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GECKOS

Turnip-tailed gecko

Thecadactylus rapicauda

One of the largest geckos in the Americas: a nocturnal ambush hunter with no movable eyelids, vertical pupils, a blue tongue and a tail that grows back thick as a turnip after a loss. The species is widespread from Mexico to Brazil, but is rare in vivaria, and little reliable information on care exists.

Family: Phyllodactylidae Former name: *Gekko rapicauda; Gekko laevis; Platydactylus theconyx*

KEY FACTS

THE ANIMAL

Adult size	**9-13 cm** snout-vent length
Weight	**16-40 g**
Lifespan	**8-12 years**
Active	**At night**
Lifestyle	**Arboreal**
Habitat	**Dry forest and rainforest**
Difficulty	**Intermediate**

CARE

Min. enclosure	**60 × 45 × 90 cm** L × W × H for 1 adult
Temperature, day	**25-28 °C**
Basking spot	**30-31 °C**
Temperature, night	**21-24 °C**
Humidity	**60-80%**
UVB	**Optional**
Diet	**Insects**
Kept	**Singly or in pairs**

BREEDING

Reproduction	**Egg-laying**
Clutch size	**1-2 eggs**
Incubation	**150-200 days** at 24-28 °C

PROTECTION AND PAPERWORK

CITES	**Not listed**
EU annex	**Not listed**
IUCN	**Least Concern (LC)**

About the species

Thecadactylus rapicauda is a large, powerfully built gecko. Adults measure 9-13 cm from snout to vent and up to about 23 cm with the tail, and the females are slightly larger and sturdier than the males. Adults typically weigh 16-40 g. The head is flat with a narrow neck, and the large eyes have vertical, elliptical pupils and no movable eyelids. The mouth is orange inside, the tongue is blue, and the lip scales are white with black edges. The toes are broad and flat and joined by skin at the base, and beneath them sits a double row of broad adhesive lamellae. They are so effective that the animal climbs glass without difficulty.

The colour ranges from light to dark grey and grey-brown to yellowish or orange with dark crossbands, and the animal can change colour according to mood and temperature. By day it is usually paler than at night. The pattern resembles lichen and bark and makes the animal almost invisible on a tree trunk.

The species name *rapicauda* means turnip tail and refers to the shape of the tail. The gecko uses the tail as a fat store and can shed it in defence. The new tail grows out thick and knobbly at the base, and it is this that gave the name. When the animal feels threatened, it waves its tail, opens its mouth and shows the blue tongue, and if it continues to be provoked, it bites hard. The species can also chirp in series of 12-25 rapid clicks, which are used to mark territory.

The species was described in 1782 under the name *Gekko rapicauda* and has since borne several other names. In 2007 a closely related species from the Amazon was separated from it, and it has been pointed out that the populations in the southwestern part of the range may constitute a cryptic species. Care in captivity is not described in the same detail as for the common terrarium geckos, and lifespan in captivity is not documented; geckos of the same size live 8-12 years.

Distribution and habitat

Thecadactylus rapicauda lives in tropical America, from southern Mexico (Chiapas, Tabasco and the Yucatan Peninsula) through Belize, Guatemala, Honduras, Nicaragua, Costa Rica and Panama and into South America: Colombia, Ecuador, Venezuela, Guyana, Suriname, French Guiana and large parts of the Brazilian Amazon. The species is not found in Bolivia, and its occurrence in Peru is not confirmed.

It is also found on many islands: Trinidad and Tobago, Isla Margarita, Aruba, Curaçao, Bonaire, Los Testigos and several of the Lesser Antilles. It has been discussed whether the island populations are native, but genetic studies indicate that they are. The type locality, originally given merely as the American islands, was later restricted to Paramaribo in Suriname.

> **Native range:** Mexico, Belize, Guatemala, Honduras, Nicaragua, Costa Rica, Panama, Colombia, Ecuador, Venezuela, Guyana, Suriname, French Guiana, Brazil, Trinidad & Tobago, Aruba, Curaçao, Caribbean Netherlands, Antigua & Barbuda, St Lucia and Grenada.

HABITAT

The gecko lives in humid lowland forest, but also in dry forest, in open areas with scattered trees and in savanna, as long as there is enough food. On the mainland it lives first and foremost on the trunks and in the crowns and is seen up to about 20 m up in the trees. By day it hides under loose bark, in crevices and holes in trees, under dead palm fronds, in wild climbing plants and in bromeliads. It also uses rock holes and stone piles.

The species is not afraid of people and readily enters buildings, where it is easier to spot than in the forest. It is nocturnal and comes out in the first hours after dark, and a few animals are seen active late in the afternoon on the shaded side of the trunk. In the wild the body temperature is about 24-29 °C and follows the air and substrate temperature. Activity seems to require at least about 23 °C. The breeding season falls in the rainy season from May to September.

Care

THE ENCLOSURE

A single animal needs an enclosure of at least 60 × 45 × 90 cm (length × width × height), and a pair at least 70 × 70 × 90 cm. There is little experience with the species in captivity, so the measurements are based on the general requirements of nocturnal, climbing geckos from humid regions. The animal is heavy for a gecko and climbs vertically on trunks, so height and solid climbing opportunities count for more than floor area.

Furnish with thick trunks, cork tubes and cork bark that the animal can crawl in under and behind, and with many hides at different heights. The animal likes to sleep in tight crevices against a surface, so the hides should fit snugly. Plants with large leaves provide shade and hold moisture. A slightly damp mix of coconut fibre and unfertilised soil suits as substrate, which the female can also bury eggs in.

The enclosure needs good ventilation and must be securely closed, because the animal normally moves slowly but can be lightning-fast when startled.

TEMPERATURE

The species is active within a relatively narrow temperature range. By day there should be 25-28 °C with a slightly warmer spot of 30-31 °C at the top of the enclosure, and at night 21-24 °C. Below about 23 °C the animal is not active.

Provide an even warmth in the upper part of the enclosure rather than a strong spot, and measure with a digital thermometer both high and low. Avoid strong heat bulbs, which dry the air and can burn an animal that crawls into a crevice close to them.

HUMIDITY AND WATER

The species needs high humidity. Keep it at 60-80 %: the humidity rises after a misting in the evening and falls during the day. Let the substrate dry out a little between mistings, so that mould does not develop.

The gecko probably drinks droplets from leaves and walls, like other species in the same group. Also provide a shallow dish of fresh water, changed regularly, although it is not documented that the animal uses it.

Read more: Humidity, misting and ventilation

LIGHTING AND UVB

The species is nocturnal and hides in dark crevices by day, so UVB is not necessary when the food is given calcium and vitamin D3. If you want to provide a weak UVB light, make sure there is plenty of shade and hiding places, so that the animal can choose to stay away from the light. Provide a fixed daily rhythm with about 12 hours of light and 12 hours of darkness, ideally controlled by a timer. Do not use strong spotlights, and let the night be dark.

Read more: Lighting and UVB Read more: Calcium, vitamins and supplements

FEEDING

In the wild the species is an ambush hunter with a very broad diet. Stomach contents from wild animals show grasshoppers, cockroaches, beetles, butterflies, spiders and scorpions, and in rare cases it also takes small amphibians and lizards. It prefers large prey, which it strikes against the substrate before swallowing whole. Feeder insects in captivity can therefore be relatively large: large crickets, grasshoppers and cockroaches.

How often and how much an animal should be fed has not been documented. As a rule of thumb for larger insectivorous geckos, adults are fed 2-3 times a week and juveniles more often. Dust the food with calcium, and regularly use calcium with vitamin D3. The animal also eats its own shed skin. A few animals occasionally lick a little ripe fruit or fruit puree, but the species lives almost exclusively on insects.

Read more: Feeder animals: keeping and breeding

BEHAVIOUR AND HANDLING

The animal is slow and deliberate when not threatened, but can be quick and aggressive when disturbed. It can bite hard, and it sheds the tail under even slight pressure. Some animals get used to being handled, but a startled animal is fast and jumpy, so keep handling to a minimum. In the wild only about a third of the animals have never lost the tail, and two thirds have a regrown tail.

Socially the species is calmer than one might think. It is peaceful towards other geckos and its own young, and several males can be kept together if there are no females nearby. Two large males can, however, shed the tail during violent fights. Keep the animal singly or as a pair, and always provide more than one hide. When the animal sleeps, it often lies curled up so that it looks like a small adder.

Breeding

SEXUAL MATURITY AND SEXING

Females are larger and more robustly built than males, but the difference in size is small. How the sexes can most reliably be told apart has not been documented. Sexually mature males measure 10-13 cm from snout to vent, and females are sexually mature from about 9 cm. The age at sexual maturity has not been documented.

MATING

The mating season follows the rainy season from May to September. There is no detailed information on how best to introduce a pair. A cool period before the mating season seems to help, but how cool and for how long has not been documented. Males can call loudly and for a long time during the mating season. Keep the animals apart until they are to be bred, and watch the pair so that a female is not bitten or stressed. The rainy season in the wild argues for imitating a slightly more humid and warmer period in the summer half of the year.

EGG-LAYING AND CLUTCHES

The female lays one egg at a time, more rarely two, alternating between the two ovaries. The eggs are almost round with a hard shell. In the wild the female buries them in slightly damp substrate or hides them in tree trunks and under bark. Give her a deep box with slightly damp substrate and hidden places under bark. How many clutches a female can lay a year has not been documented.

INCUBATION

There is little experience with eggs in captivity. The eggs hatch after about 150-200 days, depending on temperature and moisture. Move the eggs carefully and without turning them to a box with slightly damp vermiculite or perlite, and keep them at about 24-28 °C, the temperature range in which the animals are active. A tested incubation temperature is not documented, so be patient, and do not discard eggs that still look healthy.

Read more: Incubating eggs

REARING THE YOUNG

There is little experience of rearing the species. The hatchlings are relatively large and measure about 4 cm from snout to vent at hatching. Keep them separately in small, humid enclosures with hides and small insects, and mist daily. Give them food dusted with calcium, and follow their growth. The hatchlings have a black-and-white banded tail tip, which they lift from the substrate when disturbed.

Health and common mistakes

There is almost no documentation of diseases in the species in captivity. The points here are based on experience with geckos in general:

- Dropped tail after handling, pressure or fighting. The tail grows back, but as a thick, knobbly tail.
- Calcium deficiency and brittle bones, especially in juveniles and egg-laying females, if the food is not given calcium.
- Mould and skin problems if the substrate is constantly wet and ventilation is poor.
- Parasites: a tapeworm is found in the gut of most wild animals, so have newly acquired animals examined for parasites.
- Stress and loss of appetite if there are not enough hides or if the temperature is too low.

See a vet experienced with reptiles if the animal loses weight, stops eating or seems limp.

Always ask someone who knows

This guide is a good place to start, but it cannot replace experience. Animals differ, and much of what matters most is learned from people who have kept the species for years. Talk to a breeder, an experienced keeper or a vet who knows reptiles and amphibians before you get the animal - and again if anything looks wrong.