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POISON DART FROGS

Rio Santiago poison frog

Excidobates captivus

Excidobates captivus is a very small, diurnal poison frog of 12-17 mm from the border region between Peru and Ecuador. It is black with orange-red spots in rows along the back and yellow spots on the limbs and belly, and it lives on the forest floor in humid rainforest and montane forest.

Family: Dendrobatidae English name: Rio Santiago Poison Frog Former name: *Dendrobates captivus; Ranitomeya captiva; Adelphobates captivus*

KEY FACTS

THE ANIMAL

Adult size	**12-17 mm** snout-vent length
Lifespan	**5-10 years**
Active	**By day**
Lifestyle	**Terrestrial**
Habitat	**Rainforest and 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	**40 × 40 × 40 cm** L × W × H for 2 adults
Temperature, day	**22-26 °C**
Temperature, night	**18-22 °C**
Humidity	**80-100%**
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**
Larval period	**65-75 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

Excidobates captivus is one of the smallest poison dart frogs, 12-17 mm from snout to vent. The ground colour is black, and along both sides of the back there is a row of distinct orange-red spots. Small yellow spots are found above the armpit and in the groin, and paler yellow spots sit under the chin, on the chest and belly and under the thighs. The first finger is clearly shorter than the second. The genus is recognised by pale, oval spots on the underside of the thighs. The tadpoles are pale grey.

The species was described in 1982 by Charles Myers as *Dendrobates captivus* from a single museum specimen collected in 1929. Only about 77 years later was it found again at the same place. In 2008 it was moved, together with *Excidobates mysteriosus*, to the new genus *Excidobates*, and *Ranitomeya captiva* and *Adelphobates captivus* are earlier names for the species.

The genus has three species: *E. captivus*, *E. mysteriosus* and *Excidobates condor*. *E. mysteriosus* is the closest relative; it is larger and lives in montane forest on the upper Marañón.

In the wild the skin gives off a weak poison, which poison dart frogs take up from their food. Captive-bred animals do not acquire the poison and are non-toxic, but wash your hands before and after working in the enclosure all the same.

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

Distribution and habitat

Excidobates captivus occurs in Peru and Ecuador. In Peru the species is known from the lowlands south of the Marañón at the mouth of the Santiago, at about 200 m elevation, from a single animal north of the river and from the Cordillera del Cóndor. In Ecuador it occurs in Zamora Chinchipe province, including at Zumbi, Panguintza and in the Maycu reserve, at about 800-1200 m elevation. The total range is estimated at about 7350 km². The species is common in several places, and the terrain is so remote that its habitats are only slightly affected. Small-scale gold mining takes place in the area.

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

HABITAT

The species lives on the forest floor in humid, undisturbed forest and near streams, both in the lowland rainforest at Santiago and in montane forest in the Cordillera del Cóndor. It is diurnal and terrestrial. The male calls from hidden spots in the low foliage, for example from leaf axils, with short, shrill sounds at irregular intervals.

The eggs are probably laid in the leaf litter. The parents carry the tadpoles on their backs to small bodies of water in plants, for example in bromeliads and in the leaf axils of *Heliconia*.

The lowlands at Santiago lie at about 200 m elevation and are warm and wet all year, while the heights of 800-1200 m in Ecuador are cooler, especially at night.

Care

THE ENCLOSURE

Little is known about the care of *Excidobates captivus*. The species lives on the forest floor in warm to mild, permanently humid forest. *Excidobates mysteriosus* is the closest relative, and *Ranitomeya variabilis* and *Ranitomeya imitator* are better-known small poison frogs from the same part of South America.

A pair needs an enclosure of at least 40 × 40 × 40 cm. Floor area is more important than height, because the species lives on the ground. Use a drainage layer of expanded clay pebbles at the bottom, a damp substrate of coconut and soil and a thick layer of dead leaves where the frogs can hide. Broad-leaved plants and moss provide cover, and small bromeliads and film canisters with water provide places for the tadpoles.

The enclosure needs fine ventilation openings so that the air is exchanged without drying out. Close all gaps carefully, because such small frogs and their feeder insects escape easily. Do not keep other species together with *E. captivus*. Juveniles can stay in the same enclosure until they eat on their own and have clearly grown.

Read more: Terrarium construction and bioactive substrate

TEMPERATURE

The temperature at the species' localities has not been measured. 22-26 °C by day and 18-22 °C at night lies between the climate in the lowlands and at 800-1200 m elevation. Small poison frogs tolerate heat poorly, so avoid longer periods above 28 °C. Use LED lighting instead of heat bulbs, place the enclosure somewhere cool, and cool with a fan if necessary. A winter rest is not known in the species.

HUMIDITY AND MISTING

Humidity should be 80-100 %, and the substrate should be damp all year. Mist with reverse-osmosis or rainwater once or twice a day, or use a rain or fogging system. Make sure the air does not stand still. The species is so small that it dries out quickly, and a dry enclosure can be fatal within a few days.

Read more: Humidity, misting and ventilation

WATER AND WATER QUALITY

A water dish is not necessary, because the frogs get moisture from the misting and the damp leaf litter. The water in bromeliads and film canisters is replaced with fresh reverse-osmosis or rainwater every week. Avoid hard tap water and chemicals, because amphibians absorb substances through the skin.

LIGHTING AND UVB

The species lives in shade on the forest floor, so the lighting should first and foremost support plant growth and a day of 12 hours. UVB is not necessary, but optional. A weak UVB light can be used over part of the enclosure, as long as there is shade and leaf litter where the frogs can retreat.

Read more: Lighting and UVB

FEEDING

Excidobates captivus is so small that it can only take very small feeder insects: springtails, flightless fruit flies (*Drosophila melanogaster*) and the smallest woodlice. Feed adults and juveniles daily with as much as is eaten. Dust the feeder insects with a vitamin and mineral supplement a few times a week. Your own cultures of fruit flies and springtails provide a stable supply.

Read more: Feeder animals: keeping and breeding

BEHAVIOUR AND HANDLING

The species is diurnal, but hides a great deal in the foliage. The male calls short, shrill sounds from hidden spots. It is best kept as a pair, because several animals together can cause conflict. The frogs should not be handled, because they are very small and sensitive to stress. Use a plastic cup when they need to be moved.

Breeding

SEXUAL MATURITY AND SEXING

Sexual maturity and sex differences are not known in the species. The male can be recognised by the call. The safest approach is to let a group of juveniles grow up together and then place a calling pair on its own.

MATING

The male calls short, shrill sounds at irregular intervals, for several minutes at a time, from hidden spots in the low foliage. Mating and any breeding season are not known. More misting and slightly cooler nights, as in the rainy season, can bring the animals into breeding condition.

EGGS AND TADPOLES

The eggs are probably laid in the leaf litter on the forest floor; in the enclosure, a film canister laid down under the leaves suits. The number of eggs is not known; the 4-8 eggs in the box are borrowed from *Excidobates mysteriosus*. The parents carry the tadpoles on their backs to small bodies of water in plants, in the wild for example bromeliads and the leaf axils of *Heliconia*. Give each tadpole its own body of water, for example a film canister with water and a withered leaf. The food of the tadpoles is not known; algae, the natural film in the water and a fine prepared food suit.

METAMORPHOSIS

Hatching time and larval period are not known for the species. The figures are borrowed from *Ranitomeya variabilis*: at 24 °C the eggs hatch after about two weeks, and the larval period is 65-75 days. When the forelimbs appear, the water must be shallow, and the tadpoles must have easy access to land.

REARING THE YOUNG

The newly metamorphosed froglets are very small and need the smallest feeder insects, such as springtails, every day. Keep them in a damp enclosure with moss and leaves, dust the food with vitamins and calcium, and keep the temperature at 22-25 °C. They can be moved to a larger enclosure when they eat confidently and have clearly grown. Lifespan is not known; the 5-10 years in the box are borrowed from *Ranitomeya variabilis*.

Read more: Calcium, vitamins and supplements

Health and common mistakes

There are no known diseases specific to the species. The typical errors are the same as in other small poison frogs:

- An enclosure that is too warm or too dry. The frogs become lethargic, lose weight and lose colour.
- Dirty water in breeding sites, which causes fungus and disease in the tadpoles.
- Food without a vitamin and mineral supplement, which causes bone problems and weak juveniles.
- New animals that bring infection with them. Quarantine new frogs separately.

A healthy frog has intact skin and a round, but not bloated, belly. Seek a vet with amphibian expertise if the frog stops eating, swells up or develops sores or red 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.