

# Leopard Gecko Care Sheet

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[Table of Contents \(Click link below to skip to a section\)](#)

1. Housing
2. Substrate
3. Heating
4. Shelter
5. Shedding and Moist Shelter
6. Water
7. Food
8. Vitamins
9. Cage Maintenance
10. Hibernation
11. Health

(HEAD PICTURE HERE)

Leopard geckos are undoubtedly one of the best reptile pets available today. They are easy to care for, extremely docile, do not require a large cage, easy to breed, and come in a staggering array of color morphs. I have been breeding this species since 1996 and have produced thousands of leopard geckos over the years.

I have designed this detailed care sheet with the beginner reptile keeper in mind, for whom this may be your first reptile pet. If this describes you, congratulations, you have made a great choice! More advanced leopard gecko breeders will also find this information useful because it is always interesting to hear the various ways people take care of their animals and the experiences they have had.

### HOUSING

One or two adult leopard geckos can be housed comfortably in a 10-gallon aquarium. Of course they would appreciate a larger cage, so you might want to consider a 20-gallon long or 30-gallon, especially if you may want to expand your collection or consider breeding. A screen top for the aquarium is not necessary to prevent your leopard geckos from escaping because they do not have toe pads that would allow them to climb glass, but you may consider purchasing one for other reasons. I strongly recommend you get a screen top if you have cats or small children, as both could be hazardous to the health of your geckos. A fine-mesh screen top may also be important to you to prevent crickets from escaping the aquarium by climbing the strips of silicone in the corners.

(BASIC CAGE PICTURE)

Multiple females can be housed together (if approximately the same size), but sexually mature males are territorial and will fight. A male and multiple females can be housed together without problems, but they should not be introduced until they are of a safe breeding size (45 grams for both males and females). If you purchase a male and female

gecko and plan for them to live together in the future, you must raise them to adult size separately. Males grow faster and get larger than females, and a drastic size difference can develop if young males and females are housed together. The larger animal (male) is better able to compete for food, often stealing it away from the smaller animal (female). Additionally, males become sexually mature at a smaller size than females, and will breed females as soon as they are able to reproduce. I have heard of female leopard geckos as small as 25-30 grams laying eggs, but breeding at this size is often too stressful and can cause health problems, in addition to reducing the female's lifetime reproductive potential. To put this in human terms, a 13-year-old girl can have kids, but it is just not a good idea!

If you are raising multiple females together in one cage be mindful that sometimes one female grows faster than others, and as discussed above can out compete smaller cage mates at feeding time. If a drastic size difference does develop you should separate the largest animal from the smaller ones.

### SUBSTRATE

Sand is the best substrate for subadult (at least 5 or 6 inches in total length) and adult leopard geckos. I recommend Play Sand (purchased from hardware stores such as Home Depot) because it has been screened and washed. Do not use industrial sand because it contains a lot of dust that can be harmful to your geckos.

Be sure to check the grain size of the play sand before you buy it. Only use extremely fine sand (grain size 0.5 mm or less). In early-mid 2002 I had problems getting the right size sand from the local Home Depot. I am not sure if they changed suppliers or localities for mining sand, but the grain size was three to four times larger (1.5-2 mm) than usual. Since grain size was much larger, I was only able to use it with adult leopards. Recently I have observed grain size to be quite variable between different palettes of sand at Home Depot, all labeled Play Sand (Quikrete brand). The picture below shows three different grain sizes of sand packaged as Quikrete play sand. The pile on the left is extremely fine and suitable for juvenile leopard geckos; the other two piles are much coarser and only suitable for adults. (Click on photo to enlarge)

(SAND PICTURE)

Young leopards should be kept on paper towels until they are 5-6 inches long. Leopard geckos are very active feeders, and usually end up ingesting some of the substrate in the process of catching a cricket. Young leopard geckos have narrower digestive systems than adults, and it is easier for their system to become blocked if they consume sand.

I have talked to other leopard gecko breeders who have said they raise their babies on sand with no impaction problems. Sand is a lot easier to "spot clean" than paper towels, so I decided to experiment raising some of my babies on sand. I put two hatchlings on sand, and they appeared fine for two weeks. One day I opened their cage and one of the babies didn't look happy and was acting very lethargic. I picked her up and her entire belly felt very hard with all the sand she had ingested. The other baby had also ingested a

considerable amount of sand, but not as much as the lethargic gecko. Both geckos were able to pass the sand in their digestive systems, but the heavily impacted gecko required numerous doses of mineral oil down its throat and up the other end. Moral of the story, just to be safe don't use sand until they are 5-6 inches!

### HEATING

All reptiles require a temperature gradient that will allow them to select the temperature that best suits their needs at that moment. Sometimes your leopard geckos will want to heat up, other times they will want to be cooler. The best way to heat your gecko enclosure is with an under-the-tank heater. I recommend the Zoo Med Repti Therm U.T.H. These come in various sizes; choose the one appropriate for the size of aquarium you are using. The heat pad should be placed all the way on one side of the tank, creating a thermal gradient. You can peel the back of heat pad and stick it directly onto the aquarium, but once you stick it to the tank it cannot be removed (if the tank breaks in the future or you decide to use it on a different cage). I have found it works equally well to place a piece of wood or book under the tank of a proper thickness that it will push the heat pad directly against the glass. Heat tape is another alternative and it works equally well for heating leopard gecko enclosures.

(UNDER TANK HEATER PICTURE)

You should have a thermometer available to check the temperature gradient of the enclosure. I do not recommend you purchase a fancy reptile thermometer that sticks to the side of the tank, as these are more expensive than what you need and will only give you the temperature of the air inside the tank. It is more important to know the surface temperature of the areas where the gecko actually resides. I recommend the stainless steel aquarium thermometers that you should be able to find in most pet stores.

(THERMOMETER PICTURE)

A thermometer of this type will allow you to take the temperature of the sand surface at various places within your gecko's cage, most importantly the hot spot above the under-the-tank-heater. You should know these temperatures and check them at least once a week. The warm side of the cage should be at 90° F. If you find the warm side of the cage is hotter than 90° you can decrease the temperature by using a lamp dimmer (Lutron Lamp Dimmer, available at Home Depot). I recommend using the type that allows you to just plug in, rather than the type that requires you to cut the cord for the under tank heater.

(DIMMER PICTURE).

Leopard geckos are typically not active during the day and do not require a basking (heat) light or any UV bulbs. They prefer to remain in a dark hiding place during the day, and bright lights constantly shining in their eyes can stress them out. I have seen instances where people who have used basking lights on their leopard geckos have caused them to become stressed to a point where they stopped eating and the geckos eventually died.

Red bulbs are better because red light is invisible to leopard geckos, but you should be able to meet the heating requirements of your leopard gecko with an under-the-tank heater alone.

Hot rocks or heat stones are another alternative for heating that you will commonly see for sale at pet stores, but I do not recommend using them with leopard geckos (or any other reptiles). These are ceramic rocks with a cord coming out of it (leading to central heating element). The hot rock does not allow you to control the temperature of the stone; it just heats to whatever temperature was set by the manufacturer. When I was younger I used heat stones for years with iguanas and never had any major problems. I have heard horror stories and have seen pictures of reptiles that have been burned by hot rocks that have malfunctioned or ran too hot. Again, you should be able to provide the necessary heat for your leopard geckos with an under-the-tank-heater alone.

### SHELTER

Leopard geckos are nocturnal, and in the wild they remain hidden under rocks or other debris during the day. For these reasons, they appreciate some sort of shelter to hide in during the day. The shelter can consist of many things: paper towel roll, small cardboard boxes (bottom third of a cracker or cereal box), small plastic cottage cheese or margarine containers, or the white deli cup you brought your gecko home in (if you bought your gecko at a reptile show). Each of these shelters should have a hole cut on the side large enough for the gecko to enter. It is good to have several shelters in your cage, one on the warm side, one on the cool side. There are a lot of choices available if you want to get a fancier shelter for your gecko. Many different shelters are available at your local pet store or reptile show including ceramic caves, half rounds of wood, or you can fashion your own hiding place out of loose rocks attached together with silicone caulk (used for constructing aquariums). If you do make a rock cave with loose rocks, be very sure that it is sturdy and will not collapse and crush your gecko.

(DELI CUP HIDE PICTURE)

(PAPER TOWEL ROLL PICTURE)

### SHEDDING AND MOIST SHELTER

Leopard geckos shed their skin like all reptiles and amphibians, and leopards shed their entire skin all at once. Frequency of shedding varies, depending on the age and growth rate of the gecko. Babies shed much more often than adults. You will know when your gecko is preparing to shed because its colors will get duller, and then it will turn whitish immediately before the shed. Leopards usually eat their entire skin in the process of shedding. This strategy is important for wild leopard geckos for two reasons. First, they expended the energy to make the skin; they aren't just going to let it go to waste! Second, bits of lizard skin in an area may tip off predators that they are in a good place to hunt tasty lizards.

Usually the gecko is able to pull the shed off easily, but sometimes they have problems, especially if they do not have the proper humidity during shedding. You should always check your gecko after it has shed to make sure it was able to peel all the skin off.

Leopard geckos often have problems with removing skin from their toes. If dead skin is not removed promptly from a toe it will become constricted, and as the lizard grows the toe will become constricted to the point where the dead skin can cut off blood flow to the toe. If this is not caught in time the toe can die and fall off. This is not a big problem, as it usually heals quickly, but I think they are happier with all their toes!

(SHEDDING PROBLEM PICTURE)

A moist shelter should be provided so your gecko can have access to high humidity when it is shedding. I have found leopards usually prefer the moist hiding place, even when they are not in the process of shedding. The moist shelter can consist of a small plastic container. A plastic cottage cheese container with a hole cut in the side works well, or you could use a Rubbermaid sandwich container with a hole cut in the top. I typically use cypress mulch (Zoo Med Forest Floor Bedding) as the bedding in the moist shelter, but peat moss should work equally well. You want to keep the cypress mulch or peat moist, but not sopping wet. Below is an example of a 1.8-quart Rubbermaid container that I use for moist shelters and egg-laying boxes for my adult leopard geckos. This is a group of female Rainwater albino hets and a Rainwater albino male. Note: container top was moved for this photo.

(MOIST SHELTER PICTURE)

If you do find your gecko has not been able to remove some skin after shedding, you need to lend a helping hand. Place the gecko in a small plastic container with a small amount of lukewarm water. The gecko **SHOULD NOT** be swimming in the water (it will drown if the water is too deep), only use 1/16 – 1/4 inch of water depending on the gecko's size. Put a top on the container and let the gecko sit for 30 minutes. High humidity will develop in the container and this should loosen the skin enough to allow you to remove it easily with a pair of tweezers. If the skin has not loosened enough for it to be removed easily, repeat the soaking process above for another 30 minutes.

### WATER

Leopard geckos come from a dry environment, but require some humidity and water. Water should be made available two or three times a week. I use plastic bottle tops from Gatorade, large Aquafina, and 1-liter Mountain Dew bottles for water dishes. I typically use the shorter Gatorade tops for smaller leopards, and the larger Aquafina and Mountain Dew tops for larger leopards. Although these may not be the most decorative water dishes, they are the perfect size for leopards, free, and easily replaceable. Larger, more decorative water dishes can be used, but they usually become dirty very quickly (harboring bacteria) and require a rock in the center to prevent crickets from drowning. Plastic bottle tops have the benefit that they usually dry out or are tipped over in a day or two, preventing bacteria from multiplying in the water dish. I recommend placing the water dish on the cool side of the cage; otherwise the water will evaporate too quickly.

Young leopard geckos should be misted occasionally. I recommend misting the entire cage once or twice a week, especially if you notice your gecko is preparing to shed its skin. The misted water should have all evaporated within 24 hours.

### FOOD

Leopard geckos will eat many kinds of live prey items, including crickets, mealworms, superworms, wax worms, and even pink mice (a.k.a. pinkies – baby mice only a few days old). I feed my geckos on a primary diet of crickets, and this appears to be perfectly fine for them. Other breeders feed a diet entirely of mealworms, and they have successfully raised many generations of leopards. Mealworms appear to be easier because you can keep them in the fridge, don't have to worry about them getting loose, and no chirping will keep you awake at night. An additional benefit is that you can contain the mealworms in a dish, so you do not have to worry about them hiding in the cage furnishing or eating gecko feces in the cage (and reinfesting your geckos with any parasites the gecko may be carrying). I prefer crickets because they are more active, and this appears to stimulate geckos more than mealworms. Crickets are also nutritionally superior to mealworms, containing more moisture, protein, calcium, and vitamin C than mealworms (information from Grubco). Additionally, the exoskeleton of mealworms is more difficult to break down than that on crickets.

Wax worms are very high in fat, and are very useful to help a skinny or sick gecko gain weight. They can also be fed as part of the normal diet, but should only be used as an occasional treat rather than a mainstay of the diet.

Many adult leopard geckos will also eat live pinkies. I feed pinkies to my breeding females; both during the breeding season and after the season to give them additional calories to regain weight they lost from laying eggs. I have found that some females will refuse pinkies before they begin breeding, but once they start laying eggs they will eat as many as they can fit in their stomach (usually two or three).

It is difficult to feed your leopard gecko too much, but it is possible for a gecko to become obese if fed on a high fat diet (too many wax worms or pinkies). A healthy, well-fed leopard gecko will store fat in its tail and they can utilize this fat during the breeding season or during hibernation. If you decide to feed mealworms, they can be provided in a shallow dish at all times. Crickets can be offered daily if you want to spoil your gecko, but a minimum of twice a week.

The number of crickets in the cage at one time should be limited. Uneaten crickets quickly get hungry and can annoy your gecko, chewing on its toes or tail. Hungry crickets will often eat gecko feces in the cage, ingesting any parasite eggs or oocysts (stage in the life cycle of coccidia and cryptosporidium that is shed in feces; basically an egg). These crickets will now carry these parasite eggs in their stomach, and when the gecko eats these crickets those eggs will hatch, increasing the parasite load in your gecko (see page on leopard gecko health for more about this). To prevent this you should only feed as many crickets as your gecko can eat in 10-15 minutes. Pre-feeding time would be a good time to spot clean your cage, picking out any feces or dead crickets in the cage.

It is important to select the proper prey size for your gecko. Smaller geckos need to be fed smaller prey items than larger geckos. The general rule of thumb for selecting the proper size is the prey item should be no longer than the length of the gecko's head. For hatchling geckos this usually means 3/8-inch crickets (cricket age 2 weeks, maybe 3 weeks old), for juvenile geckos 1/2-inch crickets (3 weeks old), and subadult geckos can handle smaller adult crickets (male crickets are generally smaller) by the time they are 6 inches long. Note: cricket size varies by sex, but it can also vary greatly depending on your cricket supplier.

### VITAMINS

Gut loading your crickets is very important! "Gut loading" is defined as filling the gut of crickets with nutritious foods before they are fed to your geckos. Remember the old saying "You are what you eat!"; a more nutritious cricket will make for a healthier gecko. I feed my crickets Flukers High Calcium Cricket Diet (can be purchased at your local pet store or directly from Fluker Farms), and give them pieces of orange for water. If you are buying one or many dozen crickets from the pet store, put the crickets in a separate container with high calcium cricket food and orange slices for at least several hours before you feed them to your geckos. Feed only as many crickets as your gecko can eat at one time, or the crickets will pass the nutritious food and fill their bellies with gecko feces or dead crickets they find in the gecko cage.

### (CRICKET FOOD AND MINER ALL PICTURE)

Vitamins are also very important for your geckos. I (and many, many other breeders) recommend Miner-All vitamin supplement made by Sticky-Tongue Farms. Miner-All comes in two types "I" and "O". "I" is for indoor animals and contains vitamin D3. "O" is for outdoor animals and does not contain vitamin D3. Since leopard geckos are not basking lizards (such as bearded dragons), it is important to use the "I" to provide them with vitamin D3.

The typical method of administering vitamins to your geckos is the "shake and bake" method. Put a small amount of the vitamin supplement in a jar, plastic bag, or other small container, place the crickets in the container, and shake until the crickets are covered with white powder. This should be done immediately before you feed your geckos because the crickets will clean themselves and remove the powder. Juvenile leopard geckos require a lot of calcium and vitamins during the growing process, so food items should be coated with vitamin powder at each feeding. Non-breeding adult geckos do not require as much calcium, so supplementation twice a week is sufficient. Egg-laying females require a lot of calcium; so all prey items should be dusted with vitamin powder.

Some leopard gecko breeders provide a shallow dish (jar lid, Gatorade bottle top, etc.) with a pinch of vitamin supplement to their geckos at all times. I do not give dishes of vitamin powder to my geckos, I have found these dishes are quickly buried, tipped over,

or fouled. I feel gut loading and dusting with vitamin powder is sufficient, for juveniles, subadults, and even egg-laying females.

### CAGE MAINTENANCE

Leopard geckos only require minimal routine cage maintenance. They are fairly clean and usually poop in only one corner of the cage. A sand substrate allows for simple spot cleaning of feces and dead crickets, and this should typically be conducted at least once a week. The sand substrate should be dumped and the entire cage (including water dishes, cage furniture, etc.) washed and sterilized with a mild bleach solution (1 part bleach: 9 parts water) or Nolvasan (diluted to robin's egg blue) at least once every two months. You should be able to order Nolvasan through your vet. If you see many small bits of feces mixed throughout the sand it is definitely time to clean the entire cage.

Paper towels do not allow for easy spot cleaning, and should be replaced entirely once a week. Sterilization of the entire cage is not required each week, but should be done at least every two months.

### HIBERNATION

Hibernation is a natural part of the yearly cycle for leopard geckos, but it does not appear necessary for pet geckos to hibernate. It is perfectly fine to keep heat on your geckos throughout the winter season, and they should eat, drink, and be active as they would normally.

But, maybe you are planning on breeding your geckos or would just like a break and choose to hibernate your geckos. Simply turning off the under tank heater is often enough to hibernate your geckos, as they can be hibernating at 70 degrees Fahrenheit (as low as 65 degrees is fine). During the hibernation period your geckos will eat less, drink less, and be less active. They can remain in hibernation for up to three months without losing much weight because their metabolism has slowed, requiring less energy. You can choose to feed your geckos occasionally, but only feed lightly. If your geckos do not want to eat during this period that is fine, remove uneaten crickets so they do not annoy your geckos.

### RECOMMENDED READING

The Leopard Gecko Manual. 1998. Authors: Philippe de Vosjoli, Roger Klingenberg, Ron Tremper, and Brian Viets. Publisher: Advanced Vivarium Systems, Inc. 85 pp.

(LEOPARD GECKO MANUAL PICTURE)