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POISON DART FROGS

Tolima Poison Frog

Andinobates dorisswansonae

Andinobates dorisswansonae is a small, diurnal poison dart frog of 16-19 mm, black or dark brown with red, orange or yellow spots. It is known only from a small patch of forest in northern Tolima in Colombia. The species is Vulnerable and hardly kept, so its care is based on the cool, wet mountain climate of its habitat.

Family: Dendrobatidae Former name: *Ranitomeya dorisswansonae*

KEY FACTS

THE ANIMAL

Adult size	**16-19 mm** snout-vent length
Lifespan	**5-10 years**
Active	**By day**
Lifestyle	**Terrestrial**
Habitat	**Montane forest**
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	**18-22 °C**
Temperature, night	**14-17 °C**
Humidity	**85-100%**
Water	**No water dish**
UVB	**Optional** Ferguson zone 1
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	**1-2**
Hatching	**16-24 days**
Larval period	**108-152 days** from hatching to metamorphosis
Larval diet	**Algae/plants and complete diet**
Parental care	**Carries the tadpoles**

PROTECTION AND PAPERWORK

CITES	**Appendix II**
IUCN	**Vulnerable (VU)**

About the species

Andinobates dorisswansonae is a small poison dart frog. Males measure 16-17 mm and females 18-19 mm from snout to vent. The skin is glossy black or dark brown with red, orange or yellow spots. The eyes are large with horizontally oval pupils, and the toes have adhesive discs. The first and second toes are partly fused, so the foot appears to have only four toes. The species shares this trait only with *Andinobates daleswansoni*, which is red at the front and brown at the back and lives a little further north. *Andinobates tolimensis*, which has a brown back and a yellow-bronze head, lives alongside *A. dorisswansonae*. The call is a series of short buzzing sounds reminiscent of a cricket.

The species was described in 2006 from the area around Falan in Tolima and was formerly placed in *Ranitomeya dorisswansonae*. Lifespan in captivity has not been documented; the figure in the box is borrowed from related, small poison dart frogs.

Skin toxicity: poison dart frogs do not produce their own toxins but take up alkaloids from small arthropods in their food, and captive-bred animals without toxic feeder insects are free of toxins. The potency of the toxins in *A. dorisswansonae* has not been documented, but the species is regarded as toxic. The frogs should not be handled, and hands should be washed after working in the enclosure.

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

Distribution and habitat

Andinobates dorisswansonae occurs only in Colombia, in the northern part of the department of Tolima around Falan in the Cordillera Central, the middle of the Andean ranges. The species is known from a small area of forest in the Ranita Dorada nature reserve, which is surrounded by grassland.

It is assessed as Vulnerable (VU) on the IUCN Red List. The threats are deforestation, agriculture and the capture of animals.

> **Native range:** Colombia.

HABITAT

Andinobates dorisswansonae has been found in a single patch of secondary forest at about 1,780 m. The trees stand close together and shade most of the forest floor, and they are densely covered with epiphytes, moss, lichens and fungi. 2,500-3,000 mm of rain falls per year, so the forest is wet all year. The frog lives among dead leaves on the ground and in bromeliads and eats small arthropods, especially ants. The tadpoles are carried to water, probably in the leaf axils of bromeliads.

The temperature has not been measured in the species' habitat, but forest at this altitude is cool and humid all year.

Read more: Rearing tadpoles

Care

THE ENCLOSURE

Little is known about the care of *Andinobates dorisswansonae*, and the species is hardly kept in captivity. The care is based on the habitat: cool, wet mountain forest with a dense canopy, thick leaf litter and bromeliads. *Andinobates tolimensis* lives in the same forest and has the same requirements, and *Andinobates daleswansoni* lives in similar cloud forest a little further north. The closest species with captive experience is *Andinobates bombetes*, which also lives in cool mountain forest in Colombia; the figures for breeding and rearing are borrowed from it.

An enclosure of 45 × 45 × 45 cm is enough for a pair. Use a drainage layer of expanded clay pebbles, a mesh separation layer and a substrate of coconut fibre, forest soil and sphagnum. Lay a thick layer of leaf litter on top, and make hiding places with cork tubes and pieces of bark. Plant moss, ferns and tillandsias, and add at least one bromeliad with water in the leaf axils for the tadpoles. A shallow dish of damp forest soil is a good place for the eggs. The air should move gently through a ventilation strip so that it does not stand still.

Read more: Terrarium construction and bioactive substrate

TEMPERATURE

The temperature has not been measured in the species' habitat. 18-22 °C by day and 14-17 °C at night suit forest at about 1,800 m. The species tolerates heat poorly, and prolonged periods above 25 °C stress the animals. There should be no basking spot. In summer the enclosure must stand in a cool room or be given cooling. A winter rest period has not been documented and is not necessary.

Read more: Heat and temperature

HUMIDITY AND MISTING

Humidity should be 85-100 %. Spray the leaf litter and plants thoroughly once or twice a day with rainwater or reverse osmosis water, or use a fogger on a timer. The substrate should be damp but not waterlogged. Small frogs dry out quickly in dry air, so check the humidity with a hygrometer near the substrate.

Read more: Humidity, misting and ventilation

WATER AND WATER QUALITY

The species does not need a water section. The animals get moisture from the leaf litter, plants and spraying. The tadpoles grow up in water in the leaf axils of bromeliads. Use rainwater or reverse osmosis water without additives, and never use soap or cleaning products in the enclosure, because amphibians absorb substances through the skin.

LIGHTING AND UVB

Provide 10-12 hours of LED light a day so that the plants thrive. The forest has a dense canopy, so the light should not be strong, and the animals must be able to seek shade. A need for UVB has not been documented; a weak UVB bulb (Ferguson zone 1) is optional.

Read more: Lighting and UVB

FEEDING

Andinobates dorisswansonae measures only 16-19 mm and eats small arthropods, in the wild especially ants. Give springtails and small fruit flies every other day, and dust the feeder insects with calcium most of the time and with vitamins with D3 1 time a week. Keep your own cultures of springtails and fruit flies so that there is always food. Small woodlice provide variety.

Read more: Feeder animals: keeping and breeding Read more: Calcium, vitamins and supplements

BEHAVIOUR AND HANDLING

The species is diurnal and lives on the ground in the leaf litter. Territorial behaviour has not been documented. A pair can be kept together in an enclosure of 45 × 45 × 45 cm. The frogs should not be handled, because the skin is delicate. When cleaning, move the animal in a glass with damp moss.

Breeding

SEXUAL MATURITY AND SEXING

Females (18-19 mm) are slightly larger than males (16-17 mm), and the males are recognised by their call. The age at sexual maturity has not been documented. A reliable pair is best obtained by raising a small group of young animals until pairs form.

MATING

Mating has not been documented, and it is not known whether the species has a fixed breeding season. In *Andinobates bombetes* the male lures the female to the egg-laying site, and a group with slightly more females than males gives the most eggs. A pair can be kept together and left in peace in a densely planted enclosure.

EGGS AND TADPOLES

The egg-laying site and the number of eggs have not been documented for the species. One parent carries the tadpoles on its back to water, probably in the leaf axils of bromeliads. In *Andinobates bombetes* the female lays 1-2 eggs at a time, preferably on damp forest soil, and those figures are used in the box.

The tadpoles can grow up in the bromeliads or be raised individually in small cups with clean water. They are fed fish flakes in small amounts so that the water does not become cloudy.

METAMORPHOSIS

The hatching time and larval period have not been documented for *Andinobates dorisswansonae*. In *Andinobates bombetes* the eggs hatch after 16-24 days, and the larval period is about 110 days with fish flakes as food and up to 150 days or more on other food. When the front legs appear, lower the water to no more than the height of the tadpole so that the little frog can easily get onto land.

REARING THE YOUNG

The newly metamorphosed froglets measure about 12 mm (the figure is borrowed from *Andinobates bombetes*). Keep them in a small, humid box with kitchen paper or leaf litter, a piece of bark and a plant, spray twice a day, and ensure good air exchange. For the first couple of weeks they eat springtails; after that they can be given the smallest fruit flies. Dust the food

with calcium. Only after several months can they be moved to a larger enclosure.

Health and common mistakes

There is no species-specific knowledge about diseases. The typical mistakes with small poison dart frogs from cool mountain forests are these:

- Too high a temperature: the animals sit passively, eat poorly and become susceptible to skin diseases. Cool the enclosure down.
- Air that is too dry: the skin becomes dull, and the frog loses weight. Spray more often, and check the substrate.
- Stagnant air and leaf litter that is too wet: mould and skin infections. Provide gentle ventilation.
- Thin animals that stop eating, or animals with skin changes: contact a vet with knowledge of amphibians.

The species is Vulnerable and occurs only in a small area, so animals must never be taken from the wild.

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.