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POISON DART FROGS

Rio Madeira Poison Frog

Adelphobates quinquevittatus

Adelphobates quinquevittatus is a very small, glossy black poison frog of 14-16 mm with white stripes and grey, greenish or orange legs. It lives in the leaf litter of the rainforest in the Madeira River drainage in the southern Amazon and is only rarely kept. Very little is known about its care.

Family: Dendrobatidae Former name: *Dendrobates quinquevittatus*

KEY FACTS

THE ANIMAL

Adult size	**14-16 mm** snout-vent length
Lifespan	**8-15 years**
Active	**By day**
Lifestyle	**Terrestrial**
Habitat	**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	**Experienced**

CARE

Min. enclosure	**45 × 45 × 45 cm** L × W × H for 2 adults
Temperature, day	**24-27 °C**
Temperature, night	**20-24 °C**
Humidity	**70-100%**
Water	**No water dish**
UVB	**Optional**
Diet	**Small invertebrates (springtails, fruit flies)**
Kept	**In pairs**

BREEDING

Reproduction	**Egg-laying**
Development	**Tadpoles carried to water**
Egg-laying site	**On the ground**
Eggs per clutch	**4-8**
Hatching	**10-14 days**
Larval period	**60-90 days** from hatching to metamorphosis
Larval diet	**Algae/plants and other tadpoles**
Parental care	**Carries the tadpoles**

PROTECTION AND PAPERWORK

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

About the species

Adelphobates quinquevittatus is a very small poison dart frog of 14-16 mm from snout to vent. The ground colour is glossy, lacquered black with three white stripes on the back and one on each side. The legs are grey, greenish or orange with black spots. The species varies very little.

The species was described by Franz Steindachner in 1864 as *Dendrobates quinquevittatus*, and the type locality is Salto de Jirau in Rondônia. For many years the name was used for several different species from Brazil, Peru and Ecuador. Only a redescription in 1990 clearly delimited the species, and many older records in fact belong to *Ranitomeya ventrimaculata*. The genus *Adelphobates* was established in 2006, and the sister species is *Adelphobates castaneoticus*.

The species is only rarely kept, and very little is known about its care. Temperament, lifespan and sex differences are not documented; the lifespan in the fact box is an estimate.

Poison dart frogs do not produce their own toxins but take up alkaloids from prey in the wild. The potency in *A. quinquevittatus* is not documented, and the rating of mild is an estimate based on its closest relatives. Captive-bred animals fed fruit flies and springtails carry no significant toxin. Wash your hands before and after contact with the terrarium.

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

Distribution and habitat

Adelphobates quinquevittatus is found in the southern Amazon Basin in the Madeira River drainage in western Brazil, in the states of Rondônia and Amazonas. The type locality is Salto de Jirau in Rondônia. Records from Peru (around Iquitos) and Bolivia (Pando) are uncertain and are not counted among the countries on the map. The species is found, among other places, in Guajará-Mirim Park in Rondônia.

The threats are forest clearance for agriculture, mining, forest fires and hydroelectric dams. The species is not considered threatened.

> **Native range:** Brazil.

HABITAT

Adelphobates quinquevittatus is diurnal and lives in the leaf litter of humid lowland rainforest, only rarely higher up in the vegetation. Its food is primarily ants and termites.

The climate in Rondônia and the southern Amazon is tropical, warm and humid, with a drier period for part of the year.

The males call in the breeding season, while the females do not call. The tadpoles hatch after 10-14 days and are carried singly to small pools of water, for example in bromeliads, tree holes and empty Brazil nut shells, where they feed on insect larvae, other tadpoles and plant material.

Read more: Rearing tadpoles

Care

THE ENCLOSURE

Very little is known about the care of *Adelphobates quinquevittatus*. The species lives in the leaf litter in a warm and humid lowland climate. Temperature, humidity and food below are the values recommended for the species, while the figures for breeding are borrowed from the closely related *Adelphobates castaneoticus* and *Adelphobates galactonotus*.

Two adults can be kept in an enclosure of at least 45 × 45 × 45 cm. The species is small and lives on the ground, so floor area is more important than height. Use a living, planted enclosure with a drainage layer, a mesh barrier, a moist substrate and a thick layer of leaf litter that the frogs can hide in. Provide several shaded hiding places of cork, roots and plants.

Ensure good ventilation, and seal all gaps, because the frogs are very small. Let the enclosure run in, and build up a population of springtails and isopods before the frogs go in. Do not keep different species together, and have an extra, established enclosure ready to separate animals.

Read more: Humidity, misting and ventilation Read more: Terrarium construction and bioactive substrate

TEMPERATURE

The daytime temperature should be 24-27 °C, and at night it falls 3-4 °C, to 20-24 °C. The variation over the year should be small, 1-2 °C. This fits the lowland climate of Rondônia.

There should be no basking spot and no heat lamp. Heat is the greatest danger for small frogs in closed enclosures, and temperatures above about 28 °C are dangerous. Measure the temperature at the frogs' level, and make sure the enclosure can be cooled in summer. There is no winter rest, but the enclosure is kept slightly drier in winter.

Read more: Heat and temperature

HUMIDITY AND MISTING

Humidity should be about 70-80 % in the middle of the day and close to 100 % in the morning and evening, and the leaf litter and substrate should be moist at all times. A rain system and a fogger on timers is the easiest; otherwise mist once or twice a day with rain water or reverse-osmosis water. Ensure ventilation so the air does not become stagnant, but never let the leaf

litter and hiding places dry out: very small frogs dry out quickly.

In winter the enclosure is kept slightly drier. When misting is then increased heavily, it imitates the change from dry season to rainy season and can get breeding going.

WATER AND WATER QUALITY

A water dish is not necessary unless you want to raise young. The frogs get their moisture from misting and the moist leaf litter. Amphibians absorb water and substances through the skin, so use only rain water or reverse-osmosis water for misting, and avoid cleaning products and soap in the enclosure.

For tadpoles you can set out small, smooth water containers that resemble the water-filled nuts and bromeliads in the wild: a coconut shell, a small ceramic cup or a film canister with 2-5 cm of water. Keep the water clean. The tadpoles eat each other, so each container should hold only one tadpole.

LIGHTING AND UVB

Provide 10-12 hours of light a day with fluorescent tubes or LEDs for the plants. In the wild the species lives in the shade under the forest canopy, so the light should give the plants enough to grow without heating the enclosure. UVB is not documented as necessary for the species; weak UVB is optional. Provide plenty of shade, so the frogs can choose for themselves.

Read more: Lighting and UVB

FEEDING

In the wild *A. quinquevittatus* feeds mostly on ants and termites. In captivity feed small fruit flies (*Drosophila melanogaster*), springtails, micro crickets, small waxworm larvae, sieved meadow plankton and small isopods. The frogs are very small, so the feeder insects must be correspondingly small.

Feed every second to third day, as many feeder insects as the frogs eat within a couple of hours, and remove food that has not been eaten. Lightly dust the feeder insects with a calcium supplement and occasionally with a vitamin supplement. Keep your own feeder cultures, so there are always fresh animals. Juveniles are fed every day. Quantities are not documented for the species, so follow the animals' condition: a round but not fat frog is healthy.

Read more: Calcium, vitamins and supplements

BEHAVIOUR AND HANDLING

A. quinquevittatus is diurnal and lives mostly in the leaf litter. Temperament and territorial behaviour are not documented. The relative *A. galactonotus* can become aggressive towards conspecifics when it becomes sexually mature, so keep no more than a pair, and have an extra enclosure ready.

The male calls in the breeding season. Frogs should be handled as little as possible: the skin is thin and sensitive, and handling stresses the animals. When the enclosure needs cleaning, move the frogs with a clean plastic cup rather than by hand. Always wash your hands before and after.

Breeding

SEXUAL MATURITY AND SEXING

Sex differences and age at sexual maturity are not documented for the species. Only the male calls, so a calling animal is a male, and an animal that lays eggs is a female. In the relative *A. castaneoticus* the females are slightly larger, and sexual maturity is reached after 5-7 months. Buy several animals, so the chance of getting both sexes increases.

MATING

Mating is not described in detail. The males call to the females in the breeding season. A somewhat drier period in winter followed by heavy misting can get breeding going; never go so far that the frogs dry out. Captive breeding is rare and not described in more detail.

EGGS AND TADPOLES

The female lays 4-8 eggs on leaf litter on the ground. After hatching, the tadpoles are carried one at a time to small pools of water, in the wild in bromeliads, tree holes and Brazil nut shells. Who carries them is not known with certainty for the species; in *A. castaneoticus* it is the male, which also guards the eggs.

The tadpoles feed on insect larvae, other tadpoles and plant matter, so each tadpole needs its own container. Feed fish food, mosquito larvae and algae. The water must be clean and at the same temperature as the terrarium.

METAMORPHOSIS

The tadpoles hatch after 10-14 days, and the larval period is 60-90 days. When the front legs appear, the tadpole needs shallow water and easy access to land via a sloping piece of cork or bark. Move it to a damp, established rearing terrarium when the tail is almost absorbed.

REARING THE YOUNG

The newly metamorphosed juveniles are very small. Keep them in a small, established enclosure with moist leaf litter and many hiding places. They should have springtails and after about a week also take the smallest fruit flies. Feed every day, and give calcium and vitamin supplements a few times a week. Growth and timing of moving them are not documented for the species. Keep the juveniles separate from adults until they are almost fully grown.

Health and common mistakes

No list of diseases is documented for the species, so care follows what applies to poison frogs in general. The most important pitfalls are:

- Overheating. Temperatures above about 28 °C are dangerous. Measure the temperature at the frogs' level.
- An enclosure that is too dry. Very small frogs dry out quickly. Mist daily, and keep the leaf litter moist.
- Lack of calcium and vitamins. Dust feeder insects from cultures with a supplement.
- Stress and aggression. Separate animals when there is chasing and wrestling.
- Poor water and unclean tools. Use clean tools, and change the water in tadpole containers often.

Contact a vet with amphibian experience if a frog stops eating, loses weight, sits lethargically or has sores or discoloured skin. Keep newly bought animals separate for 30-45 days.

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.