

Keeping Poison Dart Frogs as Pets and Bioactive terrarium maintenance

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Poison Dart Frogs

Difficulty: Intermediate to advanced (depending on species)

Jewels of the jungle, poison dart frogs are native to the humid, tropical environments of Central and South America. Renowned for their bright, beautiful coloration, poison dart frogs are the poster child for aposematism, or using their bold coloration as a warning to ward off potential predators. Poison dart frogs are completely harmless in captivity. The poison is derived from their native diets with the most toxic species feeding on ants, mites and termites which feed on toxic plants of the jungles. So on a captive diet there is no risk of poison.

Poison dart frogs are diurnal, or active during the day, and can indeed be very active little creatures, often hopping and exploring every inch of their enclosure. They are strictly insectivores, requiring live micro feeders as their diet.

There are very important factors to keep in mind when getting into the wonderful world of dart frogs. First and foremost, different species and localities should NOT be mixed. Nature did an excellent job of evolving these little gems to be native to very specific localities, being found nowhere else. Secondly, there are several different subfamilies and genera of dart frogs. This leads to two big issues: cross-breeding and/or aggression. Cross-breeding is unethical, as it is up to us to be good stewards of the animals we keep, and cross-breeding different dart frogs ruins the genetic integrity of the species involved and often leads to weaker offspring. Secondly, even if the species are not capable of cross-breeding, there is always a risk of aggression. Just like different dog breeds, all dart frogs have different personalities and tendencies. For instance, *Phyllobates* are large, very bold, and can be kept communally. *Auratus* are communal, but smaller and generally much more shy. *Tinctorius* have a wide variation in size, are bold, but very territorial, particularly females. If one were to mix all of these, there is a high probability that the *Auratus* will be outcompeted and stressed by the much more dominant *Tinctorius* and *Phyllobates* and the *Tinctorius* may try to dominate everyone in the enclosure. To be a responsible dart frog keeper it is important to give each species and locality their own enclosure.

With their extraordinary coloration, bold personalities, diurnal behavior and long lifespans (they've been known to live 30+ years!) they can be exquisite companions.

Choosing a Dart Frog:

It can admittedly be a bit overwhelming trying to decide what dart frog(s) to get. Many people will pick based on what they find to be the prettiest coloration, but this is not the correct way to select a dart frog. There is a massive variety in size, territoriality, boldness, and breeding requirements if that is something you plan on doing down the road. If you are looking for a really bold species that's always readily visible, *Phyllobates vittatus* is not the best choice. If you want a very peaceful, communal species you can keep in a large group, *Tinctorius* are not the way to go. With dart frogs, it is incredibly important to research all the species that pique your interest so you are prepared to keep an appropriate sex ratio group together and build the tank correctly for the species inhabiting it.

Phyllobates, *Auratus*, *Leucomelas* and *Epipedobates* tend to be the easiest species to start with. They are generally very easy going and can be kept communally given enough room. *Tinctorius* are quite easy to keep, but because females can be quite territorial, it is not recommended to keep multiple females together, particularly if breeding. This can pose difficulties, as dart frogs are most often bought as unsexed juveniles, so if you raise them to sexual maturity and have multiple females, you may have to set up multiple tanks or find new homes for them. Species such as *Ranitomeya* and *Oophaga* are not for beginners, as they are incredibly tiny, lighting fast and easy to lose if you are not accustomed to caring for dart frogs. Suitable dietary items are also more limited due to their size. The less common species such as *Ameerega*, *Allobates* and *Hyloxalus* are better left to more advanced keepers as well.

It is important to know the legality of the species you are interested in keeping. Just because a species is available, does not mean it is legal to own. Unfortunately, dart frogs are still readily smuggled and available wild-caught. You should always search for healthy, captive bred

specimens that have been long established in the hobby. It is up to us to protect these amazing creatures, both in the hobby and in the wild!

Terrarium size:

This is very dependent on the species of dart frog being kept, but as a general rule, a front opening 18"x18"x18" is an ideal minimum tank size for most species. Of course bigger is always better and there's nothing quite like a huge masterpiece of a densely planted dart frog enclosure and they will utilize every bit of it. Some species, like *Phyllobates*, prefer more terrestrially oriented enclosures, while others such as thumbnails prefer more arboreal, so it is important to plan accordingly for the exact species being kept.

Lighting:

Half of the fun of keeping dart frogs is the incredible enclosures that can be designed for them. The more densely planted the tank is, the more likely you are to see their natural behaviors be exhibited. Because of this, plant lighting is paramount and the Bio Dude Glow & Grow LED is an excellent option to maintain a stunning enclosure full of healthy plants.

UVB is generally not provided for dart frogs. An Arcadia 6% UVB bulb would be the best option, but keep in mind, to maintain the necessary humidity levels, keepers often have to use glass tops, which will filter out the UVB rendering it ineffective. For this reason, dietary supplementation with D3 is the most common method used with dart frog keepers.

Temperature/Humidity:

Dart frogs are best kept at temperatures in the low-mid 70s. Temperatures above the mid 80s can quickly become dangerous. Humidity can be a difficult aspect for new keepers to dart frogs. Most species require a range of 70-100%, never dipping below 50%. Because of their humidity requirements, a bioactive enclosure is key to successfully keeping dart frogs. A few tips that can help with humidity are providing a minimum of a 3 inch false bottom/drainage layer, covering at least half of the top with glass and maintaining a densely planted tank. Bromeliads in particular are an excellent option at helping raise ambient humidity as they hold water in their axils.

Substrate:

There is no other way to successfully keep dart frogs long term than in a bioactive enclosure. The Bio Dude's poison dart frog bioactive kits are a sure fire way to set yourself and your dart frogs up for success. As stated above, a drainage layer is a must to prevent the substrate from stagnating and developing bad bacteria due to their high humidity demands. The drainage layer should be topped with a screen protector to prevent substrate from mixing in. The Dude's Terra Flora is a tried and true substrate for dart frogs, with excellent drainage and key components for optimal plant growth. Utilizing both a dwarf species of isopod, such as dwarf whites, and a larger species, such as dairy cows or powder blues along with tropical springtails and BioShot works wonders breaking down waste, aerating the substrate, keeping mold in check and serving as a secondary food source for dart frogs. Sphagnum moss should be used to help maintain humidity

and an abundance of leaf litter should be provided for all dart frogs, as they often seek refuge under the leaves. Magnolia is the recommended leaf litter for dart frogs due to the large size serving as shelter and the longer time it takes to break down.

Decorating the Enclosure:

As a lifelong hobbyist, dart frog keeper/breeder, and the Curator of Fauna for The Bio Dude, dart frog enclosures are by far my favorite to build. There is nothing like building your own slice of the jungle to keep in the comfort of your home. Plants and lots of cover are key to keeping dart frogs happy and healthy. Plants serve many beneficial purposes in the enclosure including providing shelter, breeding grounds and egg deposition/rearing sites for the frogs, helping to maintain humidity, promote the nitrogen cycle and boost overall soil health. Cork tubes and flats will be appreciated by the frogs and can double as mounting sites for epiphytic plants such as bromeliads and tillandsias. Nut pods are always an excellent addition as well, as they break down very slowly, attract springtails by the hundreds, so having them in an enclosure makes it easier to get a visual of how well the springtail population is doing and serve as secondary water sources.

Feeding:

Diet is often considered the most difficult aspect of keeping dart frogs. They must be fed live, tiny insects which can be difficult to source. Most keepers use flightless fruit flies and springtails as dietary staples. It can be easy to learn how to culture fruit flies at home which ensures you always have food available and allows you to save money not having to buy pre-made cultures. The Bio Dude's Fruit Fly Culturing Kits provide all necessary products minus the flies themselves to successfully start the culturing process. Other feeder options include extra small black soldier fly larvae, bean beetles, fruit fly larvae, rice flour beetles and pinhead crickets for larger species. Fruit flies are an excellent feeder source, but it is important to keep in mind, you should not keep or feed from a culture that is 30+ days old as they will inevitably get grain mites and will develop the ability to fly again.

Feeding schedule and amount depends on the age, species and amount of dart frogs being housed, but generally speaking, juveniles should be fed at least 4-5 times a week and adults 2-3. It can be a little tricky to gauge how much to feed, so I recommend starting with about 10-20 for young juveniles, 25-35 for older juveniles and 50+ for adults depending on how large of a species they are. At the time of the next feeding, if you're seeing an abundance of flies still left and the frogs are in good body condition, decrease the amount you are putting in. If you are not seeing any flies left, increase the amount and if there are just a few here and there, you are right on the money!

Supplementation is paramount when keeping dart frogs. Just like with diet, variety is key with supplements as well. It can be beneficial to rotate supplements as many of them derive their nutrient content from different sources, thus get absorbed and utilized differently by the frogs. Repashy Calcium Plus is a staple supplement in the hobby. Rep-Cal with D3, Herptivite and DendroCare are good options to add into your supplement rotation as well. Vitamin A is an

important supplement for dart frogs, particularly when breeding, however, they can overdose on it, so I recommend supplementing with Repashy Vitamin A Plus and SuperPig once monthly for maintenance. Vitamin A should never be used more than once weekly. All supplements will start to lose their efficacy once opened, so they will last longer if refrigerated, but should be replaced after 6 months to maintain potency.

In conclusion, if you are up to the challenge of maintaining a high humidity enclosure and a steady supply of fruit fly cultures, poison dart frogs can be an exquisite addition to your home or office. Their personalities can be quite entertaining, their beauty is second to none and their enclosure brings a piece of the rainforest inside.

