



Leopard Geckos

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Introduction

Leopard geckos (*Eublepharis macularius*) have become very popular pets over the years. They are a very interesting species to keep, very tame and easy to keep if the conditions are kept right. Their husbandry requirements are basic and if the proper guidelines are followed, these beautiful creatures can live a long time. These animals have grown so much in popularity that there have been numerous morphs that have been developed from the basic spotted wild morph to the blizzards, tangerines, hybinos/ sunglows, albinos, snows, R.A.P.T.O.Rs, Giants and their cross, and many more.

The leopard geckos' distribution includes Afghanistan, India and Pakistan. They are found in dry desert environments but reside in semi-humid hide areas under rocks, caves and natural crevices. They are nocturnal creatures, mainly active at night and spending the daylight hours hidden in their secure hide area.

Sexing

There is slight sexual dimorphism between male and female leopard geckos. Males tend to have broader heads, thicker necks and tend to be more heavily bodied than females. These changes may be so slight that it is best and more reliable to look at the underside of these animals to properly determine the sex. Males will have a V-shaped row of enlarged preanal pores on front of the vent/anus that often has a waxy secretion. The males will also have paired hemipenial swellings at the base of the tail. Female leopard geckos will lack these swellings and will only have preanal pits and not pores. As young as one month of age the sex can be determined otherwise if the temperature was known that the eggs were incubated at one can know the sex of the animal as temperature determines the sex of most reptiles.

Size

Leopard geckos are a good size lizard, reaching an average adult length of just over 8 inches from head to tail. Tremper Giant leopard geckos can reach an adult size of over 11 inches and can easily weigh over 100 to 150 grams. Currently the largest Tremper Albino Giant "Godzilla" weighs in at 170 grams!

Longevity

When cared for properly Leopard geckos can live a long time. The average life expectancy of these animals is around 15-20 years. In fact there was a leopard gecko that lived to over 28 years at the Saint Louis Zoo and one that lived over 29 years under the care of Ron Tremper, a well-known herpetoculturist. With the right conditions, diet and care, leopard geckos will make fascinating pets that will provide years of enjoyment.

Housing

A variety of enclosures can be used to house leopard geckos. The most common being the standard glass aquariums available for fish. They come in a variety of sizes that can be chosen from to suit the best needs for the number of animals being kept. Some chose to use plastic sweater-box type enclosures that work well when the appropriate size is chosen. Large-scale breeders often use these types of enclosures. Properly built homemade enclosures can also be used as long as they are designed properly.

A standard 10 to 15 gallon (20 to 24 inches long) aquarium/vivarium is adequate for housing one leopard gecko where a 15 to 20 gallon long (24 to 30 inches) aquarium/vivarium can be used to house a pair or trio. When keeping multiple leopard geckos together it is very important to keep in mind that male leopard geckos are territorial and will fight when they reach sexual maturity. Therefore, if multiple geckos are to be kept together it should be only one male to multiple females.

Substrate and Landscaping

In the wild, leopard geckos from rocky areas covered with clay-gravel soil and sand. Although it is often preferred to keep reptiles in a natural setting, sand is not the best first choice as a substrate for these animals, especially for baby leopard geckos. All too often leopard geckos ingest the sand, either accidentally during feeding or intentionally as a calcium source (see diet and nutrition section). This can lead to serious digestive disorders and sand impactions in these reptiles as well as others and can be fatal if left undetected. There are many sand products available for reptiles that make claims that the substrate is “fully digestible” but this is in fact not true and sand impactions are seen in geckos kept on that substrate as well. Therefore, this substrate should be avoided if at all possible to avoid health issues.

Although not a natural looking substrate, newspaper or paper towels has always proven to be the ideal floor covering especially with breeders. This provides a good covering without the worry of causing health issues. It provides good sanitation as well when the newspaper or paper towels are removed regularly and the enclosure is kept clean. Other suitable choices for substrate include rinsed orchid bark allowed to dry or pea gravel available for aquariums. The gravel works well because it will provide a natural looking environment and is safe to use when a larger size that is not easily swallowed gravel is used. Again, with any substrate sanitation is the key and the environments must be kept clean. You must be sure your chosen substrate if using gravel/ bark is large enough that it cannot be easily swallowed by your geckos.

As far as landscaping the enclosure, shelters are a must. Again, these geckos are nocturnal and need a secure hide area to rest in during the daylight hours. Anything from prefabricated plastic hide boxes/caves, to hollowed out logs or rocks that are securely placed will provide a nice shelter. Although these animals live in dry environments, the hide areas usually contain a higher humidity. This is essential to these animals especially during times of shedding to aid in this process and avoid health issues. Keeping moist moss, ground coco bedding/ coir, vermiculite or wet paper towels in them can provide the humidity in these shelters. Always making sure they are kept clean and moist, especially at times of shed. Other items can be

provided to create the finishing touches on the landscape like rocks, branches, and some plants ranging from decorative plastic ones to living cactus and desert plants.

Heating and Lighting

The ideal temperature range for these animals is mid to high 80's to low 90's. It is essential to provide proper heat and temperatures for reptiles as their normal body function and digestion relies upon this to work properly. There must be a temperature gradient as well so these animals can regulate their body temperature. One end of the enclosure should be at the higher range of the temperature mentioned above and the other end of the enclosure can be cooler.

The heat can be provided in several ways. An ideal way to provide the heat is via a heating pad or heat tape available for reptiles. This will provide a constant area of belly warmth and should be placed at the hot end of the enclosure. There are several types of heating pads available, most are designed to be placed under the enclosure on the outside where others were designed to go on the back wall or the inside (make sure that it is safely designed by the manufacturer before any heating pad is placed inside the enclosure). These provide a safe way to provide heat to these animals and should be connected to a thermostat if possible to better control the temperature. The traditional "Hot Rocks" that have always been used in the past as source of heat have died down significantly in popularity and caution should always be used with these devices as heat sources as they often lead to thermal burns in reptiles. Another heat source readily used are incandescent bulbs. These will provide a localized area of heat and as well as provide some light. Often a combination of heat tape or pads and incandescent bulbs are used to provide a higher daytime temperature and a cooler nighttime temperature often observed in desert environments. The appropriate wattage should be chosen based on the size of the enclosure and distance between the bulb and animals below. However, the most common means of providing heat for leopard geckos is with heat tape/pads.

Proper lighting is an essential requirement to the proper care of reptiles. There are various wavelengths of light that these animals are exposed to. It is very important to have the proper balance of these wavelengths for the well-being and good health of all reptiles. The two main categories of these wavelengths with regards to reptiles are UVA and UVB. UVA has its physiologic benefits to these animals as well as UVB, however UVB is essential for reptiles to synthesize Vitamin D3 that is needed for the proper absorption and utilization of Calcium, an essential mineral to reptiles. The sun produces UVB; therefore it is a wavelength diurnal reptiles that are active in the daylight hours require. Nocturnal animals such as leopard geckos do need exposure to UVB as they are active at night, even though calcium is still an essential part of their diet (see diet and nutrition section). Therefore, it is not essential for leopard geckos to have the UVB type bulbs. In fact, often room lighting will suffice for these animals unless incandescent bulbs are required for heat supplementation. Also keep in mind that the albino lines of leopard geckos are light sensitive and are often bothered by bright lights.

Diet and Nutrition

Leopard Geckos are insectivorous reptiles meaning they eat mainly bugs and insects. Usually these insects are consumed live therefore one must be prepared to provide a steady

supply of live insects to feed leopard geckos. There are a variety of insects available for sale in the pet industry. These include crickets, wax worms, mealworms, silkworms, butter worms and the more recently available phoenix worms. Leopard geckos could be provided with a variety of these insects to supply a well balanced diet. In the past mealworms have been frowned upon by many as poor source of food for reptiles. However, more recently these thoughts have been proven false. In fact many of the big breeders feed properly gut loaded mealworms exclusively to their leopard geckos with great success. It is very important to remember to always feed your insects a good quality gut load atleast 12 to 24 hours prior to feeding your leopard geckos. This will ensure the insects themselves are fully loaded with the proper nutrition to fulfill the requirements of your leopard geckos.

The frequency of feeding depends on the age of the leopard gecko. Baby leopard geckos should be fed daily. When feeding crickets be sure to only provide as many as the gecko will consume in a short period of time. Never leave excess crickets in the enclosure as this has proven to stress the geckos out and crickets have been known to cause injury to them as well. As far as feeding meal worms, they can be placed in bowls that are too deep for the worms to climb out but shallow enough to allow the geckos easy access to consume them. Many chose this so they can leave the worms in the enclosure so the geckos can eat free choice. This method works great for both babies and adults. Adult leopard geckos can be fed every other day but breeding geckos may require daily feedings as well to keep up with the production of eggs. When gravid their appetite may go down however from carrying the space occupying eggs. The size of the food should be chosen carefully. Never feed very large crickets to small gecko. They will still attempt to eat it and the food may get stuck. Ideally the food item should not be longer than the width of the space between the geckos eyes.

With regards to Calcium, this is an essential mineral to leopard geckos especially baby and gravid leopard geckos. Calcium is an essential component for normal bone development and proper egg production. Without enough Calcium in the diet, poor health may develop and it is common for leopard geckos to develop metabolic bone disease from Calcium deficiencies. Calcium should be provided in various ways. With every feeding the insects should be dusted with calcium by placing the food items in a plastic bag and shaking well. This will allow the calcium powder to stick to the food items so that when the gecko feeds on the insect it will ingest the calcium. Leopard geckos should also be provided with a shallow bowl of calcium powder kept in the enclosure at all times. This provides a steady supply of calcium and the geckos will readily lick the powder out of the bowls. There are a variety of sources for calcium and many are available in the pet industry. Be sure to check that is a calcium supplement not just a vitamin and mineral supplement. Vionate is also a great source of amino acids and vitamins and minerals. It has become recommended as an essential part of their diet especially in babies. When used properly, leopard gecko babies show fast growth rates and superb body development.

Water should also be provided to leopard geckos. Although they are from dry arid environments they will also consume water as needed when supplied. This too should be supplied in a shallow bowl. Again, don't forget to provide the humidity in the hiding box as well. The water should be changed daily and always keep the bowl clean to prevent the spread of disease.

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