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IGUANAS

Brown Basilisk

Basiliscus vittatus

Basiliscus vittatus is a fast, long-legged lizard from waterside habitats in Mexico and Central America, known for running on two legs across water. The male grows to 60 cm including the tail and carries a large head crest. The species is diurnal, feeds mostly on insects and needs a tall, humid enclosure with UVB, a warm basking spot and a water section.

Family: Corytophanidae Former name: *Cristasaurus mitrella; Dactylocalotes elisa*

KEY FACTS

THE ANIMAL

Adult size	**35-60 cm** total length incl. tail
Lifespan	**5-8 years**
Active	**By day**
Lifestyle	**Arboreal, terrestrial and semi-aquatic**
Habitat	**Dry forest, rainforest and wetland**
Difficulty	**Intermediate**

CARE

Min. enclosure	**90 × 90 × 120 cm** L × W × H for 2 adults
Temperature, day	**25-30 °C**
Basking spot	**35-40 °C**
Temperature, night	**23-26 °C**
Humidity	**60-80%**
Water	**Water section**
UVB	**Essential** Ferguson zone 2
Diet	**Insects, fruit and vertebrates**
Kept	**Singly, in pairs or one male with several females**

BREEDING

Reproduction	**Egg-laying**
Sexually mature	**6-15 months**
Clutch size	**2-18 eggs**
Clutches per year	**1-5**
Incubation	**55-70 days** at 28-31 °C

PROTECTION AND PAPERWORK

CITES	**Not listed**
EU annex	**Not listed**
IUCN	**Least Concern (LC)**

About the species

Basiliscus vittatus is a slender, long-legged lizard with a large head, a long tail and toes with scaly fringes along the sides. The ground colour is brown with a chequered pattern of black, white and brown and a yellow to pale stripe on each side, which begins behind the eye and continues to the hind legs. Males have a large, lobe-shaped crest at the back of the head and a low crest over the shoulders, but not the tall dorsal and tail crests that *Basiliscus plumifrons* has. Females have a folded hood behind the head and a lower dorsal crest. Males most often have a salmon-coloured belly, females a grey to silvery belly with a touch of pink.

The species is the smallest of the basilisks and grows to 35-60 cm including the tail. Males reach 45-60 cm, females 35-45 cm, and the body alone (snout to vent) reaches about 22 cm. The species name vittatus means banded and refers to the narrow, band-like crest on the male's head. Juveniles have clearer markings than adults.

The animal is nervous and very fast. When startled, it jumps into the water or runs on its hind legs, and the scaly fringes on the toes let it run a short distance across the surface of the water before it sinks and swims on. Males are strikingly submissive and withdraw rather than compete with the females for food.

Distribution and habitat

Basiliscus vittatus lives from central Mexico (from Jalisco and Tamaulipas southwards) through Belize, Guatemala, Honduras, El Salvador and Nicaragua to Costa Rica and Panama, and it reaches up to about 1,400 m above sea level. Occurrence in Colombia is doubtful and is not included in the map.

In Florida the species has been introduced and has formed a population, but it is not part of the native range.

> **Native range:** Mexico, Guatemala, Belize, El Salvador, Honduras, Nicaragua, Costa Rica and Panama.

HABITAT

The species lives in tropical and subtropical dry, humid and rain forest, always close to water. It lives in dense vegetation along streams, canals, ponds and lakes, climbing in bushes and low branches as well as walking on the ground. At night it sleeps on branches and in dense foliage, often over water.

It is diurnal and watchful and basks on branches, rocks and banks; the body temperature of active animals is about 35 °C. When in danger it drops or runs into the water. The climate has a rainy season and a dry season. The eggs are laid from May to August in holes in moist soil, often along a canal bank, and the young hatch at the start of the rainy season.

Care

THE ENCLOSURE

A pair or a male with two females needs a tall enclosure of at least 90 × 90 × 120 cm (length × width × height), and larger is better. The species is an active runner and climber, and a small enclosure causes stress and makes the animal rub its snout against the glass, giving it sores. Males must never be put together. Up to five newly hatched juveniles can live in an enclosure of about 75 × 30 × 30 cm, but they must be watched and separated as they grow and begin to fight.

Furnish with sturdy branches at several heights, dense plants, live or artificial (*Epipremnum*, *Philodendron*, *Dracaena*), and many hides, because the animal only feels safe in dense vegetation. The substrate must hold moisture: coconut fibre, soil without fertiliser or cypress bark. A waterfall or a rain system helps to keep humidity up.

Cover three sides and the lower part of the front with a background or an opaque material, so that the animal does not run into the glass.

Read more: Humidity, misting and ventilation

TEMPERATURE

The air should be kept at 25-30 °C during the day, and the basking spot should have a surface temperature of 35-40 °C, measured with an infrared thermometer. At night 23-26 °C is suitable. Use a halogen spot over a branch high up and a ceramic heat emitter on a thermostat for the night if the room is cold, and shield all lamps so that the animal cannot burn itself.

The rest of the enclosure must be cooler, so that the animal can choose between warmth and shade. Measure with digital thermometers at the basking spot and in the cool end. Too low a temperature causes poor digestion and a weakened immune system, and the animal must always be able to get away from the heat.

Read more: Heat and temperature

HUMIDITY AND WATER

Humidity should be 60-80 %. Mist the enclosure and foliage 1-2 times a day, or use a fogging or rain system on a timer, and measure with a hygrometer. Plants, a moist substrate and the water section keep humidity up, and the animals drink droplets from the leaves. A slightly drier and cooler period in winter, with 45-55 % humidity, can be used before breeding.

Ventilation must not be sacrificed for humidity. If the air stands still and wet, mould grows and the animal gets respiratory and skin problems.

WATER AND WATER QUALITY

The animal bathes and spends time in the water, and the water section must be large enough for the whole animal to lie in it. A filtered water tub or a waterfall keeps the water clean and raises humidity. Change the water often, or filter it, and clean the tub regularly, because the animal defecates in the water.

Place the water so that the animal can jump into it from a branch. This is its natural escape route.

LIGHTING AND UVB

Basiliscus vittatus is diurnal and needs UVB all day to produce D3 and absorb calcium. The species basks in sun and partial shade by the water, and the UVB lamp should give Ferguson zone 2, i.e. a UV index of no more than about 3 at the basking spot and less in the rest of the enclosure. A 6 % T5 tube or a similar lamp is usually suitable, but the distance depends on the type of lamp, so follow the manufacturer's instructions and measure if you can. UVB does not pass through glass or plastic, and the tubes are replaced according to the manufacturer's instructions.

The light is on for 12 hours and off for 12 hours all year round. Supplement with strong LED lighting for the plants and the animal. Natural sunlight in a mesh cage outdoors in summer is an advantage, but the animal must have shade and must never stand in direct sun in a glass enclosure.

Read more: Lighting and UVB Read more: Calcium, vitamins and supplements

FEEDING

Basiliscus vittatus feeds mostly on insects and other arthropods, but also takes fallen berries, and older animals eat more plant matter. Offer crickets, grasshoppers, cockroaches, superworms and spiders, and waxworms only now and then. A thawed newborn mouse once or twice a month is enough. Berries, mango and papaya can be given sparingly to adults, but easily cause loose stools in juveniles.

Feeder insects must not be larger than the distance between the animal's eyes. Juveniles are fed daily, adults every other day. Dust the feeder insects with calcium at almost every meal and with a vitamin supplement once a week, and gut-load the feeder insects before they are fed to the lizard. Females are greedy, so make sure the male gets his share too.

Read more: Feeder animals: keeping and breeding

BEHAVIOUR AND HANDLING

The species is shy, fast and stressed by handling. Animals that are picked up flee or bite. If an animal is picked up, it should be done calmly and only when necessary. The species is an animal to observe, not one to hold.

Males are territorial and bob their heads as a threat and during courtship. Two males in the same enclosure fight, and the fights can begin as early as about 5 months of age. Females are greedy at feeding time, and males are so submissive that a young male can be outcompeted and grow poorly. Young males should therefore be raised on their own until they are well established before they are put together with females.

Breeding

SEXUAL MATURITY AND SEXING

Males are larger and have a large head crest and a crest over the shoulders, females a folded hood and a lower dorsal crest. The species becomes sexually mature early, from 6 months of age and by 15 months at the latest, often long before it is fully grown. Choose only healthy animals with fat in the tail for breeding.

MATING

The species breeds readily in captivity. A slightly drier period in which humidity falls to about 50 %, and a temperature of 29-31 °C during the day, start the mating, and 12 hours of light and 12 hours of darkness are used. Keep the females separate from the male for a period before introduction. The male bobs his head and approaches slowly, and a willing female lowers her head and lifts her tail. The male grips the female by the skin of the neck, and mating lasts about 10 minutes.

EGG-LAYING AND CLUTCHES

The female becomes rounder after a week or two and looks for a nest site about three weeks after mating. Put in a laying box with a moist mix of peat, soil and sand, at least 20 cm deep. The female lays 2-18 eggs, most often 4-7, and the number depends on her age, size and condition. In the wild she lays one clutch a year, but in captivity a trio can produce a clutch a month in the season, so there are soon many young to find room for.

INCUBATION

Remove the eggs and mark them on top, so that their orientation is kept. Bury them two thirds of the way down in a mix of vermiculite and water (1:1 by weight) in an incubator with air circulation. The temperature should be 28-31 °C and humidity high, especially in the first four weeks. The eggs hatch after 55-70 days, and the whole clutch hatches within one to two days. Leave the young in the incubator until the yolk sac has been absorbed.

Read more: Incubating eggs

REARING THE YOUNG

The young are moved to a small enclosure furnished like the adults', with a basking spot of about 38-40 °C and UVB. Give them small feeder insects such as small crickets and mealworms every day, dusted with calcium and vitamins, and fresh water. The young have a great need for calcium. Keep them in small groups of the same size and separate the males as soon as they begin to fight, often at about 5 months.

Health and common mistakes

Most problems are caused by faults in the set-up. The typical ones are:

- Metabolic bone disease from too little UVB or calcium.
- Sores on the snout from running into or rubbing against the glass in an enclosure that is too small or too open. Provide hides, dense vegetation and a larger enclosure.
- Respiratory infection from poor ventilation or cold, stagnant air.
- Loose stools in juveniles that are given fruit.
- Injuries to the tail, toes and jaw after escape attempts.
- Internal parasites and mites, especially in wild-caught animals.
- Egg-laying difficulties in females without a suitable laying site.

See a vet with experience of reptiles if the animal does not eat for more than a week, is lethargic, or has swellings or sores that do not heal.

Read more: Common diseases and signs of illness Read more: Buying animals: captive-bred, wild-caught and transport

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.