

## Jackson's Chameleon (*Trioceros jacksonii* ssp.)

**Difficulty:** Hard

Jackson's chameleons are 7-14" long lizards that are generally bright green in color with a darker pattern, although exact pattern and color depends on subspecies, sex, temperature, and mood. Contrary to popular belief, chameleons don't change their color to camouflage. Males have three horns, while females tend to have fewer or no horns at all. Like other chameleons, Jackson's chameleons also have wide, splayed toes ("zygodactylus feet"), bulging independently-moving eyes, and a curled tail.

Jackson's chameleons are native to Kenya and Tanzania, although there is a significant invasive population on the Hawaiian islands. They are typically found on cool, sunny mountain slopes with plenty of rain and vegetation.

Male Jackson's chameleons generally live for up to 9 years, while females only live up to 5-6 years.

Jackson's chameleons are fascinating pets, but they tend to be more difficult to keep than most other popular reptiles, as they are sensitive and require lots of specialized equipment.

### Shopping List

- Front-opening 24" x 24" x 48" mesh cage
- Dimmable heat lamp with ceramic socket
- 40w white heat bulb
- 24" dual fluorescent light fixture with reflector
- 22" 6500K fluorescent bulb or LED
- 22" T5 HO forest UVB bulb
- Power strip with programmable digital timer
- Pressure sprayer
- Dripper (optional)
- Cool mist fogger/humidifier
- 5 gallon drainage bucket
- Branches
- Vines
- Live or artificial foliage (preferably live)
- Infrared temperature gun
- Digital thermometer/hygrometer
- Calcium supplement w/o vitamin D3
- Multivitamin
- Bee pollen powder
- Live feeder insects

## Housing

Jackson's chameleons need an enclosure that is large enough to give them adequate opportunity to thermoregulate, explore, hunt, and generally exercise natural behaviors. They are also arboreal, which means that they are a tree-dwelling species, and generally prefer spacious terrariums that offer height. The minimum recommended enclosure size for a single Jackson's chameleon is 24" L x 24" W x 48" H. If possible, larger is always better.

If you are using a full-mesh enclosure, ReptiFiles recommends installing thin plastic panels to cover the back and one of the sides of the enclosure. This helps your chameleon feel less exposed, which decreases stress, and also helps maintain healthy humidity levels.

Particularly young Jackson's chameleons (less than 10 months old) may benefit from being temporarily housed in a smaller 16" x 16" x 30" enclosure.

### Can multiple Jackson's chameleons be housed in the same enclosure?

In the wild, Jackson's chameleons are fairly solitary. They may cross paths with other chameleons in the trees every once in a while, but they don't actively seek each other out unless they're looking for a mate. For this reason, it's best to house only one chameleon per enclosure.

## Lighting & UVB

Jackson's chameleons are diurnal, which means that they are most active during the day. This also means that they need exposure to bright light and UVB during the day. Lighting and heating should be on for 12 hours/day.

### UVB Lighting

UVB lighting can be tricky, because in order to get the right strength of UVB (measured by UV Index, or UVI), distance must be considered. As a rough estimate, to provide appropriate UVB to a Jackson's chameleon in a 24" x 24" x 48" enclosure with a basking branch that places the chameleon's back 6" below the top mesh, you will need one 22" Arcadia T5 HO 6% or Zoo Med T5 HO ReptiSun 5.0 in a reflective T5 HO fixture.

*(These recommendations are approximations. It is strongly recommended to use a Solarmeter 6.5 to determine the best placement to achieve a UVI of 2.0-3.0 in the basking area.)*

### Daylight Lighting

A UVB bulb isn't bright enough to meet a Jackson's chameleon's light needs. So you will need to supplement with a bright, 6500K T5 HO fluorescent or LED lamp, long enough to span most of the top of the enclosure. The Arcadia Jungle Dawn LED Bar, Bio Dude Glow & Grow, Bio Dude Solar Grow, and the Vivosun T5 HO 6500K grow bulb are all good choices.

## Heating

Humans are *warm-blooded*, which means that our body temperature is automatically regulated. Jackson's chameleons, however, are *cold-blooded*, which means that they have to move between areas of different temperatures to regulate their body temperature. In the wild, Jackson's chameleons warm up by basking in a warm patch of sunlight. In captivity, sunlight can be replicated with a heat lamp.

- **Basking area temperature:** 80-85°F (26-29°C)
- **General temperature:** 68-75°F (20-24°C)
- **Nighttime temperature:** 50-65°F (10-18°C)

Generally speaking, it doesn't take much to achieve such a low basking temperature. A 40w white incandescent bulb should be plenty. However, if you notice that the basking area is too warm, dial down the heat down with a plug-in lamp dimmer or switch to a lower wattage bulb. If your basking area is too cool, you will need a higher wattage bulb.

The basking area should be a vine or branch directly under the heat lamp, placed in a way that puts the chameleon's back about 6" below the mesh. Because your Jackson's chameleon is arboreal and will be living in a tall enclosure, the warmest temperatures will be at the top (near the heat lamp), and the coolest temperatures will be toward the bottom. You will need vines, branches, and foliage at all levels to allow for proper thermoregulation.

To measure the general temperature of different areas of your terrarium, 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

Jackson's chameleons do best in a high-humidity environment, with a **relative humidity around 40% during the day, and 75-100% at night** as measured by a digital probe hygrometer with the probe placed in the middle of the enclosure. Humidity levels that are consistently too high or low can cause health problems for your chameleon. However, it is natural for humidity to be lower in the warm area and higher in the cool area.

To raise the humidity in your chameleon's enclosure (and provide an extra source of drinking water), use a pump-style pressure sprayer to wet down the enclosure every morning and evening, preferably when it's dark. It's also a good idea to mist again (lightly) in the mid-afternoon, or provide a dripper. An automatic misting system like MistKing makes misting less of an inconvenience.

It's best to also use a cool mist humidifier or fogger on and off for a few hours prior to "sunrise". Please note that humidifiers and foggers must be used with distilled water and periodically disinfected to prevent illness. Never use a humidifier or fogger during the day, as this also presents a health risk.

It's best to use distilled water for misting and fogging, as tap water is likely to clog your equipment.

## Substrate

Because of the sheer amount of water that goes through a Jackson's chameleon's enclosure on a daily basis, a traditional substrate layer will quickly get saturated. Instead, most keepers opt for using a drain

at the bottom of the enclosure. There are many helpful videos online on how to rig your own drainage system using a table/shelf and a bucket.

## Décor

Decorations play a vital role in your chameleon's enclosure as environmental enrichment. These items provide hiding places, encourage exercise, stimulate your pet's natural instincts, and help promote overall wellbeing. And, of course, they make the enclosure look nicer!

Branches, vines, and live or artificial plants work well as décor in a Jackson's chameleon terrarium. Many chameleon keepers prefer to use potted or hanging plants to maximize available foliage. Arrange these items in a way that encourages your chameleon to climb and explore, provides an unobstructed place to bask, and provides a variety of options for places to hide as needed.

## Food

Jackson's chameleons are *insectivores*, which means that they need to eat a variety of insects in order to get the nutrition that they need. In the wild, they eat mostly bees, wasps, other flying insects, and small beetles. A list of safe insects you can feed your pet chameleon includes:

- Banana roaches
- Black soldier flies and larvae
- Blue bottle flies and larvae
- Crickets
- Dubia roaches
- Hornworms and sphinx moths
- Locusts
- Mantis hatchlings
- Red runner roaches
- Silkworms
- Snails (captive bred only)
- Stick insects

How often Jackson's chameleons need to eat depends on age:

- **Juveniles** — as much as they can eat
- **Adults (over 1 year)** — 3-5 appropriately-sized insects every other day

The key to providing a healthy, balanced diet for your pet is VARIETY!

## Supplements

Jackson's chameleons are sensitive to the vitamins and minerals present in their diet. However, supplementation is still needed. Feeder insects should be gutloaded for 24-48 hours and then lightly dusted with an appropriate supplement prior to each feeding according to this schedule:

- Every feeding: plain calcium powder
- 1x/month: multivitamin powder, with vitamin D3 and vitamin A

## Water

Jackson's chameleons get most of their drinking water from regular mistings, but it's best to also use a dripper to provide drinking water in the mid to late afternoon.

For more information about Jackson's chameleon care, read the full-length [Jackson's Chameleon Care Guide](#) at ReptiFiles.com!