

The care and maintenance of the Leopard Gecko

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The Dude's guide to the care and maintenance of Leopard Geckos

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Overview:

In the arid shrublands and rocklands of Pakistan and Afghanistan inhabits one of the most popular pet reptiles today. The Leopard Gecko, *Eublepharis Macularius* is a terrestrial gecko with different adaptations when compared to other types of *Gekkota*. Instead of utilizing sticky fingers (lamella), on their feet they use toenails. Unlike most of their gecko counterparts, these

geckos have eye lids and the ability to close their eyes, while most geckos have an organ called the Nictitating Membrane, also known as the "third eyelid", these geckos' eyes have their own unique physiological structure making them a very unique gecko. There are other eyelid geckos in the wild but are much more uncommon compared to their other gecko counterparts. Another unique adaptation is that they are able to drop their tails when threatened to create a distraction,

giving them the ability to get away and escape danger. While they can regrow their tails, this is a huge nutritional loss for them, and proper steps should be taken to ensure they get all viable nutrients for proper regeneration. Being a staple pet reptile in the exotic animal trade, finding a captive bred leopard gecko is not challenging. Pet stores, reptile shows and even many internet businesses will have plenty of CB babies available. Acquiring a baby can be very special, because as babies they are all very similar in appearance (besides color), many of them will start with broad bands, they eventually migrate into their unique patterns as they age, hence the name Leopard Gecko. It is also a great bonding experience to raise a baby to adult for many different aspects of reptile keepers. When looking to purchase a baby, ensure that the baby is at least 30 days old and has had two solid sheds prior to bringing home. Initially imported around 1970, they have been bred and genetically crossed to create unique variations of the same lizard. Albino, Carrot Tail, Snow and many other types of genomes are readily available in the pet trade. Overall, these lizards have strict husbandry requirements, but are not hard to properly maintain and take care of. They are great for beginning or advanced reptile keepers alike. Their docile nature combined with their easy care makes them a great starter lizard for young children. See below pictures for different genomes commonly available in the pet trade.



Mack Snow White and Yellow Bell Albino Photo Credit: Seth Hoffpauir



Striped Lavender Eclipse. Credit: Eric Lago

Super Snow. Photo Credit: Star Tennyson



Photo Credit: Kirby Phillips

Like all reptiles and amphibians, Leopard Geckos will greatly benefit from a natural, bioactive terrarium. Reaching as large as 10" these active lizards will appreciate a larger terrarium with plenty of places to climb, hide and thermoregulate. Females, typically getting much larger than males are usually more solid and have a broader musculoskeletal system for oogenesis. Living in captivity for as long as 20 years, you must be ready to provide them the long term care and maintenance that these lizards require. To identify males from females, males will have hemipenises on the caudal aspect of the gecko right above the tail base. Females are lacking these hemipenises. A young gecko will easily thrive in a 10 gallon or 18" x 18" x 18" but after six months of age, upgrading will be recommended. A 20 gallon long, or 24" x 18" x 18" is recommended for a single adult, if you are attempting to keep a pair together at least a 24" x 18" x 24", 29 gallon, 40 breeder or larger is recommended. Males can be very aggressive and territorial towards other males and will consistently attempt to breed with any female(s), which can cause undue stress on the female. When keeping in pairs it is recommended to provide many hiding areas, climbing areas, and multiple places to thermoregulate to prevent fighting or bullying. Young geckos can be kept in large groups up until they are about four months old, then it will be recommended to separate them and raise them individually.





For substrate, the Dude recommends at least a 3.5" layer of Terra Sahara with some moist AAA Spag mixed thoroughly throughout the terrarium with any type of leaf litter mixed in as well. The AAA Spag is great for providing humid hides in special areas of the terrarium. Many times, excess Spag can be utilized under one of the hide caves. Not only will this help create a humid area in the terrarium, it will also help them greatly with shedding, hydration and respiration. As the BioShot slowly breaks down organic matter such as feces, shed, AAA Spag, Leaf Litter these biodegradables need to be readily added every few months so a consistent supply of organic matter can continually supply your ecosystem. From our experience here at the Bio Dude, providing your Leopard Gecko with a cool hiding spot on one side, plus a humid hide + hot spot on one side will give them enough options to properly thermoregulate. One common issue many keepers face is an incomplete shed with this species. Having toenails instead of the Lamella, many times old shed can get stuck on their toes, dry up, cause constriction, this causes the toes to fall off. Very similar with how farmers used to neuter mammals on farms. To prevent this from happening providing a humid hide on the hot side will provide all necessary humidity for a proper shed. If your humidity is correct and your gecko is still having issues, a light soak in lukewarm water will help the skin fall off without excess handling or stressors. When maintaining your terrarium, the ideal temperatures for your Leopard Gecko, a hotspot during the day/nighttime period should be provided at about 95 degrees F with a cool side of 70 degrees F on the cool end of the terrarium. Humidity should range around 25% ambient with a humid hide ranging between 65% - 85% respectively. To achieve desired heat, an under-tank heater can be mounted on the side, or a heat dome can be utilized. To create a humid hide simply put a cork bark flat halfway dug into your Terra Sahara creating a smaller cave structure in which your lizard can easily go in and out of.



With providing your gecko UVB there are many different schools of thought with this species whether if it is necessary for their overall well-being or if it is not needed. While there are some schools of thought that say Leopard Geckos are nocturnal, this is false. These geckos are crepuscular, which means that they are most active during dawn and dusk. In their biome, this is the best time for them to venture out for food. Temperatures are moderate, food is plentiful and just emerging which provides opportunity for them to get a meal. With that being said, it is not illogical to assume that they are not exposed to moderate or limited amounts of UVB in the wild. While they may have adapted to not utilize it in excess as many other reptiles, this does not mean that they will not benefit from it or use it if provided. Not only does my Leopard Gecko bask when given the opportunity in his bioactive enclosure, I also provide an Arcadia Shade Dweller 7% UVB bulb that has been used for the last few months. This bulb is not only designed for Leopard Geckos, but other crepuscular animals in mind. It is the perfect spectrum of UVB in which these animals would be subjected to in the wild. Overall, yes, UVB is highly recommended for them. Will they live without it? Probably, but should they? NO. Think of it this way. If you purchase a new car and the manufacturer tells you that it can take normal gas, but you should use premium because of how the car is designed. As an owner, you would ultimately want to pick the premium, because it is better for the car, and you will get more mileage out of it. So, if using UVB will bring all the benefits to your lizard and help them grow healthy and strong, allowing you to give them a full life while giving them that little boost, that is the only way to go, and after all, we know that we want to provide the best care, not the basic care.

When maintaining your Leopard Gecko, a light mist daily is recommended to provide hydration opportunities as well as light humidity spikes. Dew drops are readily drunk by this species and will appreciate a light misting daily. If you love automation, a Mist King is a great resource to utilize for about 15 seconds daily to keep your gecko on a schedule. Not only will this aid with shedding and hydration, but this misting will also benefit your Sahara and biodegradables by providing more drivers for decomposition. One of the most important aspects of keeping these geckos besides lighting and biome is their diet. In captivity these insectivores will readily accept crickets, dubia roaches, red runner roaches, silkworms, hornworms, meal worms, calci worms and other softer bodied insects. It is important to not only gut load your insects prior to feeding, but also dusting them with the appropriate calcium and vitamin supplements is key to proper development and homeostasis. For gut-loading, the Dude recommends Bug Grub used in wet form. Not only will this provide beneficial carotenoids needed for vitamin synthesis it will also



help keep your insects healthy and have a high moisture content, which is vital for a healthy gecko. Dusting with Rep Cal Pink Label Calcium at least twice weekly with Rep Cal Blue Label Herptivite once weekly is recommended. When feeding, place your insects, roaches or other soft bodied insects in a deli cup or a gallon Ziploc bag. Pinch in a small amount of calcium or multi-vitamin depending on the schedule and coat the crickets by shaking the bag or container with the supplement. This will allow you to provide the best nutrition possible while providing all essential drivers for proper vitamin synthesis. When feeding your gecko, it is important to never feed an insect larger than the space in between their eyes. Baby geckos up to 6 months should be fed daily, adults can be fed every 3 days. Another way to offer additional calcium is to put a small amount in a dish and place in the terrarium. Your gecko will relish it when they feel it is necessary. There is no set number as to how much to provide, but the key is to offer enough that your little one feels full, without leaving a bunch of crawling insects around which can cause undue stress.

With a healthy diet, healthy biome, accurate temperature, and humidity regulation in your terrarium; your Leopard Gecko should not have any issues with impaction from bioactive substrate. Impaction, especially with Leopard Geckos can be a big problem, especially if the animal is immune compromised in any way. If your husbandry is not correct, or if your gecko is



sick, dehydrated or have some sort of debilitating condition that would suppress their immune system, bioactive is not recommended until your gecko is healthy enough to be in their permanent enclosure. While having bio will play a major role in their overall health, vigor, appetite, and attitude it will not always solve or help with internal health problems, such as impaction. So bottom line, if your lizard is being kept the way they should be and overall healthy, they will have no problem passing any bit of substrate as they are wild animals, and if in the wild they would not have the ability to pass substrate, they would not survive as a species.

When maintaining your Terra Sahara terrarium for your Leopard Gecko, daily misting, providing a clean water source while maintaining a varied, healthy diet will allow your gecko to live its full expected life. If you decide to provide UVB and heat, be sure to provide the full 12 hours of daylight, 12 hours of night for a proper photoperiod. As your terrarium progresses you will need to replace the biodegradables every few months, but never the substrate. You simply dump in more biodegradables, and you are set! Achieving bioactivity with the Bio Dude's enclosures is easily accomplished with the Bio Shot, but other means of clean-up crews can easily be established. Springtails, Isopods, Earwigs, Dermested Beetles (in small quantities) can all be

established into your terrarium to aid in the beneficial breakdown of organic matter. If you are using live plants, remember you are most likely using succulents and they like it drier and not overly saturated. With a proper photoperiod cycle + misting schedule your bioactive terrarium will flourish without a hitch.

The best part about keeping reptiles as pets is their overall uniqueness as animals. Unique niches, adaptations, color, personalities and more come alive in your terrarium as long as you provide the proper setup that correlates with their biological niches. This is what makes them so amazing as pets, because you can have a rather tame, easy to care for lizard that not only can be calm enough to eat from tongs or your hand, but still act like a wild animal by basking, hunting, digging burrows and tunnels, breeding and even rehydrating. The most important thing to remember that these animals are NOT domesticated. They are WILD animals with instincts that must be nurtured in the terrarium to make them feel at home and comfortable. Being responsible for a life, it is your responsibility to provide the best care, rather than the basic care using research driven practices and techniques.

- Updated and fact checked July 22nd 2022