

# Giant Day Gecko (*Phelsuma grandis*)

**Difficulty: Intermediate**



Day geckos (*Phelsuma sp.*) are a family of small to medium-sized, day-active, arboreal lizards. While they are originally native to Madagascar, they are prolifically invasive in other areas around the world, including Florida and Hawaii. These geckos prefer tropical rainforest for habitat, where they spend essentially their entire lives in the trees hunting insects and eating fruits and nectar.

Giant day geckos are the largest *Phelsuma*, on average growing 8-10" long. They can also be distinguished from other members of the genus by their bright green bodies and red markings on their head and back. Some giant day geckos in captivity have been selectively bred for more of their red pattern.

With good care, a pet giant day gecko can live up to 20 years. Due to their low tolerance for handling and more particular needs for lighting and humidity, this is an intermediate-difficulty pet reptile.

## What You Need for a Bioactive Giant Day Gecko Enclosure

- Front-opening 36" x 18" x 36" glass terrarium
- [50w Zoo Med Basking Spot Lamp](#)
- [Exo Terra Deep Dome Fixture, Small](#)
- [Exo Terra Light Bracket Support Fixture](#)
- Plug-in lamp dimmer
- [Arcadia ShadeDweller UVB ProT5 Kit, x2](#)
- [Bio Dude Solar Grow T5 HO Single Bulb Light Strip, 36"](#)
- [Zilla 24/7 Digital Timer Power Center](#)
- [Bio Dude Digital Thermometer / Hygrometer, x2](#)
- [Exo Terra 2qt Mister](#)

- [Terra Fauna Bioactive Kit 36 x 18 x 18/24](#)
- [Bio Dude Crested Gecko Clean Up Crew Pack](#)
- [Terra Fauna Premium Plant Kit, 55 gallon](#)
- [Vines](#)
- [Branches](#)
- [Pangea Mini Gecko Feeder Magnetic Ledge](#), x2
- [Small gecko feeding cups](#)
- [Crested gecko diet powder](#)
- [Miner-All Outdoor Calcium Powder](#)

## Terrarium Size

The minimum enclosure size we recommend for housing a single day gecko is **36”L x 18”W x 36”H**. However, when it comes to choosing a terrarium for pet reptiles, keep in mind that larger is always better! Giant day geckos are large and very active, so it’s very important to give them plenty of room to explore and exercise. This makes them more fun to watch, too!

As a general rule, day geckos should not be housed together in the same enclosure.

## Lighting

Being a diurnal (day-active) species, giant day geckos require appropriate UVB lighting to stay healthy. Aside from enabling vitamin D3 synthesis, access to UVB lighting offers benefits such as preventing illness, improving nervous and digestive function, and improving mental health.

In other words, we recommend installing appropriate UVB lighting as part of your day gecko’s setup. Setting up two **12” Arcadia ShadeDweller UVB ProT5 Kits** end-to-end is likely to work the best for a 36”x18”x36” enclosure. Position the basking branch no closer than 6” below the UVB lamp.

Your UVB bulb must be replaced every 12 months to maintain its output. Resist the temptation to use other brands — when it comes to UVB, *brand matters!*

Because this is a bioactive setup, you will also need a plant light to encourage healthy plant growth. The extra illumination is also beneficial for further simulating sunlight! We recommend the **36” Bio Dude Solar Grow T5 HO Single Bulb Light Strip** for this purpose.

Both lighting and heating should be on for 12 hours/day.

## Heating

Like other reptiles, day geckos are *poikilothermic*, and that means that they need a range of temperatures within their enclosure so they can regulate their own body temperature as needed. Areas of heat speed up their metabolism and promote activities like digestion and healing. Cool areas slow the metabolism and promote activities like rest and energy conservation.

Giant day gecko temperature gradient:

- **Basking area temperature:** 95°F
- **Cool zone temperature:** 80-86°F

- **Nighttime temperature:** 72-80°F

To create a basking area for your day gecko, you will need a low-wattage white heat bulb like the **50w Zoo Med Basking Spot Lamp** and a fixture like small **Exo Terra Deep Dome Fixture**. If the basking area gets too warm, you can plug the lamp into a lamp dimmer like the **Lutron Credenza** and reduce the heat that way. If the basking area is too cool, you will need a higher-wattage bulb.

Day geckos have been known to hang upside-down from the mesh at the top of their enclosures, so you will need to suspend the heat lamp at least two inches above the mesh in order to prevent your gecko from accidentally getting burned. This can be done with an **Exo Terra Light Bracket Support Fixture** or similar.

The most accurate way to keep track of your terrarium's temperature gradient is to use a temperature gun like the **Etekcity 774**. However, because temperature guns are best at measuring surface temperature, it is best to also use a digital probe thermometer like the **Bio Dude Digital Thermometer / Hygrometer** to gauge air temperature at the basking spot. You can do this by zip-tying the probe to the basking branch directly under the lamp.

## Humidity

Day geckos need a high humidity environment. To be specific, they need an **average of 50-70% humidity**, wetter at night and drier during the day. Keep track of your humidity levels with a digital hygrometer like the **Bio Dude Digital Thermometer / Hygrometer**, with the probe secured to a branch in the middle of the enclosure, preferably in a shaded area.

To raise humidity in your gecko's enclosure and provide a source of drinking water, use an **Exo Terra 2qt Mister** to wet things down every morning and evening, preferably when it's dark. If you need help increasing humidity, you can run a fogger/cool mist humidifier at night.

## Substrate

A thick layer of bioactive-compatible substrate is essential to creating a successful bioactive giant day gecko enclosure.

First, pour approximately 2" of clay balls or **Bio Dude HydroGrow** drainage material on the bottom of the enclosure. Then, place a layer of **tight mesh** on top to help prevent soil from getting into the drainage layer.

Next you will need a soil-like mix that mimics the conditions of a tropical rainforest and will nourish your plants. If you want to make your own, you will need a mixture of 50% organic topsoil, 25% peat moss, and 25% play sand. Mix that with leaf litter, sphagnum moss, and an appropriate amount of **Bio Shot** to inoculate your soil with beneficial microfauna. This layer of soil should be as deep as possible.

Alternatively, you can let The Bio Dude do the work for you with **The Bio Dude's Terra Fauna 36x18x18 bioactive substrate kit**.

To make the substrate functional, make sure to add tropical CUC organisms like powder blue/orange isopods, dwarf isopods, and arid springtails. You can also add other species like dubia roaches, earthworms, and millipedes!

For best results, let your plants and CUC get established for at least one month before introducing your gecko to the setup. This is also a good time to make sure you have the right temperatures and humidity.

## Decorating the Enclosure

Enclosure décor is more than just making your setup look good. It's also an important part of providing *environmental enrichment* to your gecko, which enhances your pet's quality of life by providing opportunities to express natural behaviors. Considering that day geckos are arboreal, two of their most important natural behaviors are climbing and hiding, which means that you will need lots of **branches**, **vines**, and **foliage** to fulfill that need. Don't be afraid to clutter it up, but make sure there's some open space for basking and jumping.

Live plants in particular are critical to helping your mini-ecosystem function properly.

## Feeding Your Giant Day Gecko

Day geckos are omnivores. Specifically speaking, they primarily feed on fruit and insects. As pets, however, they do best on a diet of specially-formulated crested gecko diet powder (CGD) and live insects. Here is a quick feeding schedule you can reference:

- Hatchlings and Juveniles (0-12 months) — insects daily, CGD 2x/week
- Adults (>12 months) — insects 2x/week, CGD 1x/week

Offer 3-5 insects slightly smaller than your gecko's head at each meal. Crested gecko diet and water should be served in small cups/bowls mounted in a ledge attached to the wall, as day geckos don't like to eat on the ground.

The key to providing a healthy, balanced diet for any reptile is VARIETY! Here's a quick list of foods that are safe to feed to your day gecko:

Best crested gecko diet powders: Pangea, Repashy, Black Panther Zoological, Gecko Pro, Leapin' Leachie, Zoo Med

Best insects: crickets, dubia roaches, discoid roaches, hornworms, silkworms

## Supplements

Although feeder insects should be gutloaded for 24-48 hours prior to feeding, they will also need to be "dusted" with an appropriate supplement powder just before. There are many options, but **Arcadia CalciumPro Mg** and **MinerAll Outdoor** are both solid D3-free calcium supplements. For best results, use as directed by the label.

**Care information courtesy of ReptiFiles.**