

Clown Treefrog Care and Breeding

Techniques for keeping and breeding clown treefrogs (*Dendropsophus leucophyllatus*, formerly *Hyla leucophyllata*).

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From my earliest fieldwork in South America, I've been captivated by the beauty of the clown treefrog (*Dendropsophus leucophyllatus*, formerly *Hyla leucophyllata*). These frogs are common around human settlements, so the species and humans seem to mingle well. They are likely equal in encounter rate to something like the hatchet-faced frogs of the genus *Sphaenorhynchus*. Anyone who has worked anywhere in these species' range for any length of time just can't miss them. For example, both the clown treefrog and *Sphaenorhynchus* can be readily observed in cesspools covered with floating vegetation in and around the Amazonian city of Iquitos.

Because clown treefrogs aren't hard to find across the Amazon and the Guyanas, they have become a semiregular import in the pet trade. Proof of their long-standing status as a commercially important species can be found in the many images of captive specimens appearing on items such as calendars, stationary, books and pet trade literature.

A smaller member of the family Hylidae, clown treefrogs have a striking pattern. The giraffe phase is undoubtedly one of the most brilliant patterns of any hylid frog in South America.

Wild Clowns

The clown treefrog is the namesake species for a group of related frogs that also include *Dendropsophus anceps*, *D. bifurcus*, *D. ebraccatus*, *D. elegans*, *D. rossalleni*, *D. sarayacuensis* and *D. triangulum* (Faivovich et al., 2005). If the genus *Dendropsophus* sounds unfamiliar, all are former members of the genus *Hyla* (Faivovich et al., 2005). Frogs within this group are smaller members of the family Hylidae and the subfamily Hylinae. Most never exceed a couple of inches in total snout-to-vent length. Most of these species have a darker brown base color with yellow, tan or cream markings.

Dendropsophus leucophyllatus exists in a variety of patterns, some of which are considerably different in appearance. In fact, the giraffe phase morph of *D. leucophyllatus* was described and recognized at one time as a separate species, *Hyla favosa*, which was later synonymized with the then *H. leucophyllata* by Titus, Hillis and Duellman (1989).

In the wild, the clown treefrog group generally breeds around temporary forest pools or "floating meadows." A floating meadow is an oxbow or slow-water area of a river where the surface is covered by floating plants such as *Pistia* and/or *Eichhornia* spp., among other aquatic floating and emergent plants. Most of the frogs in this group can also be found around forest clearings with ponds.

Clown treefrogs have a distinctive raspy call with a harsh primary note followed immediately by several equally raspy but shorter notes. Often eggs are deposited on leaves immediately above water. Hatching tadpoles drop into the water and live along the bottom of the aquatic system. At the right times, large breeding aggregations of clown treefrogs can be observed with hundreds of frogs participating in the event.

The Right Setup

If these frogs are maintained properly, they are truly hearty in captivity. They live at least four to five years in captivity, and they will fill the area around them with their loud vocalizations at night.

Clown treefrogs do well in a taller vivarium. Try to provide — at minimum — 30 inches of height from the substrate. These frogs thrive in a vivarium with controlled ventilation so as to allow the slow turnover of air with the maintenance of an internal microclimate having a higher humidity. For example, Exo Terra terrariums have a screen built into the enclosure's top and ventilation ports on the face of the units below the front opening doors.

These elements provide quite a bit of ventilation, perhaps too much for clown treefrogs if the terrarium is kept in an air-conditioned home. This can be easily remedied by placing a custom-cut piece of glass over the top of the terrarium. I place small squares of cardboard at each corner of the top, under the glass, so the glass is lifted up off the top slightly. This modification slows air movement but doesn't eliminate it. I have a group of clown treefrogs maintained in exactly these circumstances.

Clown treefrogs breed on aquatic vegetation. Their eggs are deposited on leaves immediately above the water. Tadpoles have an interesting black marking that makes them easier to identify.

Clown treefrogs flourish when provided with live plants. The leaves should be large and strong enough to hold the frogs'

weight. Including live plants requires a lighting system that can accommodate them. A full-spectrum fluorescent bulb, which is replaced every four to six months, is ideal. A 12-hour light-dark schedule works fine, and a timer automates the system nicely. With healthy live plants, the frogs have plenty of places to climb and sleep. A cork bark piece or two and some well-placed thin branches top off the items that help provide cover and climbing material.

I am picky about what I use for substrate and how I arrange it. I like to use terra cotta balls, such as Hydroton, as a base layer of substrate in terrariums. The spaces between the balls can accommodate excess water and keep it away from terrarium occupants. Stagnant water in a terrarium can cause bacterial problems with amphibians. Conversely, you want your substrate to maintain its moisture. Damp terra cotta balls and the water between them become your terrarium's moisture reservoir. The balls can absorb water and release that moisture as the upper substrate dries.

For the upper substrate, I have used two different mediums. I like crushed coconut shell, which is widely available commercially in pet stores. It is sold in dry bricks that can be moistened. I also use true sphagnum moss. If you opt for the ground coconut shell, a shallow layer of moss between the ground coconut shell and the terra cotta balls prevents the shell from filling all of the spaces between the terra cotta. Either of these substrates works well.

Clown Care

Temperatures are not as critical with clown treefrogs as they are with other tropical amphibians. I have maintained this species at a wide range of temperatures, but I focus on preventing the nighttime temperatures from dropping below the low 70s or high 60s (Fahrenheit). Daytime temperatures should not exceed the mid-80s. Maintain humidity by misting the enclosure once a day. Make sure some moisture is in between your terra cotta balls at the base of the substrate mix. Add water accordingly.

Regular access to clean, fresh water is a must for nearly any captive amphibian. Use a plastic or ceramic dish that you can easily access. Make sure to change the water, and maintain a shallow amount of clean water at all times. Often, crickets jump into the water dish and drown, and dead crickets quickly foul the water. This problem can be avoided by placing the water dish on top of an upside down terra cotta flowerpot, which raises the level of the water dish. The odd cricket that escapes your feeding dish (described below) is far less likely to end up in the raised water dish. The elevated pool of water will not change accessibility for your frogs.

Feeding can be accomplished easily in a smooth-sided glass dish. A glass dish with taller sides is ideal. Crickets can jump several inches in height, and you want to contain them in the feeding dish. The giraffe phase of *Dendropsophus leucophyllatus* is typically associated with the upper Amazon Basin.

The advantages to using a feeding dish are several. First, the food is always in the same place, and the frogs become accustomed to a feeding station. Second, because the frogs are conditioned to feeding from the same dish, they are more likely to try any appropriately sized live food item you place in the dish. I have been able to use this trick to get various frog species to try live food items I otherwise was not able to get them to eat. Third, by confining crickets to a feeding dish, they cannot crawl down into odd corners of the terrarium or into the medium and die. Finally, a quick glance into the dish is all that is needed to know how much food is available for the frogs. Making sure live food is regularly available is a big part of the long-term maintenance of healthy amphibians.

Occasionally wash the feeding dish. The walls of the dish accumulate debris from the frogs crawling in and out of it. This debris ultimately provides the crickets with a gripping surface, and they will begin to escape from the dish.

Gut loading food items is another important part of maintaining healthy captive amphibians. The term refers to feeding a food item, such as crickets, a rich diet before offering it to an amphibian. This procedure helps supply nutrients to captive animals. Gut-loading ingredients are often diverse. There is no single ideal formula, and perhaps if science had a better handle on what amphibians require nutritionally, we would realize that different species require different levels of various vitamins and minerals.

In my more than 25 years of working with amphibians, I have always done well with squash. I like yellow squash, spaghetti squash, pumpkin, acorn squash, etc. Squash is good for you as well, so why not buy some at the market and provide your crickets with the internal parts you won't eat? Other appropriate gut-loading material includes kale, chard, spinach, bok choy, small amounts of carrot mixed with other ingredients, and other leafy greens.

All should be thoroughly washed with a liquid dish soap to ensure any pesticide residues are removed first. Gut load crickets 24 hours before feeding them to your amphibians. I also dust crickets every other feeding with Heptivite vitamin and mineral supplement. I have also used Rep-Cal calcium supplements every third feeding. Next Page>>

