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IGUANAS

Green Basilisk

Basiliscus plumifrons

Basiliscus plumifrons is a slender, bright green lizard from the rainforests of Central America, known for running on two legs across water. The male has crests on the head, back and tail. The species is diurnal, fast and shy and needs a tall, humid and warm enclosure with a water section, UVB and live food.

Family: Corytophanidae

KEY FACTS

THE ANIMAL

Adult size	**45-90 cm** total length incl. tail
Lifespan	**7-13 years**
Active	**By day**
Lifestyle	**Arboreal and semi-aquatic**
Habitat	**Rainforest and wetland**
Difficulty	**Experienced**

CARE

Min. enclosure	**120 × 60 × 120 cm** L × W × H for 1 adult
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	**18-24 months**
Clutch size	**4-19 eggs**
Clutches per year	**1-5**
Incubation	**56-70 days** at 28-31 °C

PROTECTION AND PAPERWORK

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

About the species

Basiliscus plumifrons is the largest of the basilisks: a slender, arboreal lizard with long hind legs, a very long tail and large, yellow to orange eyes. Both male and female are bright green with white and blue spots and dark markings along the neck and back. The male has crests in three places: a double head crest, a tall dorsal crest and a tail crest. The female has only a small head crest. Juveniles lack the crests and are less conspicuous in colour.

Males grow to 65-90 cm in length including the tail, females to 45-60 cm. The body alone (snout to vent) averages about 25 cm in large animals, and the tail makes up most of the length.

The species was described in 1876 by Edward Drinker Cope. The species name comes from the Latin pluma, feather, and frons, forehead, and refers to the small feather-like lobe in front of the large crest on the back of the head. The genus name comes from the Greek basiliskos, little king.

Basilisks are famous for being able to run across the surface of water. They run on their hind legs, support themselves with the tail and form air pockets with their feet, so that they do not sink. The trick is used as an escape, and they can also swim and dive. The animals are shy and nervous and do not tolerate much handling, and wild-caught animals rarely settle in. The species is regarded as the most difficult of the basilisks to keep and is not a beginner's animal.

Parthenogenesis (reproduction without a male) has been described in the species, which is one of the few iguana-like lizards with that ability.

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

Distribution and habitat

Basiliscus plumifrons lives in eastern Honduras, in Nicaragua, Costa Rica and western Panama, first and foremost on the Caribbean side of Central America. The species is also found along the Pacific coast in south-western Costa Rica. The type locality is Sipurio in Costa Rica.

> **Native range:** Honduras, Nicaragua, Costa Rica and Panama.

HABITAT

The species lives in humid lowland rainforest on the banks of rivers, streams, ponds and lakes. It is arboreal and diurnal and is seen both in the branches over the water and on rocks by the bank. If frightened, it runs out over the water or dives. The climate is warm and humid all year, and the animal's preferred body temperature is about 32 °C.

Males are territorial, and a male defends an area in which several females live. The eggs are laid in holes in warm, moist sand or soil. Predators are birds of prey, opossums, coatis and snakes.

Care

THE ENCLOSURE

An adult needs a tall enclosure of at least 120 × 60 × 120 cm (length × width × height), and larger is better. Height is important because the species climbs and basks high up. A pair or a male with two or three females needs a larger enclosure with several basking spots and hides.

Furnish with solid branches at several heights, dense foliage of robust plants such as *Epipremnum*, *Dracaena* and *Philodendron*, and many hides. The substrate must hold moisture: coconut fibre or cypress bark is suitable. The enclosure must be tight enough to hold humidity, but well ventilated, and the lid must be secure. The animal is fast and nervous and can injure its snout on the glass if frightened, so cover the sides and the lower part of the front, and place the enclosure in a quiet spot. Make a water section so that the animal can swim (see the section on water).

Keep only one male in the enclosure. Males fight, and a subordinate male does not thrive. Males can begin to fight as early as five months of age and must then be separated.

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. The figures are the same for the three common basilisks. 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 enclosure must have a water section that is large and deep enough for the animal to lie in and swim. The species heads for the water when frightened and can stay under the surface for several minutes. Place the water section under branches, so that the animal can jump into it and easily climb out again. The animal defecates in the water, so it must be filtered or changed often.

LIGHTING AND UVB

Basiliscus plumifrons 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 plumifrons is mostly a predator and eats live, moving prey. The diet consists of insects: crickets, grasshoppers, cockroaches, superworms and larvae. Mealworms and waxworms are fatty and are given only now and then. Adults can be given a small fish or a thawed newborn mouse once or twice a month. Berries, mango and papaya can be given in small amounts to adults, but easily cause loose stools in juveniles, and some animals will not take fruit at all.

Juveniles are fed daily, adults daily or every other day, with the amount the animal eats in about 10 minutes. The food is given in the late morning, once the animal has warmed up. Dust the feeder insects with calcium at almost every meal and with a vitamin supplement once a week, and gut-load them for 1-3 days before they are fed to the lizard. Juveniles have a high calcium requirement.

Read more: Feeder animals: keeping and breeding

BEHAVIOUR AND HANDLING

The species is shy, nervous and fast and not an animal for handling. Captive-bred animals bought young settle in better than wild-caught ones. A frightened animal flees, runs into the glass and may be injured, so move quietly to and from the enclosure. Males are territorial and aggressive towards other males and must never be kept together. The male bobs his head both as a threat and as courtship. Females are greedy at feeding time and can outcompete a young male, so young males should grow up on their own before they are put together with females.

Breeding

SEXUAL MATURITY AND SEXING

The male has three crests (head, back and tail), the female only a small head crest. The sex can be seen when the male's crests begin to grow. The animals are sexually mature after 18-24 months, but males can begin to fight as early as five months and must be separated then. The first clutches from a young female are often wholly or almost wholly unfertilised.

MATING

A male and one or more females can be kept together in a large enclosure. Breeding is governed by humidity, temperature and day length: a slightly cooler and drier period followed by higher temperature and humidity starts the mating. Keep the females separate from the male for a period before they are put together. The male bobs his head and grips the female by the skin of the neck, and mating lasts about 10 minutes. The season begins in late spring.

EGG-LAYING AND CLUTCHES

The female becomes rounder one to two weeks after mating and begins to look for a nest site in the third week. She lays 4-19 eggs per clutch and up to four to five clutches in a season; the last clutches of the season are often unfertilised. Give her a deep, moist laying box with a mix of peat, soil and sand. She may begin to dig long before laying. If she digs without laying, or does not eat, it may be a sign of egg-laying difficulties.

INCUBATION

The eggs are marked on top and moved with the same side up to an incubator with vermiculite and water (about 1:1 by weight), where they are buried two thirds of the way down. The temperature should be 28-31 °C and humidity high, especially in the first four weeks. The eggs must be moist, but not wet. The young hatch after eight to ten weeks, and the whole clutch hatches within one to two days.

Read more: Incubating eggs

REARING THE YOUNG

The young stay in the incubator until the yolk sac has been absorbed and are then moved to an enclosure furnished like the adults'. They are fed daily with small crickets and larvae, dusted with calcium and vitamins. The young have a high calcium requirement. Several young can live together while they are small, but they must be watched, and males must be separated by five months of age at the latest.

Health and common mistakes

The species is sensitive to stress and faults in husbandry:

- Metabolic bone disease from too little UVB, calcium and D3.
- Injuries to the snout from striking the glass.
- Respiratory and skin problems from poor ventilation or constantly wet air.
- Loose stools in juveniles that are given fruit.
- Parasites, especially in wild-caught animals; new animals are kept in quarantine.
- Egg-laying difficulties in females without a suitable laying site.

Weight loss, reduced appetite, lethargy and nasal discharge require a vet with experience of reptiles.

Read more: Quarantine and hygiene Read more: Common diseases and signs of illness

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.