



## THE LEOPARD GECKO, Care in Captivity

**Length:** can reach 20 cm from snout to tail tip (males are usually larger)

**Weight:** 40-100g

Adult size achieved at nine to 18 months

**Lifespan:** up to 21 years

The Leopard Gecko, *Eublepharis macularius*, is common in the pet reptile trade, and is often a suitable choice for first time reptile owners. That said, no reptile is easy to keep successfully, and strict attention to the environmental, dietary and health needs of the animal is necessary if it is to thrive in captivity. The goal of the reptile keeper should be to understand as much as possible about the natural habits and environment of the species in question. This allows the creation of a "micro-environment" habitat, which mimics the wild situation. Familiarity with the species' normal appearance, feeding patterns and behavior helps the keeper to meet the animals needs and to detect medical problems as soon as possible.

The Leopard Gecko is a small, calm, insectivorous, nocturnal lizard. It is found through much of Asia in arid or semi-arid, rocky or scrub land. In spite of this dry habitat, the gecko prefers burrows of relatively high humidity. This is a condition, which must be recreated in the captive situation. There are over 800 species of gecko, and their distribution is worldwide. The Leopard Gecko is considered a "primitive" species, as they have moveable eyelids and well-developed claws. In spite of the presence of eyelids, this gecko does possess the corneal protective covering known as a spectacle. They lack the pad-like formations and minute hair structures found on the toes of true geckos, which allow the latter to climb smooth surfaces with gravity defying ease.

Juvenile Leopard Geckos are yellow, with black or brown bands on the body, and black or brown banded tails. As they mature, the pigment spots migrate, and the classic leopard spots of the adult develop. The background color is yellow or tan. The underside of the animal lacks markings, and is an off white or cream color. Several color mutations are available. Small wart-like protrusions or tubercles are found on the scales along the back. These animals are being bred successfully in captivity, and so few specimens are wild caught.

Healthy adult geckos have fat tails, where energy is stored in case food should be unavailable, or the animal should fall ill. The tail can be dropped (autotomy) if the gecko is trapped, grabbed or feels threatened. It will grow back, but without the normal scale pattern.

Male Leopard Geckos are usually larger. Males possess a well-developed "V" shaped line of pre-anal pores ahead of the vent, and a pair of hemipenial bulges at the base of the tail, behind the vent.

### BEHAVIOUR

Leopard Geckos can be handled regularly, and with greater frequency than many other lizard species, but should spend most of their time in an environment, which is non-stressful, and meets their temperature and humidity needs. These lizards rarely bite, but if very alarmed, may vocalize. Because they are nocturnal, they need to retreat to a dark hide during the day. They should be left



undisturbed for a good part of the day. Provision of subdued lighting will; however, encourage activity, allowing keepers greater enjoyment of these interesting animals.

Juveniles and adults should be housed separately, and no more than one male should be present in a group. All lizards are territorial to varying degrees, and males especially, will fight and can kill one another. If lizards are housed in groups, more hides and visual barriers must be provided. Group housing leads unavoidably to some level of stress, and keepers must monitor the animals' behavior closely. Signs of stress in reptiles may be no more obviously than a failure to thrive and an increased susceptibility to disease. Social groups are necessary only for breeding purposes, and most geckos will be best housed singly.

Leopard Geckos will often choose a toilet area within the cage. This facilitates cleaning. Leopard Geckos hunt their food, with movement of the prey being at least as important as its appearance.

## HOUSING

As a general guide, one lizard can be housed in a 10-gallon tank. Two or three will require a 20-gallon tank. Larger tanks allow improved ventilation, and landscaping. Keep in mind that although it may be more aesthetically pleasing, a beautifully landscaped cage will be more difficult to clean, in spite of the gecko's toilet habits. The enclosure should be secure and covered with a screen, for although the lizard should not be able to climb glass; he must still be protected from potential hazards, such as other pets and children.

Newspaper is a good substrate or floor covering. Indoor/outdoor carpet can also be used. Sand, gravel and wood shavings are not recommended, because of the risk of ingestion. Bark and shavings hide uneaten food items and feces. These are potential sources of disease. Cage furniture, such as driftwood or plants (non-toxic or artificial), provides visual barriers. These are important if the reptile is to feel secure in his environment. Provide at least as many hides as there are lizards in the enclosure. These may be as simple as a plastic food container turned over, in which a door has been cut. If the bottom of this is lined with moist sphagnum, moss, sponge, vermiculite or paper towel the increased local humidity will mimic the burrows the animal would seek in the wild. The inside of the hide can be misted with water daily. The presence of a dark, humid spot is crucial to the mental well being and to the normal shedding of Leopard Geckos. Shedding problems are particularly common in juvenile lizards, as they shed more frequently than do adults. Humidity in the gecko's enclosure should be about 30%, but in the hide should reach 50-60%. Excessive humidity will lead to respiratory and skin problems. A hygrometer can be purchased to measure humidity.



The temperature within the enclosure should be 21-30° C (75-85° F). There should be a slight drop in temperature at night. A temperature gradient should be present, with one end of the cage close to 21° C and the other closer to 30° C. This allows the animal to choose the ideal temperature for his needs at the time. Reptiles are dependent on temperature for normal behavior, digestion and immune function. Lizards kept too cold will fail to thrive, and will eventually die. Above 32° C is dangerously high for a Leopard Gecko. Ib rocks are not recommended. These are dangerous to the lizard, can be electrical hazards, and do not heat the environment. A radiating heat source, such as a ceramic, black or infrared bulb is recommended. Under-tank heaters can also be useful. Temperatures must be monitored with one

or more thermometers, placed where the animal actually spends time. Bright spotlights are not recommended, as basking in sunlight is not natural for this species, and bright light will discourage activity. Again, due to the nocturnal or crepuscular nature of the animal, ultraviolet light is not likely necessary. Some filtered or subdued UV exposure may be beneficial, but again, bright light depresses Leopard Geckos and suppresses the appetite. Twelve hours of daylight and twelve hours of darkness are ideal. Lights may be attached to a timer. Although these lizards do not actually hibernate, a quiescent period about two to three months long in the winter may be beneficial. Temperatures may be dropped by 4-5 C, and the day shortened to 8-10 hours. This should only be attempted in animals known to be healthy, with fat tails (good energy stores).

The cage should be located in a relatively quiet area of the house, away from direct sunlight, stereos, and televisions in a room with constant temperatures.

Water should be provided at all times, and changed daily. The bowl should be small and shallow, so that the gecko may enter and leave it easily.

If the toilet area is cleaned daily, then the cage should not need to be changed more than every two to three weeks. A weak vinegar/water solution or a 1:30 bleach solution can be used. Rinse the cage well after cleaning, and do not use ammonia-containing products.

## DIET

Leopard Geckos are insectivorous. They can be fed crickets, wax worms, mealworms and a variety of other commercially available insects. Do not feed dead or dying, or wild insects, as some may be inherently toxic, may have been sprayed with pesticides or may carry harmful bacteria or parasites. Adult lizards may be fed (dead) pinkie mice one to two times monthly. It is wise to feed as large a variety of foods as possible, to improve the animal's chances of receiving a balanced diet, as well as to prevent picky eating habits. Hatchling and juvenile lizards should be fed daily, adults every three to four days. In the case of group housed lizards, feeding may need to be more frequent as if they are hungry, Leopard Geckos may resort to cannibalistic behavior. However, do not give the lizard more food than he can eat. It is important to know how much he eats; a poor appetite is a common sign of illness. If the cage is full of crickets, the keeper cannot truly know what the animal is eating. Crickets without food have been known to turn to the gecko for a meal, and they frequently escape the cage. Insects living and defecating in the cage are a potential source of disease. Offer appropriately sized food items, less than the width of the gecko's head.



Insects should be gut-loaded, that is fed a homemade or commercial insect or cricket food for 48 hours, prior to being offered to the lizard. This food should contain at least 8% calcium. The food items should be dusted with calcium carbonate immediately before they are offered to the lizard. Within half an hour, crickets will clean off any substance with which they have been dusted, and the gecko will not receive the nutrition he needs. Not more than once a week the prey items should be dusted with a multi-vitamin-mineral supplement, which contains vitamin D.

#### PREVENTIVE HEALTHCARE AND COMMON PROBLEMS

It is recommended that all new Leopard Geckos visit a veterinarian who sees reptiles. Proper husbandry, diet and care can be discussed, and in many cases this will prevent future health problems. A physical examination should be done and fecal examination performed to check for the presence of parasites. An annual well pet examination is suggested, so that any changes in your pet's health can be noted and addressed, and the owner can be made aware of any new recommendations in the care of this species.

If you are concerned about your pet's health, seek veterinary advice quickly. These are small animals, which can succumb rapidly to disease. Reptiles are wild animals, and a species such as the Leopard Gecko, which is also a potential prey item in nature, is especially adept at looking normal, when in fact it is masking illness. This is a defensive strategy, as those animals, which appear weak or vulnerable, are more likely to be eaten by predators.

The following signs should alert you to a potential problem, and prompt you to seek veterinary advice:

- Decreased appetite or stool production, or straining or difficulty in producing stool
- Difficulty shedding – often seen as tight bands or flakes of skin around the toes
- Breathing with the mouth open, drooling or a malformed jaw
- Reluctance or inability to walk or to use one or more legs
- Swelling of the abdomen or swellings on the limbs
- Pink tissue protruding from the vent
- Diarrhea, eye or nose discharge
- Inactivity, lethargy, or a change in behavior
- Dry, small or dark toes
- Change in color
- Thin tail; discharge from a lost tail