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POISON DART FROGS

Yellow-striped Poison Frog

Dendrobates truncatus

Dendrobates truncatus is a diurnal poison frog of about 3 cm from northern Colombia, black with two yellow stripes across the back and white spots on the flanks. It is hardy, tolerates slightly drier air than many relatives and does well in a small group, but it can be difficult to get to breed regularly.

Family: Dendrobatidae Former name: *Phyllobates truncatus*

KEY FACTS

THE ANIMAL

Adult size	**3 cm** snout-vent length
Lifespan	**10-20 years**
Active	**By day**
Lifestyle	**Terrestrial**
Habitat	**Dry forest and rainforest**
Skin toxins in the wild	**Mild**
Skin toxins in captivity	**None** Captive-bred animals. Wild-caught animals can keep their toxins for a long time
Difficulty	**Beginner**

CARE

Min. enclosure	**50 × 50 × 50 cm** L × W × H for 2 adults
Temperature, day	**22-24 °C**
Temperature, night	**18-21 °C**
Humidity	**70-100%**
Water	**Water dish** depth 1-2 cm
UVB	**Optional** Ferguson zone 1
Diet	**Small invertebrates (springtails, fruit flies)**
Kept	**In pairs or in groups**

BREEDING

Reproduction	**Egg-laying**
Development	**Tadpoles carried to water**
Egg-laying site	**On the ground**
Sexually mature	**10-15 months**
Eggs per clutch	**2-6**
Hatching	**10-14 days** at 22-24 °C
Larval period	**60-80 days** from hatching to metamorphosis
Larval diet	**Complete diet**
Parental care	**Carries the tadpoles**

PROTECTION AND PAPERWORK

CITES	**Appendix II**
IUCN	**Least Concern (LC)**

About the species

Dendrobates truncatus is a medium-sized poison frog. Adults measure 25-30 mm from snout to vent, and large females reach about 3 cm. The males are slightly smaller, and the females look both longer and broader. The base colour is black with two golden to yellow stripes running from the snout across the back, and with light, whitish spots reminiscent of flashes of lightning. The underside is patterned much as in *Dendrobates auratus*. In the yellow form, which is the most widespread in the hobby, the stripes range from strong yellow to a pale, whitish yellow. Food with colour additives such as paprika can give a deeper yellow colour.

In the hobby there are a number of forms named after localities such as 'Apartadó', 'Bucaramanga', 'Nilo', 'Santa Marta' and 'Toluviejo'. They are thought to come from separate populations and should not be mixed. The species was described by Edward Drinker Cope in 1861 as *Phyllobates truncatus*.

The temperament lies somewhere in between: *D. truncatus* is not shy, but not as pushy as *Dendrobates tinctorius*. It becomes bolder in a group and in an enclosure with plenty of cover, and it resembles *D. auratus* in both size and behaviour.

In the wild the skin is toxic. Poison frogs do not produce the poison themselves but take up alkaloids from their food, especially ants and mites, and store them in the skin. How strong the poison is in wild *D. truncatus* is not documented, and here it is set to mild, as for the other *Dendrobates*. Captive-bred animals that grow up on fruit flies and other feeder insects get no poison and are regarded as non-toxic. Wild-caught animals, on the other hand, can retain the poison for a long time. Do not handle the frogs, and wash your hands after working in the enclosure.

Read more: Feeder animals: keeping and breeding Read more: Buying animals: captive-bred, wild-caught and transport

Distribution and habitat

Dendrobates truncatus is found only in Colombia. The range extends over the northern part of the country, from the valley of the Magdalena River and the lower slopes of the Andes up to the Caribbean coast at Santa Marta and westwards to the Urabá area. Known localities include Apartadó, Chigorodó, Nechí, Puerto Berrío, Simití, Honda, Nilo, Prado, Bucaramanga and Toluviejo. Almost all recorded finds lie between 2° and 11° north latitude.

The species is assessed as Least Concern (LC) on the IUCN Red List. Collecting for the pet trade was formerly a threat, but has been curbed by the CITES listing. Aerial spraying of coca fields can kill the frogs, because they are active during the day, when the spraying takes place.

> **Native range:** Colombia.

HABITAT

Dendrobates truncatus lives in wet, moist and dry tropical forest and is also seen in disturbed areas such as banana plantations, but not on completely cleared land. It occurs from about 100 to 1,800 m above sea level. The species tolerates drier conditions than many other poison frogs and can therefore exploit habitats that are unsuitable for its relatives.

The frog is diurnal and lives mostly in the leaf litter on the forest floor, but also climbs up into the vegetation. Males like to sit a little above the ground, presumably as lookout and calling posts. Measurements of temperature and humidity from the species' habitats are not documented, so the figures under care are based on experience from the terrarium.

Read more: Humidity, misting and ventilation

Care

THE ENCLOSURE

A pair of *Dendrobates truncatus* needs a rainforest terrarium of at least 50 × 50 × 50 cm. A group needs more space, especially more floor area; allow about 40 litres per frog. The species lives mostly near the ground, so floor area counts most, but it also likes to climb. A glass terrarium with ventilation at the bottom front and at the top gives air exchange without the humidity disappearing, and all openings must be covered with mesh that fruit flies cannot escape through.

Build up the base with a drainage layer of LECA balls, a fibre cloth and a moist, well-drained substrate. On top goes a thick layer of dry oak or beech leaves, which provides cover and keeps springtails and isopods alive. Plant densely, and provide cover from cork, roots and coconut shells as well as a few raised perches for the males. The species prefers to lay eggs under cover, so place a horizontal film canister in the leaf litter or a 6 cm petri dish under half a coconut shell.

Read more: Terrarium construction and bioactive substrate

TEMPERATURE

The daytime temperature should be 22-24 °C, and at night it is lowered by 3-4 degrees, to 18-21 °C. The species briefly tolerates 18-27 °C, but above 29 °C is dangerous. The temperature only needs to vary by 1-2 degrees over the year, and there is no winter rest.

Do not use a heat lamp. Room temperature and lighting normally provide enough heat, and otherwise a thermostat-controlled heating cable can be used. An enclosure in direct sun or under a hot lamp quickly becomes too warm in summer. Always keep a thermometer with a probe down in the enclosure.

Read more: Heat and temperature

HUMIDITY AND MISTING

Humidity should be 70-80 % in the middle of the day and preferably up to 100 % morning and evening. A rain system and a fogging system make it easiest to keep the rhythm. The species briefly tolerates down to 50 % if it has access to water, but low humidity without water can quickly become fatal.

Mist at least once daily with reverse-osmosis water or rain water, so that plants and leaves become wet, and let the surface dry out a little in between. Stagnant, constantly wet air causes mould and bacteria, so misting and ventilation must be balanced.

WATER AND WATER QUALITY

A shallow water dish with 1-2 cm of water and a sloping edge or a stone, so the frogs can easily climb out, is enough. The water dish also serves as a place for the tadpoles if the parents are allowed to care for the young themselves. An open water dish quickly becomes a source of bacteria, so the water is changed every day or every other day.

Use reverse-osmosis water, rain water or dechlorinated tap water. Amphibians absorb water and dissolved substances through the skin, so soap, cleaning products and cream must not come near the enclosure. Rinse the equipment in clean water without soap.

Read more: Rearing tadpoles

LIGHTING AND UVB

The lighting is first and foremost for the plants. Fluorescent tubes or LED lighting of about 6,500 K give natural colours and good plant growth, and 12 hours of light a day is common practice. Incandescent bulbs and halogen lights give too much heat.

UVB is not documented as necessary for the species, and the frogs get their vitamin D3 through the supplement on the food. If you nevertheless choose a weak UVB source, keep to Ferguson zone 1, and ensure dense planting and shade.

Read more: Lighting and UVB Read more: Calcium, vitamins and supplements

FEEDING

Dendrobates truncatus eats small arthropods, in the wild especially ants, mites and insect larvae. Adults readily take *Drosophila hydei* and very small crickets, while juveniles and smaller animals get wingless *Drosophila melanogaster*. Springtails and woodlice in the leaf litter are a good supplement at all ages.

Feed adult frogs about every other day, and juveniles and subadults daily. Dust the feeder insects with a vitamin and mineral powder for amphibians. Newly bought animals may not eat for the first few days.

BEHAVIOUR AND HANDLING

Dendrobates truncatus is diurnal and neither shy nor pushy. The species can live in a group for life when there is enough space, and becomes bolder with more animals and plenty of cover. When the animals reach sexual maturity, the mood in the group can change, and it may then become necessary to remove all females but one. The females readily eat each other's eggs, so for breeding adults are best kept as a pair or as a male with two females. The males call with a moderately high voice.

Do not handle the frogs. The skin is thin, and salt, grease and cream from the hands can damage it. If a frog has to be moved, lure it into a clean cup. Do not mix species or colour forms in the same enclosure.

Breeding

SEXUAL MATURITY AND SEXING

The sexes are among the hardest to tell apart in poison frogs and can only be recognised from the age of 10-12 months. Males are smaller, bolder and more often sit a little above the ground, while females are longer and broader. A calling frog is always a male. The animals become sexually mature at 10-15 months, but it can take up to two years before a pair breeds successfully. The safest approach is to buy several young animals and let them grow up together.

MATING

Dendrobates truncatus is difficult to get started. When it finally succeeds, the pair can breed very busily and then take a long break, sometimes for several years. What triggers breeding is not documented.

The species is quickly worn out by breeding: if the pair is allowed to breed freely, poor eggs, weak tadpoles and weak juveniles result. Remove the egg-laying sites for a period if the female loses weight or the quality falls.

EGGS AND TADPOLES

Each clutch is 2-6 eggs. The eggs are preferably laid in hiding, for example in a horizontal film canister or on a Petri dish under a coconut shell, but occasionally also on a smooth leaf or a bromeliad leaf. Pairs that are ready to breed quickly take the offered sites into use. When the tadpoles hatch, one of the parents carries them on its back to water.

If you want to rear them deliberately, you take out the clutch and let the eggs develop in a closed box at 22-24 °C, moist but not under water. The tadpoles can be reared together in a large enough container, but are preferably kept separately, for example in cups with reverse-osmosis or rain water and an Indian almond leaf. They are omnivorous and are fed good-quality fish food and dried mosquito larvae; poor food gives slow growth and deformities. Remove leftovers and change the water often.

METAMORPHOSIS

The eggs hatch after 10-14 days, depending on the temperature. Development from tadpole to frog then takes 60-80 days.

When the front legs break through, the water level is lowered and the cup is tilted, so the froglet can climb onto land by itself; otherwise it can drown. It does not eat while the tail is being absorbed.

REARING THE YOUNG

The newly metamorphosed juveniles are moved to a small rearing box with leaves, plant cuttings and a good population of springtails. Small boxes vary quickly in temperature, so place them out of draughts and direct sun. The first food is springtails and later *D. melanogaster*, always dusted with vitamins and minerals. Feed daily, and keep juveniles of the same size together. At 2-3 months the juveniles are well under way and ready to move.

Health and common mistakes

Dendrobates truncatus is hardy when the climate is right. Typical problems are:

- An enclosure that is too dry. Low humidity without access to water can quickly become fatal.
- Overheating. Above about 29 °C is dangerous.
- Deficiency diseases such as soft bones and crooked legs, if the food is not dusted with vitamins and minerals.
- Bacterial and fungal infections of the skin in a wet and dirty enclosure.
- Chytrid fungus (*Batrachochytrium dendrobatidis*), a serious amphibian disease. Keep new animals in quarantine, separate from those you already have.
- Burnout after breeding: poor eggs, tadpoles and juveniles if the pair breeds without breaks.

Amphibians are difficult to diagnose and treat, so prevention is the most important thing. Seek a vet with amphibian expertise if a frog loses weight, stops eating, sits limply or develops sores on the skin.

Read more: Quarantine and hygiene

Always ask someone who knows

This guide is a good place to start, but it cannot replace experience. Animals differ, and much of what matters most is learned from people who have kept the species for years. Talk to a breeder, an experienced keeper or a vet who knows reptiles and amphibians before you get the animal - and again if anything looks wrong.