Awesome Krimpvarkies

Madagascar Lesser Tenrec Guideline Rev 6



Compiled by Lizl van Vreden

Introduction:

First of all, tenrecs are not a hedgehog. Although they look like one.

A tenrec is a species of mammal within the afrotherian family Tenrecidae endemic to Madagascar. Tenrecs are widely diverse; as a result of convergent evolution some resemble hedgehogs, shrews, opossums or mice. They occupy aquatic, arboreal, terrestrial and fossorial environments.

Family: Tenrecidae; Gray, 1821
Gestation period: Lesser hedgehog tenrec: 63 days
Scientific name: Echinops telfari
Class: Mammalia
Mass: Lesser hedgehog tenrec: 150 g-250g,
Length: Lesser hedgehog tenrec: 16 cm, can differ.
Lifespan: 10 years
Teeth: 32
Sexual Maturity: After their first torpor, from 9 months old

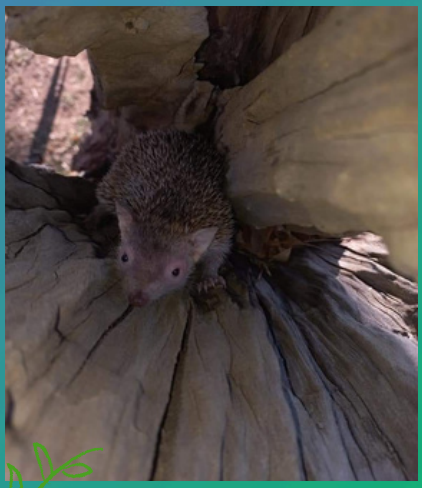


Behaviour:

Behaviour traits are being nocturnal, and being able to go into torpor,Scent marking, annointing and taking sand baths. Tenrecs are nocturnal animals and comes out of their hiding spot early evenings. Although they are found today around the world, and kept as pets, they live mostly in Madagascar and spend their winters in a deep sleep called torpor.



They are mainly insectivores, but they also eat invertebrates, reptiles and small mammals, eggs.
Tenrec`s depth perception are good and thus causing for them to be good tree climbers; they love to climb on branches and shrubs. Their nails are also very curved and tends to be cat-like to enable them to climb up into trees



Little bit more about tenrecs

The lesser hedgehog tenrec (Echinops telfairi) received its name in honour of Charles Telfair. Charles was an Irish botanist who established the first botanical gardens in Mauritius and Réunion.
He was honorary curator of the botanical garden at Pamplemousses from 1826 to 1829. For his ground-breaking work he was honoured to have plant and animal species named after him.
Those include the plant genus Telfairia, the lizard species Leiolopisma telfairii (Telfair's skink), and the mammal species Echinops telfairi (lesser hedgehog tenrec).

The tenrec was likely the first mammal to land on Madagascar millions of years ago, so the early lineage evolved over generations to adapt its body shape to its environment. Through a process called “adaptive radiation,” new tenrec species appeared, each physically suited for its ecological niche and free of competition, according to the International Union for Conservation of Nature (IUCN)/SSC Afrotheria Specialist Group.
Tenrecs were being studied and kept by zoo`s and museums since the 1950`s. In today`s society Zoo`s are considered as cruel, but in the past, they worked together with researchers and made ground breaking discoveries for us today to understand our pets and other animals better. The pet industry is also perceived as cruel, yet due to trading many animals are actually saved from extinction by the pet industry. Lost of land and habitat, deforestation are increasing the risk of animals that are still free and wild.

Tenrecs arrived shortly after hedgehogs in South Africa, around the early 2000`s. All tenrecs were imported from Madagascar at the time from the same importer. Tenrecs are still a true species and not perceived as domesticated.



Tenrecs prefer a sand bath above a water bath. Water baths can be done every 6 months. Normally this is done after their winter torpor if they have extreme dry skin. If humidity in cage is on point, a regular sand bath will be enough to get rid of dry skin.

Point to remember: If you do need to bath your tenrec, use tear-free baby shampoo with added linseed oil and rinse with clean water after wards. Water baths are **only** given when there is no other option.

To ensure that your tenrec enjoys his sand bath it is always a good practice to spray a bit of water onto the sand to keep it moist. If the sand is dried out, they will use it as a toilet.



Food:

Staple diet: Insects such as mealworms, superworms, beetles, crickets, black fly soldier larvae. Silkworms.
Tenrec`s that are on a insect only diet must get Calcium D3 added to the diet to prevent Metabolic Bone Disease. This can be done by sprinkling (powder dust) calcium powder over the insects 2 or 3 times a week.

All other foods are considered treats.

Wet cat food: Sachets cat food, example Pampers.
Proteins: Scramble eggs, mince-meat, (no salt or spices), fruits, cooked pumpkin. Cooked chicken livers and chicken.

Why don`t we give dry cat food?
They dont have flat square molars like hedgehogs, that can grind the pellets. They have V-shaped Zalambdodont dentition, that are designed to cut and slice.



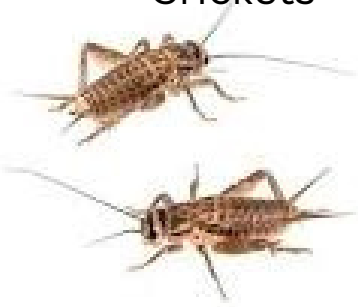
Insects in South Africa



Silkworms



Crickets

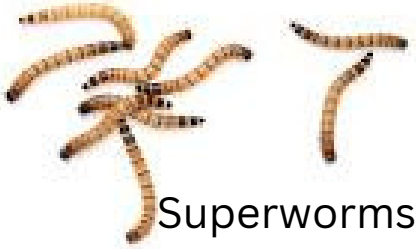






Black Fly Soldier Larvae





Superworms

Dubia Roaches



Mealworms



Gut-loading your insects

Gut-loading your insects plays an very important role in your tenrec`s diet. It ensures that your tenrec gets all important nutrient`s they need.
Captive-bred feeder insects like crickets, mealworms, and super worms often lack the diverse and balanced nutrition found in their natural diets, which can lead to deficiencies in essential nutrients like calcium and certain vitamins.
By feeding feeder insects a diet rich in calcium, vitamins, and other nutrients, the insects' guts become a temporary storage for these nutrients, which are then transferred to the tenrec when the insect is consumed.

List of items to feed your insects:



- Cat pellets
- Goldfish fish flakes
- Bran
- Oats
- Carrots
- Oranges
- Potatoes
- Apples
- Squash
- Sweet potatoes
- Collard greens
- Kale
- Mustard greens
- Romaine lettuce
- Butternut squash
- Bug- Grub



Gut-loading the insects 24-72 hours before giving it to your tenrec ensures optimal results.

Housing

Various types of cages are available, keep in mind that your cage must be large enough to keep your tenrec busy and occupied. Bars must be small enough to keep him safe inside.
Your cage must be secure and escape free, as they can cling on the wire and climb up on it, meaning, your cage must have a lid. Lots of branches and things to climb on.
They enjoy tree stumps and plants in their enclosures. Tenrecs love small hides and things to crawl underneath. They like digging also, therefor cage bottom must be covered with a subtract that can not cause their nails to get stuck on. See following pages for cage ideas.

You cage need to have:

- a nest / sleeping hut. This can be a wooden hut or DIY hide.
- a running wheel is optional if your cage is large, with loys of climbing objects, as many tenrecs don`t make use of a wheel.
- food and water bowls
- Sand bath container or area with sand, mostly recommended is Reptile sand and Kiddies Play sand. Never use Chinchilla bath sand as it is too fine and cause respiratory issues.
- Ladders / tree stumps etc.
- Floor covering- play sand, eco litter, bark chips, compost mix with coco peat. Just a reminder, play sand as a floor cover can become smelly if you have a male. Males tends to have a bit of a strong odor and when they take a sand bath, they gave of their aroma. Some people compare the smell with Dorito chips or even weed (marijuana). Eco litter is a good odor combat friend when it comes to males. Change your sand in the bath tray weekly, and you won`t have odor problems.

ALWAYS remember NOT to keep two males in 1 cage, they do fight. Females can also become hostile towards another tenrec if they were not raised together in one cage.

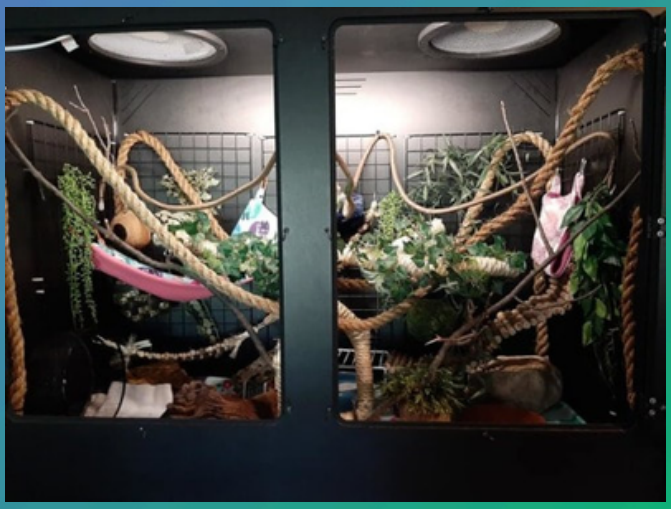
Cage decoration ideas



Terrarium cage with eco litter as floor covering. Wooden sleeping hide, no wheel but climbing objects available. The fountain provides more humidity to the cage.



Terranium cage with kiddies playsand as floor cover, wheel and less climbing objects. Wooden cabin hide.



Wooden cage with lots of climbing objects and ropes, plants, and vines.

Setting up your cage

Eco Litter



Kiddies Play sand



Reptile sand



Bark chips



Wooden bridges



Wooden ladder



Sleeping options









More cage things



DIY Tunnel from PVC pipe and fake grass



Plastic Plants can be used also





Feeding bowl



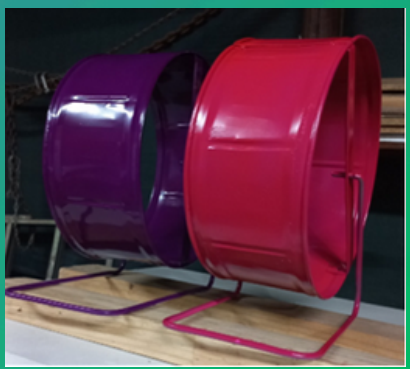
Plastic bowls



Feeding bowl

Suitable wheels for tenrecs





Torpor:

During winter times tenrecs goes into torpor, which is like hibernation. They become lethargic, eat less and eventually retire to a hide-out completely. After 2-4 months they will become more active by themselves. Torpor is a involuntary state, meaning the animal does not control it.

Adult Tenrec`s:

Adult tenrecs in South Africa does not need extra heat sources.
To interrupt (increase heat in cage) tenrecs torpor can actually have a negative impact on their immune system and shortens their life span.
Torpor is a natural process for them and intervening only disrupts their natural rhythm and metabolism.
It was noted by breeders and owners that tenrecs will sometimes become lethargic even in summer when there is a sudden drop of temperature. This will last only a few days.
During extreme heat waves, they can also go into a short torpor period to preserve energy. Even daily when tenrecs go to sleep it can be seen as a short torpor.
The reason for this is when they fall asleep all their bodily functions lowers down and they tend to feel cold. When they wake up, they slowly start moving around until all bodily functions, heartbeat, pulse and body temperatures, blood circulation is up.
During torpor it is a good practice to leave out food for your tenrec, as they do wake up occasionally and eat. Although they don`t eat much during this time, it is wise to watch them. If they fall asleep while still eating the food can cause tooth decay.

After normal torpor, the tenrecs will come in their seasonal breeding period.

Photo Credits: Telana Smith, Luna



Torpor Continue:

Juveniles in torpor:
Very important to know is that juvenile tenrecs, weighing less than 120 grams, under a year should be prevented from going into torpor as they don`t have enough body fat yet to survive a winter. Heat emitter lamps can be used to keep cage temperatures stable.

Temperatures and cage humidity readings:
Juveniles:
Temps: 25 degrees
Humidity: 60-80

Adults:
Winter Temps: Maximum 19 degrees
Summer Temps: 22-26 degrees.
Humidity Readings:
Winter: 40-50
Summer: 70-80

Hygrometer, it reads humidity and temeprature



Standard temperature meter



To increase humidity in cage: you can mist the enclosure regularly, use a humidity-holding substrate like coconut fiber or orchid bark, add a water bowl, consider adding live plants or a water fountain feature. Be careful not to make the substrates too wet. Just spray water lightly once a day. Even spraying the bath sand daily will help. Dried moss can be sprayed daily and does improves humidity in cage.



Breeding



Photo Credits: Lynda Mitchell

Their breeding period is seasonal, normally after torpor. Males often show a milky white liquid discharging from eye. During mating, which can last longer than an hour, the female mostly squeaks and the male puffs from time to time. The frequency of mating attempts decreases after 2 to 3 weeks, after which you need to separate the animals again.

Gestation period is around 63 days, and 3-9 babies can be expected. The pregnancy of a female becomes visible through increased body weight, swelling of the abdomen and (shortly before birth) the teats, show particular interest in food and nest building. She will appear to be constantly hungry and will even eat food that she normally don`t eat.

A new-born tenrec weighs about 0-10 g, the quill tips are under the skin, the eyes and ears are closed. After a few days the young are covered with quills, the eyes open around day 9. About a week later (or a little earlier) they start to leave the nest temporarily. At 3 weeks the first of the young start to take in solid food, at 4 weeks at the latest all young eat solid food. At this time, it is especially important to provide a varied diet. From day 35 on the mother will no longer provide milk and they can be separated from the mother.
Its important to handle babies from day 1 and to weigh them to monitor their progress.

Sexing Tenrecs:

Because of their cloaca it is difficult to determine the sex of a baby tenrec. Cloaca, in other words, it's an anus, genitalia, and urethra all in one, and in females it also serves as the depository for sperm. Only after their first torpor, when they reach sexual maturity, will there be a few visible things that will assist with identifying males from females.

Males:

They have enlarged rings around the eyes, which are caused by eye glands.

They generally have a shorter, broader head.

Females:

Adult females often show clearly visible teats. Four pairs of teats.

Females have longer, narrower faces.

There are different ways to identify if your tenrec is male or female:

1) Un-sexed animals can be paired with a male - the reaction (copulation or aggression) often shows the sex. Males also have a distinct odour, which can be recognized with a bit of experience.

2) By applying pressure to the lower part of the tenrec`s body, if it is a male, the penis will protrude from his cloaca. But, if it is still a juvenile, his male organ might still be too small to protrude.

3) Vets can do a DNA sexing test.

4) Experienced owners mostly distinguish between them by looking at facial features.



Health Matters:

Tenrecs are in general very healthy animals, but the healthiest can also get sick. The following illnesses are listed as a shortlist of possibilities.

Mites: Loss of quills, flaky dry skin, excessive scratching. Revolution for Kitten or Broadline for Kittens is recommended. Because Tenrecs skin appears to be much more resistant in terms of absorbing the Revolution and requires the
the full tube to be administered. Cage and all bedding to be cleaned. out and disinfected. Follow up treatment to be made one week later.

Obesity: Lack of exercise and too small cage and improper food are the main causes of this.

Tooth Decay: This can happen when your tenrec goes into torpor while eating!Ensure that they do not fall asleep while still chewing. Or when on a dry cat food diet

Respiratory infections: Sneezing, congested chest, licking of the nose is also a sign.

Dry skin: Coconut oil, vitamin e oil, linseed oil will cure this quickly.

Malnutrition: Lack of proper food and shortages of insects in their diets.

Digestive issues: Diarrhea or constipation. Can be treated with cooked pumpkin or Protexin. In the case of diarrhea check if food sources is not contaminated, in the case of constipation, ensure that your tenrec is drinking water and has adequate water sources. If not, seek a vet`s advice.

Metabolic Bone Disease: Mealworms & superworms can cause this if they do not get added Calcium D3 with their food.

Cancer: Tenrecs can also get most types of cancer like any other animal, and males are more likely to get cancer than females. (as concluded by the Association of Zoo Veterinarians Conference 2012)





Health matters Continue

You might find it helpful to keep the following products at hand:

1)Linseed oil – dry skin

2)Revolution for Kittens/ NexGard Combo for Kittens – Mites

3)Brunel Vitamin Tonic/ Virbac Vitamins, vitamins helps for healthy appetite and general health, especially for a sick or recovering tenrec. Dilute ½ teaspoon with 500 ml water and replace drinking water with this mixture.

4)Protexin- Probiotics – Excellent for a sick / recovering / pregnant or lactating females. Resolves upset stomach. Good for general health and absorption of vitamins and minerals. Tip of a knife point over food is enough.

5)Calcium D3- to be added with insects such as mealworms and superworms. If your tenrec is on a insect only diet, this must be offered 2 times a week. Sprinkle over insects.

Nail clippers- It is required to trim your tenre`c nails from time to time.

Contact details you might need:

1) Lizl van Vreden 072 090 3479 / lizlvanvreden@gmail.com
2) Onderstepoort 012 529 8105 -Gauteng
3) Nelspruit Animal Hospital – 013 752 8271 – Mpumalanga
4) Langenhoven Animal Clinic - 051 446 1324- Free State
5) Cape Exotic Animal Hospital – 021 975 0708- Cape Province



More on health matters:

Calcium D3



Protexin



Revolution for Kittens



Rescue Remedy



Linseed Oil

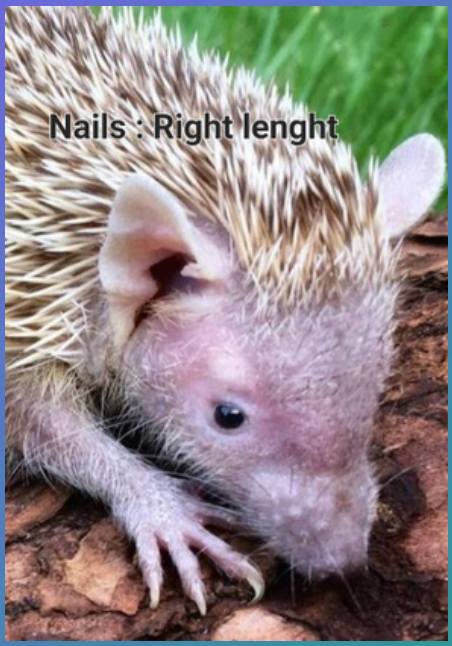


Brunel Vitamin syrup



Nail trimming :

Nail trimming can be a challenge if your tenrec does not approve. Best is to give it a go around midday when they are fast asleep. As you have read in the torpor section, tenrecs go into a “daily” torpor when sleeping, which cause them to be a bit cold and “stiff”. If you have a biter, it is your best oppurtunity to quickly trim those nails while your tennie is asleep!





Colours:

Tenrecs comes across in a variety of colours, from light to very dark. Most of these colours are availble in South Africa.



Black - photo credits Jennifer Griffith Ayers, Vulcan exotics



Dark Grey - Jennifer Griffith Ayers, Vulcan Exotics

Copper - Jennifer Griffith Ayers, Vulcan Exotics





Dark Red- Jennifer Griffith Ayers, Vulcan Exotics

Light Brown- Jennifer Griffith Ayers, Vulcan Exotics



Brown- Lizl van Vreden, Awesome Krimpvarkies





Dirty Blonde - Jennifer Griffith Ayers, Vulcan Exotics

Blonde - Jennifer Griffith Ayers, Vulcan Exotics



Legal matters

When keeping an exotic pet it is always important to check first of how legal it is in your area to keep such an animal.
Unfortunately, in some areas the officials of Nature Departments confiscate exotic pets and euthanize them. This is according to the by-laws of certain provinces in South Africa.
When owning a exotic pet without a permit in an area where it is prohibited it also creates the problem that when you are need of an vet, you won`t get help and the animal will have to suffer.

Province Requirements

Gauteng
No permit require.
Transport permits require if you are traveling to a province that does not allow exotic pets.

Mpumalanga
No permit require.
Transport permits require if you are traveling to a province that does not allow exotic pets.

Limpopo
No permit require.
Transport permits require if you are traveling to a province that does not allow exotic pets.

North- West
No permit require.
Transport permits require if you are traveling to a province that does not allow exotic pets.

Natal
Permit required, Natal do issue permits, it cost R50.

Free State
Banned- Against the law to keep exotic pets in the Free State. They confiscate all exotic pets

Western Cape
Banned. Against the law to keep exotic pets in the Western Cape. They confiscate all exotic pets

Northern Cape
Permit required
They do issue permits if you apply. Without a permit, they confiscate. They are reluctant to issue permits.

Eastern Cape
Permit required. Without a permit, they confiscate. Reluctant to issue permits.

The end....