Clown Treefrog Care and Breeding

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

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Using a Rain Chamber
Clown treefrogs have been captively reproduced on a sporadic basis for years. Breeding this species usually requires a rain chamber (RC), which I will detail briefly. The RC creates conditions in an enclosure that simulate a rain storm. The RC also provides appropriate egg deposition sites.

Several factors need to be considered in setting up a RC. First, “rain” can be generated through two possible avenues. You can use a misting system that draws from a reservoir of clean water. It includes an overflow in your RC for excess water to drain and leave the system. The second avenue includes a recirculating system. A pump draws water from a pool in the bottom of the enclosure and pushes that water through plumbing and back out of a spray bar or sprinkler head at the top of the enclosure.
Clown treefrogs have bulging eyes that add to their charming personality.

Using a misting system and a reservoir of fresh water has the advantage of always showering clean water onto your amphibians and hopefully onto their eggs. When I say “clean” water, I mean water without high bacterial loads. This system best simulates natural conditions, but the downside is that the reservoir needs refilling. If you need to mist the frogs for a longer period of time, it can be a difficult job to keep up with.

I have seen this problem circumvented by plumbing the misting system directly into a water supply. Then water is drawn through a carbon filter to remove chloramines/chlorine. The design is a bit more involved, but it eliminates the key drawback of the misting system approach. A timer can be used to automate this system, but know that if you don’t refill the reservoir and the timer comes on, the pump can burn out and may become a fire hazard.

The second design, a recirculating system, does not require the constant water supply, and it can be run for extended periods. However, as the frogs defecate in the water, bacterial counts in the recirculating water climb. This may not be a problem for adult frogs, but freshly deposited eggs are vulnerable. Never mist on freshly deposited eggs using a recirculating system. The likelihood of a bacterial problem with the egg clutch is high. In addition, these systems require frequent water changes.

The design can be augmented to easily address this problem. For example, I described in a previous article (Fenolio, 1996) a RC with an external pump that distributed water to several possible outlets through a series of valves. These valves distributed water three ways: recirculating it into the base pool of the RC, pushing it through misting heads plumbed into the top of the enclosure, or through an alternate valve where the water could be diverted to a drain. This third option made water changes of even larger volumes a short task. An in-line filter was also included so biological filtration was maintained in the same manner as someone uses a biological filter in an aquarium. The pump used to create the rain can be automated through the use of a timer.

There are other RC system considerations aside from the two described above. Water temperature can be used to change temperatures in the RC if a temperature swing is one factor that cues your frogs into breeding. I have not used temperature swings to breed clown treefrogs, but they may respond to them. A simple submersible aquarium heater works in both systems.
The standard phase of the clown treefrog is set on a background color of brown. The pattern ranges from a light cream color to a brilliant yellow.

Further, live plants can be maintained in a rain chamber through several measures. I recommend using plant species, such as Philodendron or other viny, aerial-root species, that can be raised and maintained hydroponically. This way, no dirt is introduced into the system as a potential source of bacterial contamination. Appropriate lighting needs to accompany live plants.

Rainy Reproduction
Providing proper egg deposition sites is a must in any RC design. Clown treefrogs deposit eggs on the leaves of floating aquatic plants. For my frogs, I adjusted the water height in my RC, raising it to 6 or 8 inches. I added water lettuce (Pistia sp.). These plants float on the surface and have leaves that can hold the weight of the frogs and their eggs. Water

hyacinth also works. Note that the long root systems of these floating plants can clog up an internal pump, and a modification of your RC design is necessary to keep roots from tangling up the impeller of the pump. This can easily be accomplished with an intake screen.

Another consideration for a RC includes determining when you rain on your frogs and the duration of these showers. I like to start the rain an hour or so before the automated lighting systems turn off. At first, I rained on the frogs for several hours into the night. I usually shortened the showers to one or two hours, split between just before the lights turn off and after they turn off.

I also rained on my frogs when storm systems passed through. This way, I had the advantage of decreased barometric pressure, which appears to be a cue for many frogs to initiate breeding.

Often frogs don't breed right away. Every species responds to RC conditions differently. The group of clown treefrogs I bred did so after about 10 days of the described conditions. I have had to maintain groups of the yellow-eyed leaf frog (Agalychnis annae) in my RC for periods exceeding a month before they bred.

Increased humidity can heighten the likelihood of bacterial infections, and long periods of time in the RC especially multiplies these problems. If the frogs' skin becomes red or if open sores develop, return frogs to their regular enclosures with a decreased humidity and seek immediate veterinary assistance. Successful amphibian breeders keep a close watch for signs of trouble in the RC. Always make sure easy pathways are available for amphibians in an RC to exit the water and take refuge in a protected site. Provide some ventilation to help reduce the likelihood of bacterial problems, and don't forget to make regular water changes.
Clown treefrogs vocalize when barometric pressure changes accompany an approaching storm.

Tadpoles and Juvies
After a number of days in the RC, clown treefrogs deposit their eggs on the leaves of live plants at or above the waterline. Average clutches in captivity typically range from 400 to 600 small eggs. Leave the eggs in the RC undisturbed, and they will hatch, depending on temperature, from five to 10 days later. Tadpoles spend most of their time on the bottom of the enclosure.

The young accept a wide variety of fish foods, including sinking pellets and small pieces of frozen fish foods. Experimentation with various foods is necessary, but I recommend starting with Sera Micron. It will sink after a while, and the tadpoles will feed on it on the bottom. Also dependent on the water temperature, amount of available food, and density and period between water changes, tadpoles metamorphose anywhere from two to five months. I recommend regular water changes of 25 percent or less as well as biological filtration, either through a sponge filter or other means. Limit strong water circulation because these tadpoles are not adapted to strongly moving waters.

Metamorphic frogs require an enclosure offering humid corners as well as regular ventilation. Too much humidity will lead to skin infections. Metamorphic frogs require a lot of available food and access to clean water. Make water available but keep it shallow; small frogs can easily drown. They like a terrarium well-planted with live plants.

Clown treefrogs are an excellent species to work with in captivity. They are hearty, can live for years and will breed in captive circumstances. These attractive frogs fill homes with their quirky vocalizations at night, and they are especially vocal when the barometric pressure decreases with an approaching storm. Best of luck with your clowns! Page 1>>