

The Forest Floor: Ground coverings and decorative items

Designing a terrarium for poison dart frogs provides an excellent opportunity to attempt to recreate a slice of the tropical rainforest. In the tropical or temperate forest the ground is almost never bare, instead covered in a thick layer of dead leaves, tree branches, and floral debris. Terrariums in the past mainly just used soil or bark as the substrate; forgetting this important aspect of design and seldom looked like the real thing. Paying attention to all the little details of a habitat is the most important aspect in recreating it in your tank. I wanted to suggest some ideas to help you get the right look for your habitat.

- Dead leaves: Various types of dead leaves work but some hold up better than others and are not toxic. Proven species that look tropical are live oak, willow oak, bamboo, magnolia, and beech. Try to add several colors of leaves, so you get both light and dark hues in the mix. This should form the basis of most forest terrariums; start with around a one inch layer of mixed leaves, then add detail items such as described below.
- Regular oak and beech leaves work great but look temperate. A trick I use to fix that is to cut the edge off with scissors, a simple oval shaped leaf perfectly simulates tropical drip-tips. Some of the large oak species measure over ten inches and have relatively straight edges, looking similar to tropical *Ficus* species.
- Banana and *Heliconia* leaves: These species form large soft leaves that curl or roll up as they dry. After drying out for a few weeks, these add lots of dimension to the terrarium floor, with yellow and tan hues. They will last from several weeks to months.
- Palm fronds: One of the most accurate items to add to the terrarium is a smaller palm frond. The centers of fan palm leaves are great for this, adding immense depth and texture to the design. Longer fronds of the coconut or royal palm work well if you trim off most of their outer leaves, leaving just the stem. At the base of large palm fronds, the stem becomes hard and woody, and this part can be used as well. Most of these decorative additions will last at least five months or more, even in the wettest of terrariums. These can all be placed randomly on the bottom, with smaller leaves and twigs mixed in recreating the dense debris piles of the rainforest. Try to lean them up against the background or tree trunks, imitating the freshly fallen look.
- Bamboo: Found in many parts of the world, bamboo is particularly useful when designing various Asian habitats. Bright green when freshly cut, this will fade to yellow or tan before eventually turning a dark brown. It lasts a long time and is resistant to rotting, making it useful in wet environments or even underwater.

- Tree branches: Smaller tree branches are common on the forest floor. They will also help add texture to the leaf litter mix to keep it open and airy. Oak and other hardwoods are good, stay away from coniferous species otherwise they will break down very quickly.
- Tree roots: Natural dried wood and roots can look great in a naturalistic exhibit. The key is choosing the correct types to achieve a realistic look. Typically, the bleached driftwood that is commonly sold for terrarium décor simply does not look that realistic in a natural terrarium. The only accurate use for driftwood would be a wetland or stream side habitat where the wood has been weathered by the water. A good substitute is real, whole tree roots obtained from either a stream or construction and logging sites. A walk besides a typical stream will show many trees that are so close to the bank that their roots are completely exposed. In a lot of cases this accurately mimics the tree buttresses and strangler vines of the tropics. A lot of times there are dead trunks and roots along the stream bank that can be used in the terrarium after cleaning. Always try to identify the species of wood before you use it, and stick to non-toxic hardwoods such as oak, maple, or beech. If the tank is very wet, you may want to lightly seal the surface of the wood with a fish-safe, two part clear epoxy paint. Try to brush it on and lightly wire brush when dry to remove the glossy look.
- Nuts and seed pods: In tropical areas there are thousands of fruiting trees, constantly dropping these onto the ground. Various Brazil nuts, jungle pods, date pits, or tamarind pods all look appropriate. Even a few acorns with the caps taken off look similar to many palm fruits, be sure to stick them in the oven for awhile to prevent germination.
- Coconuts: A lot of people add coconut halves to provide breeding sites for their frogs. A more natural look can be obtained by using smaller, whole coconuts with a 1"-2" hole in the side. You can get them from the store and drill out a large hole, then take a pair of pliers and chip away the edges of the hole. When done correctly it will look like an animal has chewed a hole in the side. Getting the meat out is kind of tricky; an easy way is to just leave them outside in the garden or compost pile for a few months. Another great find is smaller coconuts that still have the husk and part of the stem attached. You can buy these green and put them in a dry place for a few months before putting them into the terrarium.
- Moss: One of the most common debates in terrarium design is the concept of covering the entire substrate with a carpet of live moss. Many a tank, while often beautiful, has a bright green lawn of pillow moss that covers the bottom like a miniature golf course. This is a rather inaccurate conception because moss simply does not typically grow all over the ground in tropical areas. Moss tends to prefer very well draining substrates to grow

on, such as tree trunks or rock. For the most realistic look save the live moss for sporadic patches and for your background later.