

## Tokay Gecko (*Gekko gekko*)

**Difficulty:** Hard

Tokay geckos (*Gekko gekko*) are a nocturnal, carnivorous type of arboreal gecko widespread throughout southeast Asia and invasive in other parts of the world, including Florida (USA), Martinique, and the islands of Belize. They prefer tropical forest for habitat, but are also commonly found hunting insect pests in rural human homes. As a strictly arboreal species, they spend most of their lives up off the ground.

Tokay geckos average 10-12" / 25-30cm long, but are capable of growing as large as 16" / 40cm. Females are generally smaller than males. The wild type has a pale gray to blue base color and orange/red or black spots, depending on locality. The body is robust, with large lidless eyes, vertical pupils, a rounded snout, small but sharp teeth, bumpy skin, and sticky toe pads.

Tokay geckos are infamous for their bold, aggressive attitudes, so if this sounds intimidating, this is not the pet for you. But if you appreciate them for what they are and pay attention to providing high-quality tokay gecko care, you may expect your pet to enjoy a lifespan of up to 15-20 years.

### Shopping List

- Front-opening 24"L x 24"W x 48"H terrarium, or larger
- 50w halogen flood basking bulb, x2
- 5.5" dome heat lamp with dimmable switch, x2
- 40w ceramic heat emitter, x2
- Wire lamp fixture, x2
- 24" Zoo Med T8 Reptisun 5.0
- 24" Zoo Med T8 Terrarium Hood
- Power strip with digital timer function
- Digital probe thermometer/hygrometer, x2
- Pump-style pressure sprayer
- Tropical reptile substrate, 20+ quarts
- Environmental enrichment
  - Artificial or live tropical plants
  - vines
  - branches
  - cork hollows
  - decorative ledges
- Magnetic gecko ledge, large
- Calcium supplement powder w/vitamin D3
- Multivitamin supplement powder

## Housing

Tokay geckos need an enclosure that is large enough to give them adequate opportunity to explore, hunt, and generally exercise natural behaviors. They are also arboreal, which means that they need a terrarium that provides a generous amount of climbing space. Considering that the average tokay grows up to 12"/30cm long, the minimum recommended enclosure size for a single tokay gecko is **24"L x 24"W x 48"H / 60 x 60 x 120cm** or similar. However, particularly large tokays will need a larger setup at least 36"L x 24"W x 48"H / 90 x 60 x 120cm.

### Can multiple tokay geckos be housed in the same enclosure?

No. Due to highly territorial behavior, it's best to keep only one tokay gecko per enclosure.

## Lighting & UVB

Tokay geckos are nocturnal, which means that they are primarily active at night. However, they still need a light on during the day to help regulate their day/night cycle. Lights should be left on for 12 hours/day.

### UVB Lighting

Because they are nocturnal, technically tokay geckos can survive without UVB lighting as long as they get plenty of supplemented vitamin D3. However, you are still going to get the best results from using UVB lighting rather than relying on supplements.

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 tokay gecko in a 48" tall enclosure, you will need one of the following:

- Zoo Med T8 ReptiSun 5.0 + Zoo Med T8 Reptisun Terrarium Hood
- Arcadia ShadeDweller Arboreal UVB kit

Place the basking branch no closer than 6" below the lamp. UVB bulbs must be replaced every 12 months in order to remain effective.

*(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 at the top of the enclosure.)*

## Heating

Humans are *warm-blooded*, which means that our body temperature is automatically regulated. Tokay geckos, however, are *cold-blooded*, and they need to move between areas of different temperatures in order to regulate their body temperature. In the wild, tokay geckos warm up by basking in a warm patch of sunlight. In captivity, sunlight can be replicated with a white incandescent heat lamp.

- **Basking area temperature: 90-100°F (32-38°C)**
- **Cool zone temperature: 80-85°F (26-29°C)**
- **Nighttime temperature: 76-80°F (24-26°C)**

Due to their size, you will need two ~50w halogen flood bulbs for basking, such as the Arcadia Halogen Lamp in a dual dome lamp such as the Zoo Med Mini Combo Deep Dome fixture. This wattage should be plenty, but results will vary based on your room temperature. If you notice that the basking area is too

warm, dial down the heat down with a 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. Because your gecko 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 track basking temperature, use a digital probe thermometer, with the probe zip-tied to the basking surface under the heat source. Most reptile-brand digital probe thermometers function well.

### **Night Heat**

Because tokay geckos prefer warmer nighttime temperatures than present in the average home, you will likely need a lightless heat source for nighttime heating. One or two low-wattage ceramic heat emitters connected to a lamp dimmer or on/off thermostat is likely to be your best bet for creating comfortable nighttime temps for your tokay.

### **Humidity**

Tokay geckos do best in a high-humidity environment with **humidity levels between 60-80%** 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 gecko. However, it is natural for humidity to be lower in the warm area and higher in the cool area. It is also normal and healthy for humidity levels to rise at night and fall during the day.

To raise the humidity in your gecko's enclosure (and provide an extra source of drinking water), use a pump-style pressure sprayer such as the Exo Terra Mister to wet down the enclosure every evening, and in the morning if necessary.

### **Substrate**

Because tokay geckos are arboreal (tree-dwelling), they don't spend much time on the ground. Although it's not necessary to use bedding for them, it's very useful for helping to stabilize humidity. It also acts as a cushion if they fall from their perch, which may happen while they are hunting. It's best to use at least 2" / 5cm of moisture-retentive substrate similar to the soil in a tokay gecko's natural habitat.

**Here are some reliable options:** DIY tropical mix (60% organic topsoil, 40% coconut fiber), Zoo Med Reptisoil, Zoo Med Eco Earth, Exo Terra Plantation Soil, The Bio Dude Terra Fauna bioactive kit. For best results, add a generous layer of leaf litter on top.

Feces and urates should be removed daily, and contaminated substrate should be scooped out and replaced. Substrate should be completely replaced once every 3-4 months, depending on your needs.

### **Décor**

Decorations play a vital role in your 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 terrarium is just a glass box with dirt and a feeding ledge. Just because tokay geckos can climb up glass doesn't mean they shouldn't have other climbing materials available. They also need places to hide that are not on the ground.

**Here are some ideas to get you started:** branches, cork hollows, vines, live plants (ex: dracaena, sanseveria, pothos, philodendron, bromelia), artificial plants, decorative ledges

Arrange these items in a way that encourages your gecko to climb and explore, offers plenty of shelter, and creates areas of both light and shade.

## Food

Tokay geckos are *insectivores*, which means that they need a varied diet of insects to get the right nutrition. In the wild, they eat mostly insects such as cockroaches, grasshoppers, and centipedes, but they are also known to occasionally eat frogs, lizards, and snakes. For pets, it's best to offer primarily insects, with the occasional vertebrate treat.

Juvenile tokays should be fed daily, and full-grown adults should be fed every other day. Offer as many insects as the lizard is capable of eating in a 5-minute period, no larger than the gecko's head.

Best feeder insects for tokay geckos: crickets, dubia roaches, discoid roaches, red runner roaches, grasshoppers/locusts, hornworms, silkworms

Crested gecko diet and pinky mice should be offered as occasional treats no more than 2x/month.

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

Feeder insects need to be “dusted” with a light coating of calcium powder before every feeding to balance their calcium-phosphorus ratio, and adding a multivitamin to the routine helps prevent deficiencies from developing.

There are many options, but the Arcadia Earthpro system or Repashy CalciumPlus LoD are both solid all-in-one supplements. For best results, use as directed by the label.

## Drinking Water

Although your gecko will get drinking water from daily mistings, it's best to always keep a bowl of clean water available on a magnetic gecko ledge. This bowl should be scrubbed out with veterinary disinfectant such as Rescue or F10SC weekly for good hygiene.