

African Fat-Tailed Gecko (*Hemitheconyx caudicinctus*)

Difficulty: Intermediate

African fat-tailed geckos are 8-10" lizards with a long, stout body, stubby limbs, an oval head, pebbled skin, and a plump, segmented tail. Their coloring features alternating bands of medium and dark brown, sometimes with dark spots and white markings, including a white stripe from head to tail. Although they are geckos, they are unique from most others in that they have eyelids and can't walk up walls.

African fat-tailed geckos are native to West Africa, ranging from Senegal to northern Cameroon. They prefer dry Sahel and dry/moist savannah for habitat, and are generally found near rock crevices and among the leaf litter of dry forests.

With good care, African fat-tailed geckos generally have a 15-20 year lifespan, although longer is possible.

Shopping List

- Front-opening 36" x 18" x 18" glass terrarium
- 50w halogen heat bulb
- 5.5" dome lamp with ceramic socket
- Plug-in lamp dimmer
- 22" T5 HO forest UVB bulb (Zoo Med or Arcadia brand)
- 24" T5 HO fluorescent hood, with reflector
- Plug-in light timer
- Digital thermometer/hygrometer (x2)
- 2-4" naturalistic substrate
- Flat basking rock
- Hides/caves (at least 2)
- Misc. décor (leaf litter, logs, cork flats, live/artificial plants, ledges, etc.)
- Pressure sprayer
- Food and water dishes
- Calcium and vitamin supplement

Housing

African fat-tailed geckos may seem small, but they still need an enclosure that is large enough to give them adequate opportunity to explore, hunt, and generally exercise natural behaviors. They are also terrestrial, which means that they are a ground-dwelling species, and generally prefer terrariums that are wider than they are tall.

This is why the minimum recommended enclosure size for a single African fat-tailed gecko is **36”L x 18”W x 16”H**. If possible, larger is always better! Although they are considered terrestrial, African fat-tailed geckos are built to live amongst rocks, and are capable climbers.

Can multiple African fat-tailed geckos be housed in the same enclosure?

This species is generally considered to be solitary, and does not appear to live in groups in the wild. A pair can be successfully housed together in a large enough enclosure, but keep in mind that if the geckos don't get along, they can fight and severely injure one another. Males in particular are known to fight. Altogether, it's best to house only one gecko per enclosure.

Lighting & UVB

African fat-tailed geckos are nocturnal, which means that they are primarily active at night. This means that they are likely to prefer cooler temperatures, are exposed to low levels of indirect UVB during the day, and have exceptional night vision.

All lights should be turned off at night. You can use a 12/12 day/night cycle, or you can vary day length seasonally to encourage more natural hormonal rhythms. If you choose to do the latter, lights should be on for up to 13 hours/day during summer, and down to 11 hours/day during winter, with gradual increments in-between.

UVB Lighting

African fat-tailed geckos are capable of surviving without UVB lighting as long as they receive a high-D3 calcium supplement, but they are most likely to thrive when UVB is provided. In order to get the right strength of UVB (measured by UV Index, or UVI), distance and obstructions must be considered.

- Lamp placed over mesh: Zoo Med ReptiSun T5 HO 5.0, 22”
- Lamp installed under mesh: Arcadia ShadeDweller Kit, 12”

The UVB lamp should be installed on the warm side of the enclosure, close to the heat lamp, because heat and UVB work together. The gecko should be able to get no closer than 10” to the lamp.

(These recommendations are approximations. It is strongly recommended to use a Solarmeter 6.5 to determine the best placement to achieve a UVI of 1.0-2.0 in the basking area.)

Heating

Humans are *warm-blooded*, which means that our body temperature is automatically regulated. African fat-tailed geckos, however, are *cold-blooded*, which means that they have to move between areas of different temperatures to regulate their body temperature. In the wild, African fat-tailed geckos warm up during the day by sleeping in a warm burrow or patch of sunlight. In captivity, the best way to replicate the warming effects of sunlight is with a heat lamp.

- **Warm hide temperature:** 90°F (32°C)
- **Warm side temperature:** 80-90°F (27-32°C)

- **Cool side temperature:** 70-77°F (21-25°C)

At night, African fat-tailed geckos can tolerate a drop in temperature down to 60°F (16°C).

Generally speaking, a ~50w halogen heat bulb or two should be plenty for achieving the desired temperatures in your African fat-tailed gecko terrarium. However, if you notice that the warm hide is too warm, dial down the heat with a plug-in lamp dimmer or switch to a lower wattage bulb. If the general air temperature is too cool, try adding another or higher-wattage heat bulb.

Creating the Basking Area

Place one of the hides (I prefer a rectangular black box hide for this) directly under the heat lamp(s) and place a slab of stone like thin flagstone, aquarium slate, or slate tile on top to create a basking platform. The hide underneath will be the warm hide. The heat lamp should be able to heat the warm hide to the target temperature, but this can vary depending on room temperature, thickness of the rock, etc.

If your warm hide is not getting warm enough, add a heat mat under the hide box, covered with 1" of substrate to prevent direct contact. Plug this heat mat in to a thermostat such as Inkbird or Jumpstart brand. Place the thermostat probe inside the warm hide to regulate its temperature.

Tracking Temperature

To measure the general temperature of different areas of your terrarium, you can use an infrared thermometer (a.k.a. temperature gun). To passively track basking temperature, use a digital probe thermometer, with the probe placed on the basking surface under the heat source. The Etekcity 774 is a good infrared thermometer, and most reptile-brand digital probe thermometers function well.

Humidity

African fat-tailed geckos do best in an environment that **cycles between wet and dry seasons**. During the wet season (summer), shoot for 70-80% daytime and 100% nighttime. During the dry season (winter), shoot for 50% daytime and 70-75% nighttime. To increase humidity levels in the enclosure, use a handheld pressure sprayer. Distilled or reverse osmosis water works best if you want to avoid water spots.

It is also important to your gecko's health to provide them with consistent access to an area of higher humidity. This can be done with a "humid hide" — a cave or hide with moistened substrate, placed on the cool end of the enclosure. This helps your gecko shed successfully and stay hydrated. Keep the humidity levels in this hide around the same as your current target nighttime humidity.

You can monitor humidity levels in your humid hide with a digital probe hygrometer with the probe placed in the middle. You will need another device if you want to monitor the humid hide separately.

Substrate

Providing substrate for African fat-tailed geckos is a bit of a controversial issue, but the short of it is that as long as a naturalistic substrate is used, and the gecko is adequately heated, hydrated, has access to UVB, and is otherwise healthy, there's nothing to be worried about.

For African fat-tailed geckos, it's best to use a well-drained, naturalistic substrate that is similar to what is found in their native habitat. Clean sand or a 60/40 mix of topsoil and play sand works well. This substrate should be layered at least 4" deep to allow for burrowing behavior. However, new African fat-tailed geckos should pass quarantine before naturalistic substrate is added to their enclosure.

Feces and urates should be removed daily, and contaminated substrate should be scooped out and replaced. Substrate should be completely replaced once every 3-6 months, depending on how diligent you are about daily cleaning.

Décor

Decorations play a vital role in your African fat-tailed gecko's enclosure as environmental enrichment. Enrichment items encourage exercise, stimulate your pet's natural instincts, and help promote overall wellbeing. And, of course, they make the enclosure look nicer! Without décor, your gecko's terrarium is just an expensive box of dirt.

Hollow logs, thick branches, leaf litter, ledges, and artificial or drought-resistant live plants work well as décor in an African fat-tailed gecko terrarium. You can also provide additional hideouts. Arrange these items in a way that encourages your gecko to climb and explore, and provides a variety of places to sleep or shelter in during the day.

Food

African fat-tailed geckos are *insectivores*, which means that they eat insects. How often an African fat-tailed gecko needs to depends on age: The general rule is to offer 2 appropriately-sized bugs per 1 inch of your gecko's length, or however much they can eat in 15 minutes. Juveniles should be fed daily, and young adults fed every other day/every 3 days. Adults whose tail is fatter than their neck can be fed every 5 days.

Feeder insect options: crickets, dubia roach nymphs, discoid roach nymphs, black soldier fly larvae, mealworms, darkling beetles, hornworms, silkworms, grasshoppers/locusts

The key to providing a healthy, balanced diet for your pet is VARIETY. Provide as varied of a diet as you possibly can, and you will be rewarded with a healthier pet that always looks forward to mealtime.

Supplements

All insect feeders should be lightly "dusted" with calcium powder to balance the calcium-phosphorus ratio. Multivitamin powder can be used every once in a while to provide extra nutrients. All-in-one powders provide a balanced dose of both at once.

There are many options in terms of supplements, but Repashy CalciumPlus LoD and Arcadia EarthProA are both solid all-in-one supplements for African fat-tailed geckos that have appropriate UVB. For best results, use as directed by the label.