How to Create, Monitor, and Control Proper Humidity Levels for Your Herp

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Humidity requirements for pet herps vary over a wide range. At one end of the spectrum, species such as green iguanas, geckos, chameleons, and water dragons need moist, tropical rainforest conditions. At the other end, species like the desert spiny lizard and the crevice spiny lizard require arid conditions. Whichever humidity level your pet requires in his enclosure, it must be monitored and maintained continuously. If the humidity would drop too low, your herp may not shed his skin correctly, and develop other health problems, such as egg binding in females. If humidity is too high, your pet could suffer severe fungal infections, or even pneumonia.

Research and observe

Temperature and humidity conditions in your terrarium require ongoing observation and precise adjustment when needed. Before setting up your pet's microclimate, research and learn everything you can about the needs of your particular pet. So specific are the needs of various species, that keeping different species together in the same enclosure is strongly discouraged. Also, be sure to take into account your local climate, and the type of climate control operating in your home. Humidity needs may change depending upon the status of your pet. For instance, during shedding, higher humidity levels are often helpful.

Moisture variables

The amount of moisture in the air of the enclosure or aquarium is controlled by three variables:

1. Ventilation
2. Temperature
3. Introduction of water into the atmosphere

Ventilation

Full enclosures with small side vents conserve heat and humidity. These are best for tropical and other species with high humidity requirements. Glass and plexiglass aquariums with wire mesh tops allow heat and humidity to more readily escape. These are best for desert and other species with low humidity requirements. If you need to maintain high humidity levels, avoid enclosures made of wood or pressboard which may rot or swell when moist. Regardless of type of enclosure, adequate ventilation and regular cleaning are necessary to control the rapid growth of bacteria and mold. With any type of enclosure always make sure all electrical connections are waterproof.

Temperature

In most cases, an ideal herp environment will be maintained through the use of multiple heat sources. For instance, an under-the-cage heat mat will keep the base temperature of the enclosure at the proper level, while a basking light or ceramic heater will provide a warmer spot. Most herps do best when they have a temperature gradient within the enclosure so they can move to a warmer or cooler spot, as desired. To monitor the temperature, at least two thermometers should be used. One should be placed near the floor of the cage where it is coolest, and one near the basking area, where it is the warmest. The thermometers should be checked at least once daily to be sure the heat sources are working properly.

The warmer the temperature, the faster the water sources in the enclosure will evaporate. Since most enclosures will be warmer than room temperature, the water in the cage will evaporate faster than water outside of the cage. This means water bowls, pools, damp moss, and other water sources need to be checked frequently and water added as needed.

Introduction of water

Just as thermometers are necessary to monitor temperature, a hygrometer is necessary to monitor the humidity and be sure your pet's environment is optimal. If the humidity is too low, there are many ways to add moisture to the environment. Choose one or more of the following to satisfy your herp's moisture requirements:

- Pools: Some herps, especially amphibians and some snakes, need a large pool of water in which to submerge themselves. The water in the pool should be clean and changed regularly.
- Dishes: Pet-safe, low profile water dishes provide water to drink and help raise humidity levels.
- Foggers: Foggers add moisture and ambience by simulating low clouds, fog, and dew. They are particularly useful for dew-lapping reptiles.
- Humidifiers: There are several types of humidifiers/air exchangers that constantly supply fresh, humid air to

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terrariums. If there are multiple herp enclosures in a room, some owners prefer to use a room humidifier.

- Misters: Programmable misters deliver a quick mist every hour, a long mist every 12 hours, or many choices in between.
- Waterfalls: Waterfall kits are available, which not only add humidity, but enhance the appearance of the terrarium.

- Drip systems: By allowing water to constantly drip into a pool at the bottom of the cage, humidity levels can be increased. A drip system could consists of a container of water placed above the cage, with holes or plastic tubing leading from it which drips water onto the plants. (Ask your veterinarian for a used intravenous (IV) drip set, that you can fill with water.)
- In-cage rain system: An in-cage rain system can be made from PVC tubing that has small holes drilled into it. The tubing can be connected to a water supply using a valve to control water flow. The tubing is placed over the cage, and the water drips into the cage. A collection system under the cage will need to be provided, such as large plastic trays or buckets.
- Humidity boxes: For some herps who need high humidity, a humidity box can be used to add humidity to a specific area of the enclosure. To make such a box, cut an entrance in any small plastic box and line it with damp sphagnum moss. The moss needs to be changed regularly to prevent mold from developing. Humidity boxes are especially useful when the herp is shedding or in winter when room humidity levels can become very low.
- Spray bottle: A low-tech way of adding humidity is simply to spray the enclosure with water at intervals. To avoid creating problems like pneumonia and mouth rot, do not overdo it.
- Live plants: Depending upon the species or herp, some do well with live plants in their enclosures. This is an attractive way to add humidity as well as basking and hiding areas. Be sure to use nontoxic plants.

Too much moisture can be detrimental. Moisture on the animal will result in lowering of his body temperature as it evaporates. In general, there should be a drier area of the cage where the herp can go to to help regulate his body temperature. If mildew becomes a problem, decrease the number of hours the humidifiers, foggers, etc. are running. To kill the fungus, the enclosure can be cleaned with a mild bleach solution, rinsed thoroughly, and allowed to dry. Do not use the bleach solution in the same room as the herp, and remember to take safety precautions. For more information on cleaning cages, click here.

Summary

The humidity requirements of herps vary. Learn what is optimal for your herp and choose his enclosure and accessories based on his needs. Daily monitor the temperature and humidity and adjust his habitat as necessary to maintain proper levels. If the humidity needs to be higher, there are multiple ways to add moisture to his environment.

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