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IGUANAS

Hernandez's Helmeted Basilisk

Corytophanes hernandesii

Corytophanes hernandesii is a slender, arboreal lizard from the forests of southern Mexico, Belize, Guatemala and Honduras with an angular, bony helmet on the head. It sits motionless for hours waiting for large insects, changes colour from brown to yellow, orange and almost black, and is very shy. It needs a tall, humid enclosure, UVB, large live feeder insects and peace.

Family: Corytophanidae Former name: *Chamaeleopsis hernandesii; Corytophanes chamaeleopsis; Corytophanes hernandezii; Corytophanes mexicanus*

KEY FACTS

THE ANIMAL

Adult size	**25-35 cm** total length incl. tail
Lifespan	**5-8 years**
Active	**By day**
Lifestyle	**Arboreal**
Habitat	**Dry forest and rainforest**
Difficulty	**Experienced**

CARE

Min. enclosure	**60 × 45 × 90 cm** L × W × H for 1 adult
Temperature, day	**26-30 °C**
Basking spot	**32-35 °C**
Temperature, night	**21-24 °C**
Humidity	**60-90%**
Water	**Water dish**
UVB	**Essential** Ferguson zone 1
Diet	**Insects and worms/snails**
Kept	**Singly or one male with several females**

BREEDING

Reproduction	**Egg-laying**
Clutch size	**3-11 eggs**
Incubation	**90 days** at 26 °C

PROTECTION AND PAPERWORK

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

About the species

Corytophanes hernandesii is a small to medium-sized lizard, laterally compressed, with long, slender legs, long toes and a very long tail. The head carries a bony helmet (casque), and under the chin sits a serrated throat pouch, which the species extends as a threat. The shape of the helmet distinguishes it from the other species in the genus such as *Corytophanes cristatus*. The base colour is various shades of brown with a pale belly.

The body alone (snout to vent) is up to about 10 cm, and the tail is about two and a half times as long, so the total length is 25-35 cm. The male has a larger helmet than the female, and the sex can be seen from about 5-6 months of age, when the male also has distinct bulges beneath the vent. Females have black stripes on the throat, and gravid females develop a cross-band across the head between the eyes. Both sexes can change colour to yellow, orange, red, greenish white, light blue and black when signalling to others of their kind, for example during courtship.

The species was described in 1831, and the specific name honours the Spanish naturalist Francisco Hernández of the 1500s. The genus's closest relatives are the basilisks (*Basiliscus*) and the genus *Laemanctus*.

C. hernandesii is an animal to watch, not to handle. It is peaceful but sensitive to disturbance. It relies on its camouflage, which resembles dead leaves, and first stays motionless; biting is the last line of defence. The species is rarely kept and rarely bred, but it is not difficult to keep once established.

Distribution and habitat

Corytophanes hernandesii lives in southern and eastern Mexico (including Veracruz, Chiapas, Oaxaca, Puebla, Campeche, Quintana Roo, Yucatán, San Luis Potosí and Querétaro), Belize, Guatemala and Honduras, from sea level up to about 1300 m. The type locality is restricted to Jalapa in Veracruz.

> **Native range:** Mexico, Belize, Guatemala and Honduras.

HABITAT

The species lives in humid and dry, tropical and subtropical forest. It is diurnal and arboreal and sits on trunks and branches in the understorey. The pattern on its back resembles dead leaves, and the animal sits motionless for long periods; it is a pronounced sit-and-wait hunter that waits for large prey, so a single large prey item can last up to a week. The species is itself prey for many predators and relies on its camouflage.

The males are aggressive towards other males. Mating takes place from March to June. The female lays her eggs in the ground.

Care

THE ENCLOSURE

A single adult needs a tall enclosure of at least 60 × 45 × 90 cm (length × width × height). Larger is better, especially wider. A pair or one male with two females can be kept together in an enclosure of at least 90 × 45 × 60 cm, but there may be only one male per enclosure, and taller is better. Height matters because the species sits vertically on trunks and thick branches, and the enclosure must let the animal choose for itself between warmth and shade and between climbing and hiding.

Furnish with several vertical and slanting branches of different thickness, anchored securely, and with dense foliage from sturdy plants such as *Epipremnum*, *Philodendron* or *Calathea*, so the animal can stay hidden. Cork panels on the back wall provide vertical perches. The substrate is a mix of soil, sand, perlite and oak mulch with a thick layer of leaf litter on top, and live soil invertebrates such as springtails, isopods and earthworms keep the substrate free of waste. Even so, remove droppings and urates daily, and replace the whole substrate every 3-4 months. The enclosure must be tight enough to hold humidity but well ventilated. The lid must be secure.

Cover the sides and part of the front with a background or plants, which makes the animal feel safer. A frightened animal may freeze or flee into the glass.

Read more: Humidity, misting and ventilation Read more: Feeder animals: keeping and breeding

TEMPERATURE

The air should be 26-30 °C by day, and the warmest spot, a thick branch under a lamp, should have a surface temperature of 32-35 °C, measured with an infrared thermometer. The coolest part of the enclosure at the bottom is 24-27 °C. At night the temperature should be 21-24 °C and never below 20 °C.

The species is not a pronounced basker, so the basking spot should be small and moderately warm, and all lamps must be shielded so the animal cannot burn itself. Heating from a ceramic heat emitter on a thermostat at one end of the enclosure is suitable and gives warmth without light; a lamp over the basking branch adds to it. Heat mats and coloured bulbs are not suitable. Measure with digital probes at the basking spot and at the cool end. The figures for basking spot and night are borrowed from *Corytophanes cristatus*.

Read more: Heat and temperature

HUMIDITY AND WATER

Humidity should be 60-90 %, lowest in the middle of the day and highest after misting and at night. Mist the enclosure and the plants 1-4 times a day with a pressure sprayer, or use a fogger or rain system on a timer, and measure with a digital hygrometer in the middle of the enclosure. Use several short mistings spread evenly over the day rather than one large one.

The animals drink water droplets from leaves and will rarely drink from a bowl, but a shallow bowl of fresh water is an advantage.

Ventilation must not be sacrificed for humidity. If the air is wet and still, mould grows and the animal develops respiratory problems. Too low humidity causes problems with shedding.

LIGHTING AND UVB

Corytophanes hernandesii is diurnal and needs UVB all day, even though it is a shade species. The UVB lamp should give Ferguson zone 1, i.e. a low UV index on the highest branches and almost none lower in the enclosure. A T5 HO tube or equivalent shade lamp in a reflective fixture is suitable, but the intensity depends on where the animal sits, so follow the manufacturer's instructions and measure if possible. UVB does not pass through glass or plastic, and the tubes are replaced according to the manufacturer's instructions.

The light is on for 13 hours in summer and 11 hours in winter with a gradual transition. Add a broad-spectrum plant light, which also helps the live plants grow. Direct sun in a glass enclosure is dangerous, because the species does not tolerate overheating.

Read more: Lighting and UVB

FEEDING

The species is insectivorous and takes large, slow prey: cockroaches (such as discoids and dubia), silkworms, hornworms, grasshoppers, superworms and earthworms. It prefers large prey, and feeder insects as large as the animal's body (snout to vent) are overpowered without difficulty and can last up to a week. Small feeders are almost completely ignored, even by juveniles. Dust the feeders lightly with calcium at most meals and with a vitamin supplement 1-2 times a week, and gut-load the feeders for 1-2 days before feeding them on.

Juveniles are fed daily and adults every second to third day, with as much as the animal eats in about 5 minutes; the feeding frequency is borrowed from *Corytophanes cristatus*. The animal sits and waits, so the feeders must be live and moving; tweezers or a feeding cage in the upper part of the enclosure help. Gravid females eat almost nothing in the last 2-3 weeks before laying, because the eggs fill the body.

Read more: Calcium, vitamins and supplements

BEHAVIOUR AND HANDLING

The species is shy and peaceful but sensitive to disturbance, and it is better suited to observing than to handling. It often sits completely still for hours and moves slowly. If frightened, it first freezes and then spreads the throat pouch and crest with its mouth open; biting is a last defence. Approach and leave the enclosure calmly, and leave the animal in peace while it is feeding.

Males are aggressive towards each other, so there may be only one male per enclosure. Newly imported and wild-caught animals are often dehydrated and emaciated and carry internal parasites, so quarantine, a reptile vet and patient feeding up with humidity and small, frequent meals are the first priority. Captive-bred animals are far preferable.

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

Breeding

SEXUAL MATURITY AND SEXING

The male has a larger helmet than the female and distinct bulges beneath the vent, and the sex can be seen from about 5-6 months of age. The female has black stripes on the throat, and gravid females develop a cross-band across the head. The age and weight at sexual maturity have not been documented, and the lifespan of 5-8 years is borrowed from *Corytophanes cristatus*. The animals should be fully grown and in good condition before they are put together.

MATING

Mating takes place from March to June and looks aggressive. After several head bobs, colour changes and chasing, the male bites the female's crest and holds on to mate, and this is repeated several times in the following days. The female usually comes away unharmed. One male and up to two females can be kept together in a large enclosure with many hiding places, but watch them and separate them at signs of stress or injury.

EGG-LAYING AND CLUTCHES

The female lays her eggs 10-12 weeks after a successful mating. A clutch contains 3-7 eggs, rarely up to 11. Clutch size depends on the female's size and age. The eggs are relatively large, about 25 mm long, and the largest clutches fill almost the whole body. Provide her with a deep tray or box of moist, loose mix of soil and leaf litter so she can dig and cover the eggs.

INCUBATION

Move the eggs carefully, keeping the same side up, to an incubator with a moist vermiculite substrate. The eggs are very sensitive to the moisture of the substrate; if the water content rises during incubation, the eggs die, so the moisture of the substrate must be constant. At about 26 °C the young hatch after about 90 days, and both sexes emerge at this temperature in a 1:1 ratio. It is likely that the sex depends on temperature, but this has not been established. The figures are based on very few breedings.

Read more: Incubating eggs

REARING THE YOUNG

The young are independent from hatching and can be kept in the same conditions as the adults, in a smaller enclosure with many twigs and plants. Feed them daily with feeders that are large enough, dusted with calcium, and mist daily so they can drink. Keep the young singly or in small groups under supervision, and separate them if fights break out.

Health and common mistakes

The species is sensitive to stress and errors in husbandry:

- Dehydration and emaciation in newly acquired, wild-caught animals.
- Metabolic bone disease from too little UVB, calcium and D3.
- Shedding problems at too low humidity and respiratory infections from poor ventilation.
- Egg-laying difficulties in females that are not given a good laying site.
- Snout injuries from hitting the glass.
- Burns if the animal touches a lamp.
- Parasites, especially in wild-caught animals; new animals are kept in quarantine.

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

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.