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POISON DART FROGS

Amazonian Poison Frog

Ranitomeya amazonica

Ranitomeya amazonica is a tiny, diurnal poison frog of 16-19 mm from the Amazon around Iquitos in Peru and Leticia in Colombia. It is black with red, orange or yellow stripes and blue-grey marbling on the legs, breeds in bromeliads and is regarded as one of the easiest small Ranitomeya to keep and breed.

Family: Dendrobatidae Former name: *Dendrobates amazonicus*

KEY FACTS

THE ANIMAL

Adult size	**16-19 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	**40 × 40 × 40 cm** L × W × H for 3 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	**2-8**
Hatching	**10-14 days**
Larval period	**60-80 days** from hatching to metamorphosis
Larval diet	**Complete diet and other tadpoles**
Parental care	**Carries the tadpoles**

PROTECTION AND PAPERWORK

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

About the species

Ranitomeya amazonica is one of the smallest poison frogs and measures only 16-19 mm from snout to vent. The skin is smooth and black. On the back there is a distinct black Y, whose two arms end at the eyes, and red, orange or yellow stripes run along the sides. The legs and belly are black with a fine net of sky blue, blue-grey or bronze-coloured, and the throat is bright yellow or orange. As in the rest of the genus, the colours have a pearly sheen.

In enclosures the forms found are chiefly 'Iquitos' (yellow, orange and red stripes), 'Red' (red stripes) and 'Arena Blanca' (orange forebody that fades into blue-green towards the rear, with black spots or stripes). 'Arena Blanca' comes from the white-sand forests of Loreto and can be easily mistaken for *R. reticulata*. The forms should not be mixed.

The sexes are difficult to tell apart in young animals. Adult females are slightly longer and distinctly broader and more pear-shaped than the males, especially when carrying eggs, and only the male calls.

The species was described by Rainer Schulte in 1999 as *Dendrobates amazonicus* and was separated from what was then called *D. ventrimaculatus*, chiefly because of the call. In the hobby the animals long went under the name "ventrimaculata", and before that they were imported as *Dendrobates quinquevittatus*. Genetic studies have since confirmed the species. In 2022 the populations in French Guiana and eastern Brazil were moved to *R. variabilis*, so the yellow animals from French Guiana that are still found in the hobby belong today to that species. The closest relative is precisely *R. variabilis*, and the two species meet south of Iquitos.

Skin toxicity: Poison frogs do not produce their poison themselves. Wild *R. amazonica* have alkaloids in the skin, and they come from small arthropods in the diet. The toxicity of the small Ranitomeya is slight. Captive-bred animals, which live on fruit flies and springtails, lack the poison or have very little. Wild animals are therefore mildly toxic, and captive-bred animals are practically non-toxic. Do not handle the frogs, wash your hands after working in the enclosure, and do not touch your eyes and mouth afterwards.

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

Distribution and habitat

Ranitomeya amazonica lives in the lowland rainforest along the Amazon River in north-eastern Peru, especially in Loreto around Iquitos and by the lower Río Napo, and in the extreme south-eastern part of Colombia around Leticia and Puerto Nariño. The species is known from, among others, the Allpahuayo-Mishana and Tamshiyacu-Tahuayo reserves.

The populations in French Guiana and at the mouth of the Amazon in Brazil have belonged to *R. variabilis* since 2022 and are not included on the map. Whether the species is also found in western Brazil and in Guyana is unresolved, and those two countries are not included on the map.

> **Native range:** Peru and Colombia.

HABITAT

Ranitomeya amazonica is a lowland species found from sea level up to about 200 m. It lives in primary rainforest and older secondary forest, mostly in undisturbed areas, but tolerates some disturbance. The frog likes to stay a little above the ground in bromeliads and on low leaves, often near streams, ponds or slow-flowing water.

The species breeds in the leaf pools of bromeliads, where eggs and tadpoles develop. In the enclosure, bromeliads and film canisters are used for the same purpose. Temperature and humidity at the habitats are not known.

Read more: Humidity, misting and ventilation Read more: Rearing tadpoles

Care

THE ENCLOSURE

A pair or trio of *Ranitomeya amazonica* needs an enclosure of at least 40 × 40 × 40 cm. If there are to be more frogs, allow about 20 litres of extra space per animal, and choose a tall rather than a low enclosure.

Set up the enclosure like a clearing in the rainforest with a drainage layer, mesh, a damp substrate and a layer of dead leaves. The frogs climb a good deal, so give them branches, roots, dense planting and bromeliads where they can sit and lay eggs. Springtails and small woodlice in a living enclosure keep the substrate clean. The more hiding places there are, the more you will see of the frogs: in a sparsely furnished enclosure they hide.

Keep each enclosure to one form, and never mix the species with other poison dart frogs. Crossbreeding is undesirable, and the weakest animals easily lose out. Plan a separate rearing enclosure for the young in advance.

Read more: Terrarium construction and bioactive substrate

TEMPERATURE

Keep the enclosure at 21-26 °C by day and 18-21 °C at night. The frogs are most active and breed best at the warm end, at 24-26 °C. The temperature must not exceed 27 °C for long periods: the frogs become stressed, and 29 °C can be fatal.

Extra heat is rarely necessary; the light for the plants often provides enough. Never put the enclosure in sun behind a window pane, where the temperature rises very quickly, and watch out for radiators and air conditioning in the room. Measure the temperature at the frogs' height, and in summer cool with ventilation or by moving the enclosure to a cooler room. There is no known winter rest.

HUMIDITY AND MISTING

Humidity should be 70-100 %, preferably 80-100 %. Mist every day, preferably morning and evening, so that the humidity is close to 100 % after misting and falls to about 70-75 % in the middle of the day. Use reverse-osmosis water or rain water. A rain system on a timer makes the humidity more stable, even when you are away.

The frogs tolerate down to 50 % briefly if they have clean water to sit in, but low humidity without access to water can quickly become fatal. Provide a little air exchange so that the air does not stand still and no mould forms.

WATER AND WATER QUALITY

Ranitomeya amazonica swims poorly, so the water must be shallow and easy to climb out of. Use a shallow water dish or a small water feature with 1-2 cm of water, so the smallest frog can sit with its head and upper body above the water.

For eggs and tadpoles there must be water-filled bromeliads or film canisters. Clean water in the film canisters attracts egg-laying females. Use reverse-osmosis water, rain water or dechlorinated tap water, and change the water regularly. The frogs absorb substances through the skin, so never use soap or cleaning products in the enclosure.

LIGHTING AND UVB

The frogs are diurnal and live in the shade of the forest. The lighting is first and foremost for the plants: give 12-14 hours of LED plant lighting a day. *Ranitomeya amazonica* has no known need for UVB, so UVB is optional. If you choose a weak UVB source, provide both bright and shaded spots. The lamp must not heat up the enclosure.

Read more: Lighting and UVB

FEEDING

Ranitomeya amazonica is so small that it can only take small feeder insects. Juveniles and adults take wingless fruit flies (*Drosophila melanogaster*), and large adults can also take *D. hydei* and newly hatched crickets. Springtails and small white woodlice are a good supplement at all ages and also live permanently in a living enclosure. Local wild ants cannot be used as feed.

Feed adults and juveniles daily with exactly so much that it is eaten up by the next feeding. The frogs can be shy and need a steady supply of very small food. Dust all feeder insects from cultures with a vitamin and mineral supplement for amphibians, and follow the manufacturer's instructions, because too much of certain vitamins can be harmful. Start your own cultures of fruit flies and springtails before the frogs arrive.

BEHAVIOUR AND HANDLING

Ranitomeya amazonica is diurnal, but often shy, and young animals in particular hide a lot. In a densely planted enclosure with many dead leaves the frogs come out more. Adult males sit openly and call with a soft, short buzzing that can hardly be heard outside the enclosure.

The species can be kept in pairs, in a trio or in a small group, as long as there is enough space, and most animals are peaceful. When the frogs become sexually mature, the balance in the group can change, and females can eat each other's eggs. If you see fighting or a frog chasing another, move one of them. The frogs should not be handled, because the skin is thin and absorbs substances from the hands. If a frog has to be moved, lure it into a transparent tub.

Breeding

SEXUAL MATURITY AND SEXING

The frogs are sexually mature at 5-8 months. Adult females are distinctly broader and more pear-shaped than the males, because they lay eggs often, readily every week, and they are often slightly longer. The male sits openly and calls. Young animals cannot be sexed, so the surest approach is to start with at least four animals of the same form and let them pair up, or to buy a sexed pair.

MATING

The male calls to lure a female to a suitable egg-laying site, typically a bromeliad or a film canister. There is no amplexus: the male touches and strokes the female with his forelegs, she lays the eggs, and he fertilises them externally. Two frogs that grip each other or wrestle, on the other hand, are two animals of the same sex fighting.

Ranitomeya amazonica is one of the easiest poison frogs to breed and does so best in a small group; several females often lay eggs in the same film canister. If breeding does not get going, a period of slightly less misting followed by frequent, heavy misting and generous feeding can set it off. Give the frogs a break after some months of breeding, so the females can regain condition.

EGGS AND TADPOLES

The eggs are laid in the leaf axil of a bromeliad or in a film canister, partly or fully below the water surface. The female lays 2-8 eggs per clutch, most often 4-6. Film canisters are set at an angle, about 45 degrees, on the back wall or on a solid piece of decoration.

When the tadpoles hatch, the male carries them on his back to separate pools of water. The tadpoles are cannibals and are not fed with feeder eggs; in the wild they live on mosquito larvae, algae, dead organic matter and other tadpoles. In captivity it is safest to remove them and rear them separately in small cups with reverse-osmosis water and a tropical almond leaf. Feed with fine tadpole food or dead fruit flies, remove leftovers, and change the water regularly. If the eggs are left in the enclosure, the tadpoles may also eat eggs.

METAMORPHOSIS

The eggs hatch after 10-14 days, and the tadpoles take 60-80 days to become small frogs. The hind legs come first, and the forelegs a couple of weeks later. When the forelegs have appeared, the water level must be lowered, and the tadpole must be able to climb onto land: place the cup at an angle, or put a piece of cork in the water, because the tadpole can drown once the gills are gone. The little frog does not eat while the tail is being absorbed, and is moved to the rearing enclosure when the tail is almost gone.

REARING THE YOUNG

The newly metamorphosed young are moved to a small rearing enclosure with a drainage layer, dead leaves, a couple of plant cuttings and a good population of springtails. Small enclosures swing quickly in temperature, so place them somewhere without draughts and sun.

Give springtails and, in time, small fruit flies, lightly dusted with calcium and vitamins, and do not feed more than the young can manage to eat. The young can go together, but keep them apart from the adults, who outcompete them. At 2-3 months the young are well under way and measure about 13 mm.

Read more: Calcium, vitamins and supplements

Health and common mistakes

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

- Overheating. Above about 27 °C the frogs become stressed, and 29 °C can be fatal.
- An enclosure that is too dry. Low humidity without access to water can quickly be fatal.
- Food without a vitamin and mineral supplement, which causes bone problems and weak juveniles. Too much vitamin A is also harmful, especially for juveniles.
- Dirty water in tadpole cups and film canisters, which causes bacteria and fungi.
- Stress and aggression. Separate frogs that fight.
- New animals that bring infection with them. Keep newly bought frogs in quarantine for a period.

A healthy frog has intact skin without sores, red or irritated areas (especially around the vent and on the inside of the hind legs) and without cottony patches, and it has a clearly round belly. Signs of illness are frequent shedding, a bloated body, lethargy or restlessness, loss of appetite and dull, dry skin. Isolate a sick animal, and seek a vet with amphibian experience quickly.

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.