



Cardboard Boxes

Our bat-eared foxes are curious about cardboard boxes, returning to them over and over to sniff and investigate. 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:

Play

Play is an important part of social interaction and the bat-eared foxes at Cheetah Outreach spend a lot of time chasing, wrestling and play-fighting with each other. Play promotes activity and provides good exercise.



❑ Whip with Guinea Fowl Wing or Plastic Bottle

A guinea fowl wing attached to a whip encourages chasing and jumping. Our bat-eared foxes respond well to feathers of any kind and particularly like them attached to a whip so they can chase after them. The female in particular jumps well off the ground to get at feathers. Feathers should never be left inside unsupervised. Plastic bottles also trigger play instinct in our bat-eared foxes. Chasing the bottle often turns into a game of chase with each other.



❑ Walks

Walks can provide the handler with many opportunities to enrich a bat-eared fox's life. New and different environments can provide a variety of smells and sights to investigate. Not only do walks provide exercise to the bat-eared foxes but they give them great opportunities to forage, sniff, rub and roll in new scents. The bat-eared foxes at Cheetah Outreach may be let off their leads during walks in the big exercise enclosure, only under supervision, to give them the opportunity to run.



Social interaction/Tactile

Bat-eared foxes are social animals with a monogamous relationship, so social interaction is essential to pair bonding and to individual well-being.

❑ 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. Both bat-eared foxes at Cheetah Outreach have been hand-raised by humans so enjoy attention from people on a daily basis.



❑ Interaction with Other Bat-eared Fox

The pair bond between bat-eared foxes is as close as any canid, with pairs seldom separated except while small cubs are confined to the den. They sleep together in the den; rest together, often lying in contact; protest and assist each other; and social-groom and play together. Social interaction, including dominant and submissive posturing, nibble-grooming and play, is essential for the well-being of bat-eared foxes 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 bat-eared fox's life. When encountering other animals larger than themselves, they become very curious but cautious. When encountering meerkats through the fence, they run up and down the fence, trying to initiate play.

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.



Behavioral Conditioning

Behavioral conditioning is very important since it provides mental and intellectual stimulation. The level of conditioning depends on the individual and includes the following:

❑ Lead Walking

Lead walking begins at an early age in order for young animals to get accustomed to the restricted feeling of harness or collar and lead. Lead walking is important for all ambassador animals. With the bat-eared foxes at Cheetah Outreach, it allows them to go on walks and explore different areas of the facility.

