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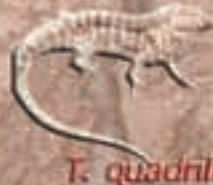
Genus

# Tupinambis



*T. teguixin*

*T. longilineus*



*T. quadrilineatus*

*T. merianae*



*T. rufescens*



*T. duseenii*



*T. rufescens*



# Tegus



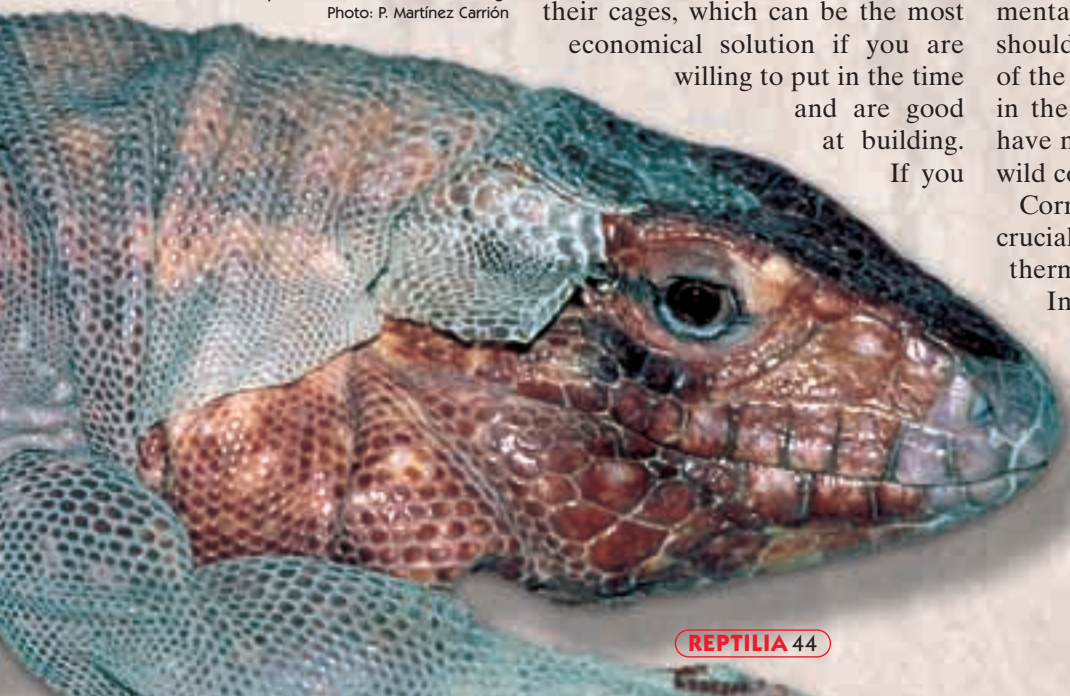
The saurian family Teiidae currently contains 9 genera and 116 species. This article is about the tegus of the genus *Tupinambis*, which are found in several areas of South America. They are all considered tropical lizards that require a stable environment (without large temperature fluctuations).

The species known today as the common or black tegu, *Tupinambis teguixin*, was first described in 1758 by the world-renowned father of taxonomy, Carolus Linnaeus. This species occurs in the northern part of the genus range, and now includes tegus formerly classified as *Tupinambis nigropunctatus*, which is no longer recognized. Common tegus are readily available in the pet trade.

The southern or Argentine black and white, or giant tegu, *Tupinambis merianae*, is found in eastern and central South America. This species has recently become more available to hobbyists. Besides being larger in size, as its common name implies, the giant tegu is also easily distinguished by its beaded scalation, in contrast to the flat scalation of the common tegu.

The red tegu, *Tupinambis rufescens*, occurs in two distinct geographical variations: one in northern Argentina; the other in eastern Bolivia, western Paraguay, and central western Argentina as far south as the province of Neuquén. It is also readily available.

*Tupinambis rufescens* shedding. Photo: P. Martínez Carrión



*Tupinambis rufescens* juvenile. Photo: J. F. Taylor

Three other species are not generally available, but can be acquired if one is determined. The striped tegu, *Tupinambis quadrilineatus*, is found in central Brazil. The Rondonia tegu, *Tupinambis longilineus*, the rarest of species of the genus, is found in parts of Brazil north of Bolivia. The yellow tegu, *Tupinambis dusenii*, is found in the province of Paraná, Brazil.

### Housing

Tegus of any species must be considered large lizards. Juveniles under 6 months of age can be kept in indoor enclosures measuring 4 x 4 x 3 feet (120 x 120 x 90 cm) (LxWxH). An enclosure for a single adult should be twice that length, measuring 8 x 4 x 3 feet.

Most tegu keepers custom build their cages, which can be the most economical solution if you are willing to put in the time and are good at building. If you

choose to purchase an enclosure, there are many places that will custom build one to your specifications. Your local pet shop may know of someone in your area who builds custom cages, or you may be able to find something on the Internet. Most cages built for tegus are of laminated wood with peg-board halfway up the back for ventilation, a solid glass front, and a lifting lid — or sliding glass front (but the track may be hard to find).

### Heating and lighting

Correct temperature and lighting are particularly important for keeping tegus healthy and happy. We must understand that the well-being of captive animals depends entirely on their human keepers. Even if the animal is captive-bred, environmental conditions in its enclosure should be similar to the conditions of the natural habitat of the species in the wild. Captive-bred animals have not lost the instincts that their wild counterparts still use.

Correct heating is an especially crucial factor in maintaining exothermic animals, such as reptiles. Instead of generating heat internally, an exothermic animal relies on the ability to thermoregulate by selecting an external environment of a temperature that meets its needs — e.g., for digesting food, which in turn provides the

energy for other functions. Some keepers might think that the enclosure could be heated to one constant temperature, but this is not the case at all. If a tegu were constantly maintained at a temperature high enough for digestion, it would become stressed and eventually “cooked.”

Instead, we want to create an environment with natural temperature variation. And we must provide the tegu with a temperature gradient, meaning that one end of the cage is warmer than the other, so the captive animal can select the temperature it needs at any given time.

It has been noted, and shown from personal experience, that Argentine red tegus, *Tupinambis rufescens*, can safely handle maximum temperatures of 110–120°F (43–49°C) directly beneath the basking lamp. All other tegus should have basking temperatures of 100–110°F (38–43°C). The ambient temperature at the cool side of the enclosure should be no less than 85°F (29°C) during the day, with a nighttime drop of no more than 10 degrees Fahrenheit (5 degrees Celsius).

In the wild, extended periods of exposure to natural unfiltered sunlight allows tegus to synthesize vitamin D<sub>3</sub>. In captivity, tegus need exposure to ultraviolet (UVB) light from special reptile lamps.

The most commonly used UVB lamps are fluorescent tubes with reflective housings to direct more light towards the animals. Another type of UVB lamp is the mercury-vapor bulb, which is claimed to provide the same amount or more ultraviolet radiation, and also doubles as a heat source. Both the fluorescent tubes and the mercury-vapor bulbs must be replaced periodically because the UVB output diminishes over time.

From the experience of keepers and breeders it is generally agreed that captive tegus should also be given supplemental vitamin D<sub>3</sub> with their food.

### Substrates

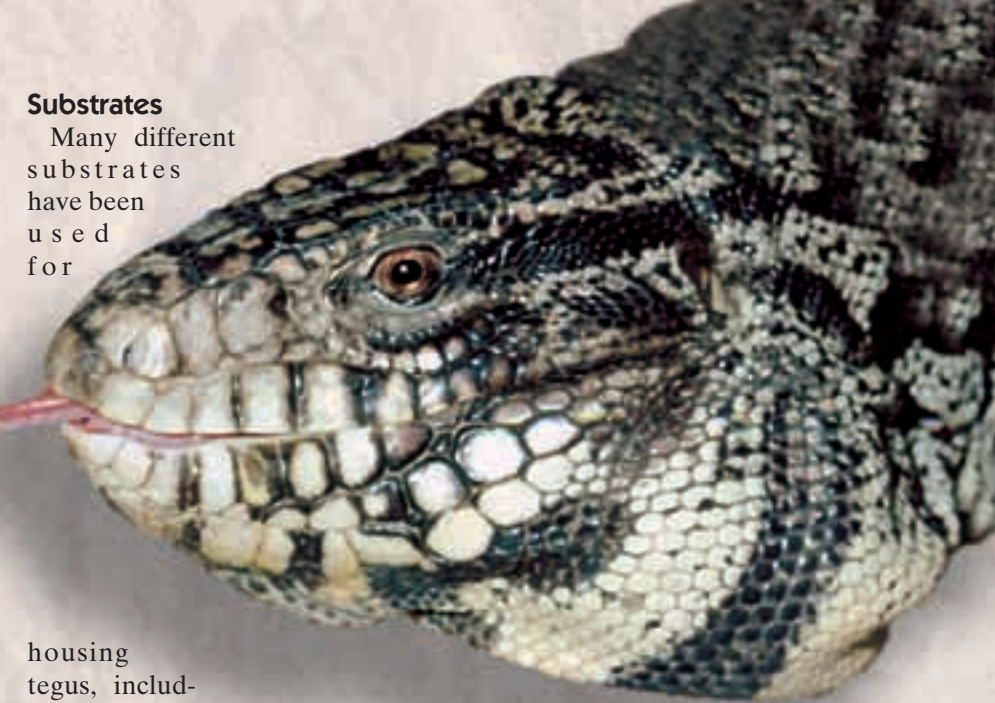
Many different substrates have been used for

housing tegus, including indoor/outdoor carpeting, bark, cypress mulch, and compressed soil. There are also many accounts of tegus losing claws or toes that have become entangled in loose carpet threads. And some tegus spend most of their time in their water bowls because of a lack of humidity elsewhere in the cage. Again, we humans must do our research in order to provide the proper environment for the captive animal.

In their natural habitat, tegus are burrowing lizards. Keeping such an animal on carpet would clearly be a disservice. Sand has been used by some keepers, but this can lead to problems with humidity and eye irritation — tegus commonly rub their faces on the ground after a meal. There is also a risk of intestinal



*Tupinambis teguixin* juvenile. Photo: J. L. Fariols



*Tupinambis teguixin*. Photo: P. Martínez Carrión

impaction from sand being ingested during feeding.

Newspaper is the time-honored traditional substrate used by keepers who are not concerned with the aesthetic appearance of the enclosure. It is easy to obtain and has great absorbency, but is not particularly attractive.

Compressed soils are readily available from most pet stores, are absorbent, and can be cleaned by removing clumps much like cat litter. The biggest drawback is that considerable quantities would have to be purchased in order to cover the bottom of the cage and provide a sufficient depth for burrowing.

Cypress mulch is another substrate that is readily available at pet stores and seems to work well for tegus. It holds moisture well and thus helps increase humidity, and it is also good for burrowing. However, it can hide uneaten food and be kicked into the water bowl.

Personal experience has shown that untreated orchid bark works very well. It holds moisture, absorbs waste well, and is easily cleaned. It can usually be purchased inexpensively at garden centers.

You may also want to try mixing any of these substrates together to discover what works best in your enclosure. One substrate that you should definitely avoid, however, is cedar shavings, which are commonly used for mammals such as rodents in order to control odors. Cedar shavings will cause respiratory problems in lizards. If you insist on using wood shavings, use ponderosa pine.

#### Furniture

Cage furniture is not strictly necessary for keeping tegus healthy. However, in addition to keeping the animal healthy, I believe it is important to provide it with a natural environment. The minimum of cage furniture would be two hide boxes (one on the warm side and one on the cool side of the enclosure) and a basking branch or rock placed directly beneath the basking lamp. Inside the hide boxes we suggest piling some loose, moistened (not soaking) sphagnum moss, which can be found at garden centers.



*Tupinambis rufescens* adult. Photo: P. Martínez Carrión

Although tegus are ground dwellers, they do appear to appreciate having a few additional branches that are large enough for climbing on (and well secured).

#### Diet and feeding

The tegu diet consists mainly of protein and fruit, the proportions of which depend on whose theory you subscribe to. From our research and personal experience we have found that a diet of 50 percent protein and 50 percent fruit seems to work very well. Hatchlings should be fed a primary diet of animal protein, and offered fruit on the side to get them started on it. Reputable breeders have noted that red tegus, *Tupinambis rufescens*, require more fruit than other species do.

The protein part of the tegu diet can be supplied with crickets, king mealworms (*Zoophobas*), rodents,

canned dog or cat food, ground turkey meat, or eggs. The rodents should be pre-killed, and thawed if they were frozen. Insect prey should be gut-loaded (fed on a calcium- and vitamin-rich diet) or at least dusted with a calcium and mineral supplement — daily for hatchling tegus, every other day for juveniles, and twice a week for adults. Breeders have reported that a diet of strictly high-quality canned dog and cat foods may lead to liver, skin, and eye problems because of too much vitamin D<sub>3</sub>.

Tegus can be offered just about any kind of fruit — grapes, melons, berries, apples, pears, guava, bananas, etc. If you find that your tegu has a particular favorite food, you might use this as a reward for good behavior during short handling sessions.

Feeding tegus by hand is not recommended. They will soon associate your hand with food and end up biting you by mistake. Use tongs.

#### General behavior

If given the opportunity, tegus display very interesting behavior. They can provide hours of entertainment for their keepers, as well as clues to their state of health. These animals are naturally very curious and actively investigate their surroundings. Tegus will run eagerly towards the scent of food, and they also soon learn that seeing their keeper often means food is coming. This may facilitate taming, which can be difficult with hatchlings.



*Tupinambis merianae* adult. Photo: P. Martínez Carrión

Tegus generally would rather avoid contact with humans, but some tolerate it and others seem to actually enjoy it. Still, it is usually only a matter of moments before a tegu lets you know that it has had enough. The threat display is usually a huff-and-puff routine, in which the lizard tenses its body and inflates its throat — this means that a powerful bite is coming. Wiggling the tail warns of a lashing. This is the time to put the animal back into its enclosure to calm down. It is advisable to use heavy gloves when handling a tegu.

#### Hygiene

Insufficient basic hygiene is probably the number one cause of health problems in captive herps. Being familiar with routine care requirements is necessary for keeping tegus healthy and happy.

Water is one of the essentials of life on Earth. The drinking water for the captive reptile should be changed daily, and the water dish cleaned.

Food is another essential of life that should be monitored constantly. The food dish should be removed daily and washed thoroughly before being used again for fresh food. Tegus are ravenous feeders and typically make a mess when eating. Check the enclosure for bits of uneaten food. The tegu is more likely to ingest substrate and develop intestinal impaction if it is eating scraps off the ground.

Stools and urine should be removed from the enclosure daily. They are unpleasant to look at, and may begin to smell bad if left in the cage. Tegus also sometimes defecate on cage furnishings, which can be easily cleaned with a small scrub brush and hot water.

Every month or so you should strip the cage down and clean it out completely. This includes replacing

all of the substrate and wiping down the entire enclosure with a bleach solution — about one capful of bleach to 5 gallons (19 liters) of water. As a little added bonus for your scaly friend, put the cage furnishings back in a different way. This will make it seem like a whole new environment, and will inspire the lizard to investigate its “new territory.”

#### Breeding

If you are thinking of breeding tegus in order to make a profit, stop now! Most potential breeders spend money for quite some time with no results, and then end up selling the animals as worthless. Never get drawn into this business for the money. There may be money to be made, but only if you are a dedicated reptile lover.

For breeding, you first need to have a sexually mature pair, or better yet a trio (one male and two females). Late juveniles and subadults can sometimes be sexed by visual examination of the cloacal region. A subadult male has visible spurs located on each side of the vent. Adult males also have enlarged jowls and are typically heavier bodied. The only way to positively identify the sexes is to have the tegus probed by a professional herp veterinarian.

As with most reptiles, tegus need a cooling or hibernation period for triggering breeding behavior. There have been reports of



*Tupinambis rufescens* juvenile. Photo: J. F. Taylor



*Tupinambis rufescens* pair. Photo: P. Martínez Carrión

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*Tupinambis rufescens* juvenile. Photo: J. F. Taylor



*Tupinambis teguixin* juvenile. Photo: J. L. Fariols

tegus breeding without it, but we suggest providing a hibernation period because this would be normal in their natural habitat.

Feeding should be stopped 2 weeks before initiating the hibernation period. This should coincide with the onset of winter in your area, regardless of whether the tegus are housed indoors or outdoors. Temperature and humidity should be dropped gradually over a 2-week period. Try to keep temperature at 50°F (10°C). Temperatures below 42°F (ca 6°C) would kill smaller species.

Hibernation temperatures should be maintained for an average of 3 months, or 5 months at the most. To end hibernation, reverse the process by gradually increasing temperature and humidity, and then resume feeding. Females should be fed heavily at this time so they have enough fat reserves for egg production. Males often steal all the food, so it may be a good idea to feed the sexes separately.

Tegus normally copulate a month or two after coming out of hibernation. The courtship behavior of tegus is most interesting. The male performs a sort of marching-in-place dance for the female, which is somewhat comical. The male may also prod the female with his snout, and scratch at her sides. Coitus will soon follow, and is sometimes a very violent act.

Males housed together have been seen mounting each other to establish dominance. Females have been known to dominate males by mock mounting prior to egg-laying, seemingly to let the males know that they want to be left alone. One male and one or two females can usually be housed together as long as the enclosure is large enough (the dimensions described previously per adult), but they should be separated at the first sign of aggression. I recommend putting the sexes together only for copulation, and only when you are able to watch them continuously.



*Tupinambis teguixin*. Photo: P. Martínez Carrión

The observant keeper will easily see when the gravid female tegu is ready to lay her eggs. She will usually stop eating 1–7 days before laying. As soon as this happens, provide the female with fresh nesting materials — alfalfa hay, cypress mulch, or pine shavings — and remove the male from the enclosure, as he may attempt to eat the eggs.

After the female builds a nest (this is two-chambered in the case of *Tupinambis merianae*) she will lay 10–50 eggs. A female tegu may sit guard over her nest, but the eggs should be transferred to an incubator set at a temperature of 84°F (29°C). Hatching normally begins after 90 days of incubation.

## Shedding

As they grow, tegus, like all reptiles, shed their skins. Tegus shed in large flakes and pieces (not in one piece like snake skins). Healthy tegus under optimal conditions shed without problems, typically completing the process within a few days.

Proper humidity is important for normal shedding, and regular cage misting is the best way to prevent shedding problems. If sections of skin appear to be adhering abnormally, mist the cage, including inside the hide boxes. A tub of water large enough for the lizard to soak in is also beneficial. Or, if the lizard is tame enough to handle, baby oil can be applied to the problem areas.

## Diseases and ailments

It is always best to buy a captive-bred tegu. If, for whatever reason, you obtain a wild-caught specimen, take it and a fresh fecal sample to a reputable reptile veterinarian to have it examined for parasites as soon as it arrives.

For scent-marking or copulation, a male tegu everts one of his hemipenes. Sometimes an everted hemipenis is injured — scraped against a hard surface, or scratched or bitten by another tegu — and cannot be withdrawn again. This ailment is called hemipenial prolapse, and should be treated by a qualified reptile veterinarian.

Similarly, a particle of substrate may adhere to a hemipenis and be drawn into the cloaca and cause irritation. If not treated immediately this can lead to infection and other problems for the lizard.

Metabolic bone disease is a condition typically seen in iguanas, but which can also develop in tegus. We have personally seen a blue tegu (believed to be a color morph of *T. teguixin*) with MBD. We could not determine what had led to this case (the specimen was turned over to us because the owner was unable to care for it properly), but we did catch it in time to reverse some of the damage. If a tegu is given the proper diet, supplements, and UVB exposure, we highly doubt that it will ever develop this problem.

Mites are tiny almost imperceptible arachnids that feed on the blood of a host animal. They are commonly associated with snakes, but can also infest lizards. Mites are notorious for their ability to hide in the terrarium where they can multiply to great numbers before they are even noticed. In lizards, mites usually infest the vent area and around the eyes and nostrils. An observant keeper will notice the lizard scratching like a dog with fleas. Many products are available for combating mites with varying success. Sprays seem to work best for mite-infested lizards. Pest strips from garden centers are dangerous if hung in the cage because they could be eaten by the lizard and cause serious intestinal blockage. When mites are first noticed, remove the tegu from the cage and soak it in lukewarm water. Then the cage should be completely stripped down and disinfected. Furnishings that are small enough and heat resistant, such as natural rock, can be baked in an oven at 400°F (ca 200°C) for 15 minutes. The substrate should be thrown out completely and replaced with paper towels after the rest of the cage has been disinfected with a bleach solution. Contact your vet for suggestions on how to proceed.

If properly cared for, tegus can live for more than 10 years, providing many hours of enjoyment for a dedicated keeper. If you are not the dedicated type, please save yourself and the lizard a real problem. Get something else. ■

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