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POISON DART FROGS

Tahuayo Poison Frog

Ranitomeya flavovittata

Ranitomeya flavovittata is one of the smallest species in the genus: only 15-17 mm from snout to vent. It is bright yellow with black markings, brown legs and a pale blue belly and comes from the rainforest near Iquitos in north-eastern Peru. It is diurnal and a little shy, breeds willingly in film canisters and bromeliads and is a good choice for a keeper with a little experience.

Family: Dendrobatidae Former name: *Dendrobates flavovittatus*

KEY FACTS

THE ANIMAL

Adult size	**15-17 mm** snout-vent length
Lifespan	**5-10 years**
Active	**By day**
Lifestyle	**Arboreal and 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	**Intermediate**

CARE

Min. enclosure	**30 × 30 × 45 cm** L × W × H for 2 adults
Temperature, day	**21-26 °C**
Temperature, night	**18-21 °C**
Humidity	**70-100%**
Water	**Water dish** depth 1-2 cm
UVB	**Optional**
Diet	**Small invertebrates (springtails, fruit flies)**
Kept	**In pairs or in groups**

BREEDING

Reproduction	**Egg-laying**
Development	**Tadpoles carried to water**
Egg-laying site	**In leaf axils (e.g. bromeliads)**
Sexually mature	**5-8 months**
Eggs per clutch	**2-6**
Hatching	**10-14 days**
Larval period	**60-80 days** from hatching to metamorphosis
Larval diet	**Complete diet and unfertilised eggs from the female**
Parental care	**Carries the tadpoles and feeds the tadpoles with eggs**

PROTECTION AND PAPERWORK

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

About the species

Ranitomeya flavovittata is a small, diurnal poison dart frog. Adults measure 15-17 mm from snout to vent, so the species is among the smallest in the genus. Females are broader and rounder than males, because they lay eggs often, but the difference is not large.

The colours are more uniform than in many other species in the genus. Head and body are bright yellow, and the legs are coffee brown to light brown. The belly is light blue. Head, back and legs have black markings in stripes and spots, and the pattern varies slightly from animal to animal. As in the rest of the genus, the skin has a slight pearly sheen.

The species was described in 1999 by Rainer Schulte as *Dendrobates flavovittatus* and is today placed in the genus *Ranitomeya*. It belongs to the genetic group around *R. vanzolinii*, but is less common in the hobby than this relative. Lifespan in captivity is typically 5-8 years, but over 10 years is possible.

Skin toxicity: Poison dart frogs do not make their own poison. In wild frogs the alkaloids in the skin come from the diet, probably small arthropods such as ants and mites. Frogs reared on fruit flies and springtails do not get these substances and are non-toxic. The toxicity of wild animals has not been measured for this particular species, but the genus generally has low toxicity. The frogs should nevertheless not be handled, and you should wash your hands after working in the enclosure.

Males call with a short buzz or a repeated peeping and readily sit out in the open when they call.

Read more: Feeder animals: keeping and breeding

Distribution and habitat

Ranitomeya flavovittata is found only in Peru and is known with certainty only from the Loreto region in the north-eastern part of the country, in the Peruvian Amazon lowlands. The species lives in the lowlands near Iquitos, and the recorded finds lie in a small area around 4° south and 73° west, most of them near the Tahuayo River.

The range is thus small and known only from a few localities. It lies partly in a protected area, the Reserva Comunal Tamshiyacu-Tahuayo. It is not documented that the species occurs outside Peru.

> **Native range:** Peru.

HABITAT

R. flavovittata lives in old and secondary tropical rainforest. The species has been recorded up to about 500 m above sea level. The frogs move in the low vegetation and stay especially in bromeliads and other water-filled plants within 2 m of the ground. The eggs are laid in bromeliads, but also down in the leaf litter. The species has been seen by streams and ponds and at the edge of standing or slow-flowing water.

The species apparently breeds in bromeliads of the genus *Guzmania*, and males have been seen carrying tadpoles. It is diurnal and searches all day for small arthropods on and around the plants. Precise figures for rainfall and temperature in the species' habitat are not documented, but the climate in the Peruvian Amazon lowlands is warm and humid all year, without a real cool period.

Read more: Rearing tadpoles

Care

THE ENCLOSURE

A pair of *R. flavovittata* needs an enclosure of at least 30 × 30 × 45 cm, but bigger is always better. A group of 3-4 frogs needs at least 45 × 45 × 45 cm, and each additional frog requires more space. The frogs readily climb, so a tall enclosure is better than a low one.

Set up with a drainage layer, a damp substrate and a thick layer of dead leaves. Preferably add springtails and small isopods, so the enclosure becomes bioactive and stays clean. Plant densely with bromeliads, climbers and small plants, so the frogs have hiding places and climbing routes. Put film canisters on the wall or the floor at an angle of 35-45 degrees as laying sites.

Young can be kept together in a group. As adults the species can usually be kept in a group, also with several males, but in a few animals this can change. If there is fighting, the aggressive animal must be removed. Never keep different species or locality forms together.

Read more: Terrarium construction and bioactive substrate

TEMPERATURE

Keep the enclosure at 21-26 °C by day and 18-21 °C at night. The night temperature is borrowed from related species. The temperature must not exceed 27 °C for long periods, and above 29 °C can be fatal. Eggs and tadpoles can be kept at the same temperature as the adults.

Extra heat is normally not necessary; the light for the plants gives enough warmth. Never use sunshine through a window to heat the enclosure, because the glass can make the temperature rise dangerously fast. Keep an eye on how the room's radiators and air conditioning affect the temperature in the enclosure. No cool rest period is documented.

HUMIDITY AND MISTING

Humidity must be 70-100 %. The species can briefly cope with about 50 % if it has access to clean water, but this is an emergency measure and can be fatal if it continues.

Mist daily, and use reverse-osmosis water or rainwater. A misting system running a couple of times a day makes it easier to keep humidity up. Let the leaves dry out a little between mistings, and provide air exchange so mould does not form.

Read more: Humidity, misting and ventilation

WATER AND WATER QUALITY

Give the frogs a shallow water dish or a small water feature, and keep the water so shallow that the smallest frog can sit with its head and upper body above the water: the species swims poorly. The water depth should be 1-2 cm. A bromeliad leaf or a film canister with clean water is necessary if the frogs are to lay eggs and have tadpoles.

Use reverse-osmosis water, rain water or dechlorinated tap water. Change the water regularly, and never use soap or cleaning products in the enclosure, because the substances are absorbed through the frogs' skin.

LIGHTING AND UVB

The frogs are diurnal and live in the shade of the rainforest. The light is first and foremost for the plants: LED light for 12-14 hours a day is suitable. It is not documented that the species needs UVB, and it is not normally used. If you choose a weak UVB source all the same, ensure dense planting and shade. The light must not heat up the enclosure.

Read more: Lighting and UVB

FEEDING

R. flavovittata is so small that it can only take small feeder insects. Juveniles and most adults eat wingless fruit flies (*Drosophila melanogaster*), and large adults can also take *D. hydei* and newly hatched crickets. Springtails and newly hatched small isopods are a good supplement at all ages. In the wild the species hunts small insects and other arthropods on and around the plants.

Feed juveniles and adults daily with exactly so much that it is eaten up by the next feeding. Dust the feeder insects with a vitamin and mineral supplement, and follow the manufacturer's instructions, because overdosing of certain vitamins can be harmful. Always keep your own cultures of fruit flies and springtails, so the supply is stable. Local wild ants cannot be used as food.

BEHAVIOUR AND HANDLING

R. flavovittata is diurnal, quick and a little shy. The frogs become bolder if the enclosure is densely planted and has many hiding places, and they get used to you if you watch them through the glass. The males call from open spots.

The species can generally be kept in pairs, trios and small groups. When the frogs become sexually mature, the composition can change, and the females can begin to eat each other's eggs, even though many even breed in the same film canister. The frogs should not be handled: the skin is thin and delicate, and residues of soap, cream and oil from the hands can harm them. If a frog has to be moved, lure it into a transparent tub.

Breeding

SEXUAL MATURITY AND SEXING

Females are distinctly broader than males, especially when they are carrying eggs, and only the males call. These are the surest distinguishing features, but young animals cannot be sexed. The species becomes sexually mature at an age of 5-8 months. The easiest way to a pair is to buy or breed several juveniles and keep them together.

MATING

The male calls to attract a female, and when she chooses him, the two leave open ground together and look for a quiet spot for egg-laying, often in a bromeliad or a film canister. There is no real amplexus. The species is not difficult to breed, and it breeds best in pairs. Give the frogs film canisters or bromeliads, stable temperature and high humidity.

EGGS AND TADPOLES

The female lays 2-6 eggs per clutch, in captivity most often 4-6, on a smooth surface, typically on the bottom or side of a film canister, in a bromeliad leaf or in the leaf litter. How often the female lays is not documented.

When the eggs hatch, the male carries the tadpoles on his back to a pool of water, a bromeliad or a small puddle. Like the other species in the group around *R. vanzolinii*, the tadpoles are facultative egg eaters: they can live on infertile eggs from the female but also manage without. If they are allowed to stay with the adults, they readily eat infertile eggs. Otherwise they can easily be raised separately in small containers of clean water on fine tadpole food and dead fruit flies.

METAMORPHOSIS

The eggs hatch after 10-14 days. After that it takes 60-80 days for the tadpole to metamorphose into a little frog. Change part of the water regularly, and keep the containers clean so the water does not become contaminated.

When the front legs appear, the tadpole must be able to get out of the water: lay a piece of cork or a leaf so it can climb up, and move the little frog to a moist rearing enclosure when the tail is almost absorbed.

REARING THE YOUNG

The newly metamorphosed frogs are very small. Give them springtails and the smallest fruit flies for the first weeks, and later also offer wingless *D. melanogaster* in larger quantity. Keep them in a small, moist enclosure set up like the adults' with plants, cover and a small water feature.

Feed daily, and lightly dust the food with vitamins and minerals. The juveniles can go in a group, but when they should be moved and how fast they grow is not documented.

Health and common mistakes

Poison frogs are sensitive to heat, drought and poor hygiene. The most important mistakes are:

- An enclosure that is too hot. Above 29 °C can be fatal, and the frogs become lethargic.
- Too low humidity, especially without access to clean water.
- Dirty water in the tadpole containers, which causes fungi and disease.
- Food without a vitamin and mineral supplement, which causes bone problems and weak juveniles.
- New animals that bring infection with them. Keep newly bought frogs in quarantine by themselves for a period.

A healthy frog has intact skin and a clearly round belly. Seek a vet with amphibian experience quickly if the frog stops eating, bloats, or develops sores or red, cottony areas 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.