

Green Tree Python (*Morelia viridis*)

Difficulty: Hard

Green tree pythons are moderately robust, constrictor-type snakes with smooth scales, peanut-shaped head, distinct neck, vertical pupils, and heat pits on the snout and lips. The rear portion of the head is divided into two large bulges. Length averages between 40-51" (1-1.3m), with females being significantly larger.

Although best known for their bright green adult color, adult green tree pythons may also have aquamarine and/or yellow markings. Due to a phenomenon called *ontogenetic color change*, juvenile green tree pythons look very different from adults, with a dark red or bright yellow base color interrupted by yellow/white or maroon/brown markings, respectively.

Green tree pythons are primarily native to New Guinea and the surrounding islands, but they can also be found on Northern Australia's Cape York Peninsula. They prefer tropical forest for habitat, where they are mainly arboreal (tree-dwelling) in habit, although they will come down to the ground to hunt. Adults are crepuscular, which means that they are mostly active around dusk and dawn, but juveniles are more diurnal (day-active).

Due to their stunning appearance, green tree pythons are popular pets and display animals, and when purchased captive-bred, can be relatively hardy in captivity. If you pay attention to providing appropriate green tree python care, this pet is likely to live 15-20 years.

Shopping List

- 3'L x 2'W x 2'H reptile enclosure (front-opening)
- Mini dome lamp fixtures, x4
- 35w mini halogen flood bulbs, x4
- 22" low-output T5 SO UVB bulb and reflective fixture
- 34" ~6500K LED plant grow light
- Power strip with digital timer
- Handheld pressure sprayer
- 30-60 quarts coconut fiber/coir substrate
- Climbing branches, at least 2
- Live or artificial foliage (preferably live)
- Digital probe thermometer and humidity gauge, x2
- Large water bowl
- Low-D3 all-in-one reptile supplement powder
- 12" soft-tipped feeding tongs

Housing

A snake's enclosure should be at least large enough to allow the animal to stretch out to its full length as desired. Since green tree pythons are arboreal, you must also allow enough height for climbing/perching. This leads to a fitter and overall healthier snake both physically and psychologically. An enclosure measuring **at least 3'L x 2'W x 2'H**, or 0.9m x 0.6m x 0.6m is a good starting point.

Using an enclosure larger than the minimum is strongly recommended. **Bigger is always better as long as the space is useable to your pet!** Green tree pythons have a reputation for being sedentary, but the truth is that they are active snakes which will travel an average of 164'/50m per day in the wild.

Can multiple green tree pythons be housed together?

Green tree pythons are not particularly social animals, so you don't have to worry about them getting lonely. In fact, keeping multiple pythons together is likely to be stressful for the snakes and lead to competition for resources, preventing them from thriving. For this reason it's best to house only one individual per enclosure.

Lighting & UVB

One of the things that makes green tree pythons unique is that they are primarily diurnal when they are young, but they become more crepuscular after they change into their adult coloring. What does this mean for you? It means that your pet is likely to benefit from having a brightly illuminated environment during the day, as well as access to UVB lighting, even as an adult. Aside from regulating their day/night cycle and associated hormonal rhythms, UVB lighting in particular gives snakes all of the vitamin D3 they need, supports immune health, and encourages increased activity and better appetite. Although green tree pythons can technically survive without UVB light, ReptiFiles strongly recommends providing it in order to promote optimum welfare!

Lights should be on for 12 hours/day and completely turned off at night.

UVB Lighting

UVB lighting can be tricky, because in order to get the right strength of UVB (UV Index, or UVI), distance and potential mesh obstruction must be considered. The basking branch should be placed as follows. Given distance is from the snake's back to the UVB lamp.

- Arcadia ShadeDweller MAX
 - mounted over mesh — 6-8"
 - mounted under mesh — 8-10"
- Zoo Med T5 HO Reptisun 5.0 or Arcadia Forest 6%
 - mounted over mesh — 9-11"
 - mounted under mesh — 12-15"

(These recommendations are approximations based on available data. For best results, use a Solarmeter 6.5 to determine the best placement to achieve a UVI of 2.0-3.0 in the basking area.)

Your UVB must be long enough to span half to two-thirds of the enclosure and placed on the warm side of the setup. This bulb should be housed in an Arcadia ProT5 or Vivarium Electronics reflective fixture (yes, brand does make a difference).

Additional Illumination

Halogen and UVB lamps generally aren't enough to create the kind of bright light that simulates daytime. You will also need a nice bright 6500K LED or T5 HO fluorescent grow light, long enough to span most of the enclosure's length. I prefer the Arcadia Jungle Dawn LED Bar and the Bio Dude Glow & Grow LED.

Heating

Humans are *warm-blooded*, which means that our body temperature is automatically regulated. Green tree pythons, however, are *cold-blooded*, which means that they have to move between areas of different temperatures in order to regulate their body temperature. This is the range that works best for green tree pythons:

- **Basking: 80-86°F (27-30°C)**
- **Cool end: 70-80°F (21-26°C)**
- **Nighttime: 68-72°F (20-22°C)**

In captivity, using incandescent heat bulbs is the best way to replicate the way a reptile's environment is warmed by the sun. Because green tree pythons prefer relatively low temperatures and will be basking fairly close to the heat source, ReptiFiles recommends using a cluster of at least 4 35w halogen flood bulbs such as the [Arcadia Halogen Flood Heat Lamp](#) or [Zoo Med Nano Halogen Heat Lamp](#) in a couple of [Zoo Med Nano Combo Dome Lamp Fixtures](#). This combination is likely to deliver the best results.

If this is not possible for whatever reason, success is also likely to be achieved with an arrangement of 2 higher-wattage incandescent heat bulbs such as the [Exo Terra Daytime Heat Lamp](#) in the [Zoo Med Mini Combo Deep Dome Dual Lamp Fixture](#).

How to measure temperature in a green tree python enclosure:

To measure basking temperature, you will need a digital probe thermometer placed on the basking branch. Zip ties often work well for holding probes in place. For monitoring the cool end, you will need an additional digital probe thermometer placed in the shade in the middle of the setup.

If you notice that your basking area is getting too hot, dial it down with a [rheostat](#) or [proportional \(dimming\) thermostat](#). If your basking area is too cool, you will need higher wattage bulbs.

Humidity

Green tree pythons are a tropical species, and sensitive to dehydration, but that doesn't mean that they should be kept sopping wet. In fact, keeping them too wet can be just as bad as keeping them too dry! The key is to keep their enclosure humid but well-ventilated enough that is capable of drying out between mistings.

Green tree pythons are likely to do best with **humidity levels that fluctuate between 40-70%**. Higher right after a misting is fine as long as the enclosure is allowed to dry out to around 40% before misting again.

➤ *Note: Hatchlings and juveniles are more prone to dehydration than older individuals.*

Ambient humidity should be tracked via digital probe hygrometer with the probe in the middle of the setup.

How to humidify your green tree python terrarium:

To raise the humidity in your snake's enclosure, you can use a pressure sprayer like the [Exo Terra Mister](#) every evening, and again in the morning if needed. Alternatively you can install a [Mistking automatic misting system](#).

Substrate

Green tree pythons are likely to be healthiest and happiest when they are housed on a substrate (a.k.a. "bedding") that imitates the conditions of their natural habitat and facilitates moderate to high humidity. The substrate should be **2-4" deep** to cushion your snake's body and help maintain healthy humidity. This takes about 30-60 quarts of substrate for a 3' x 2' enclosure. A layer of clean **leaf litter on top is recommended**.

Options for substrate include: DIY tropical mix: 40% plain topsoil + 40% coconut fiber + 20% play sand (by weight), [Zoo Med Reptisoil](#), [Zoo Med Eco Earth](#), [Exo Terra Plantation Soil](#), [Bio Dude Terra Firma bioactive kit](#), [Josh's Frogs BioBedding Tropical bioactive substrate](#)

Feces and urates should be removed immediately, and contaminated substrate should be scooped out and replaced. Substrate should be completely replaced every 3-4 month depending on how diligent you are about routine spot-cleaning.

Décor

Decorations play an important role in your python's enclosure as environmental enrichment. These items are not optional — they are essential to promoting positive welfare for your pet! Enrichment items encourage exercise, stimulate your snake's natural instincts, and help stave off boredom.

Appropriate options for green tree python enrichment items include: cork logs, sturdy branches, thick and/or braided vines, large, sturdy live plants (ex: ficus, dracaena, pothos, schefflera), sturdy artificial plants, ceiling-mounted hide boxes

At minimum, you will need a couple of sturdy branches and foliage for cover. One of these branches needs to be within 12" of the ground to function as a "hunting perch". However, I encourage you to go well *beyond* the minimum to maximize the amount of usable space in your pet's home. All branches should be well secured to prevent them from falling and potentially injuring your snake. However, it's best to make these branches removable as well for convenience of handling.

Food

Green tree pythons are *carnivores*, which means that they need a diet of whole animal prey in order to get the nutrition that their bodies need. Here's a potential feeding schedule to keep your pet in lean body condition:

- **Hatchlings — every 5-7 days**
- **Juveniles — every 1-2 weeks**
- **Adults — every 2-4 weeks**

A good rule of thumb is to provide a prey item(s) which totals around 15% of your snake's weight for individuals younger than 2 years old, 5-10% for individuals between 2-5 years old, and around 5% for those older. You can weigh your snake by placing them in a plastic tub or bowl on a kitchen gram scale.

Although rats and mice are the most common feeders, snakes generally need to more than just rats and mice to truly thrive. The key to providing a healthy, balanced diet for your pet snake is VARIETY, the way they eat in the wild. Provide as varied of a diet as you possibly can, and you will be rewarded with a healthier snake!

Prey ideas for green tree pythons: mice, African soft-furred rats, domestic rats, hamsters, gerbils, quail, chicks, Reptilinks (iguana and frog meat in particular)

It's best to offer frozen-thawed prey rather than live to your pet snake. This is safer for the snake and generally considered to be more humane as well. Prey should be thawed in a plastic bag in warm water to around 100°F/38°C before offering. Use soft-tipped feeding tweezers to reduce the risk of getting accidentally bitten when the snake strikes.

- *Tip: Hornworm moths can be offered to green tree pythons as an occasional treat! You will need to raise them from captive-bred hornworms, but these can be released live into your snake's enclosure.*

Supplements

Green tree pythons can survive without vitamin or mineral supplements, but they can be a good way to help prevent nutritional deficiencies. Occasionally lightly dust the prey item with a 50/50 mix of calcium and multivitamin before thawing. [Arcadia RevitaliseD3](#) and [Repashy CalciumPlus LoD](#) are both good options.

Water

Your snake should have free access to a large bowl of fresh water every day. This water should always be kept clean, with the bowl scrubbed out with veterinary-grade disinfectant such as [Rescue](#) or [F10SC](#) weekly.