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IGUANAS

## Smooth Helmeted Iguana

# *Corytophanes cristatus*

*Corytophanes cristatus* is a long-legged, tree-dwelling lizard from the rainforests of Central and South America, with a tall, helmet-like crest on the back of the head and a serrated crest along the back. It sits motionless for hours, waiting for large insects, shifts between grey, olive-brown and reddish-brown, and is very shy. It needs a tall, humid enclosure, UVB, live food and calm.

Family: Corytophanidae  Former name: *Agama cristata*

KEY FACTS

### THE ANIMAL

| | |
|---|---|
| Adult size | **25-35 cm**<br>total length incl. tail |
| Lifespan | **5-8 years** |
| Active | **By day** |
| Lifestyle | **Arboreal** |
| Habitat | **Rainforest** |
| Difficulty | **Experienced** |

### CARE

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|---|---|
| Min. enclosure | **60 × 45 × 90 cm**<br>L × W × H for 1 adult |
| Temperature, day | **27-30 °C** |
| Basking spot | **32-35 °C** |
| Temperature, night | **21-24 °C** |
| Humidity | **60-80%** |
| Water | **Water dish** |
| UVB | **Essential**<br>Ferguson zone 1 |
| Diet | **Insects and worms/snails** |
| Kept | **Singly** |

### BREEDING

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|---|---|
| Reproduction | **Egg-laying** |
| Clutch size | **4-11 eggs** |
| Incubation | **60-90 days**<br>at 26-28 °C |

### PROTECTION AND PAPERWORK

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

## About the species

*Corytophanes cristatus* is a medium-sized, laterally compressed lizard with long, slender legs, very long toes and a long tail. The head is large with big eyes and is topped by a helmet (casque) that begins as a ridge above each eye and merges into a single tall crest at the nape. The crest continues as a serrated keel down the back. Under the chin sits a serrated throat fan, which the species can spread out as a threat. Both sexes have the helmet, but it is largest in the male.

The body alone (snout to vent) is about 9-12 cm, and the tail is up to twice as long, so the total length is around 25-35 cm. Colour varies widely: the base colour can be pale yellow, rusty orange, olive green, grey, brown or almost black, and the pattern may be absent altogether or consist of a faint leaf pattern or irregular dark crossbands. The species can change colour with light, temperature and mood and is almost invisible against bark and leaves.

The species was described in 1820 by Blasius Merrem as *Agama cristata*, and the type locality was originally given in error as Ceylon. The species name comes from Latin cristatus, crested, and the genus name from Greek korythos, helmet, and phaneros, visible. Its closest relatives are the basilisks (*Basiliscus*) and the genus *Laemanctus*.

*C. cristatus* is an animal to look at, not to handle. It is peaceful but sensitive, sits still for most of the day and defends itself first by freezing, then by spreading its throat fan and crest and opening its mouth, and only as a last resort by biting. The species is not common in the trade, and most animals are wild-caught or recently imported.

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

## Distribution and habitat

*Corytophanes cristatus* ranges from southern Mexico (Veracruz, Tabasco, Chiapas, Campeche and Quintana Roo) through Belize, Guatemala, Honduras, Nicaragua (including the island of Isla Grande del Maíz), Costa Rica and Panama to Chocó in north-western Colombia. It is absent from the state of Yucatán. The type locality is restricted to Orizaba in Veracruz.

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

### HABITAT

The species lives in humid tropical forest, both primary and secondary. It sits on trunks, branches and shrubs in the understorey, often low down, and only occasionally descends to the forest floor to hunt in the leaf litter. It is active by day but does not bask: its body temperature is around 26 °C, close to the temperature in the shade, and the animal therefore does not tolerate being heated in direct sun.

The species is a dedicated ambush predator. It sits motionless and takes large, slow prey such as cicadas, caterpillars, beetle larvae, grasshoppers and spiders, and occasionally earthworms and small lizards. When in danger it freezes, even when the threat is up to 15 m away, and relies on its camouflage. The female digs a shallow nest in the forest soil, lays 4-11 soft-shelled eggs, covers them and stays with the nest. The helmet is thought to help with digging.

## 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. 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, climbing and hiding.

Furnish it with several vertical and sloping branches of different thicknesses, anchored firmly in the floor and walls, and with dense foliage of robust plants such as *Epipremnum* and *Philodendron*, so the animal can stand hidden. The substrate is at least 10 cm of coconut fibre and garden soil with a thick layer of leaf compost and dead leaves on top. Remove droppings and urates daily, and replace the whole substrate every 3-4 months. The enclosure must be tight enough to hold moisture but well ventilated, so the air does not stand still. The lid must be secure.

Cover the sides and part of the front with a background or plants, and the animal feels safer. A frightened animal may freeze or bolt into the glass. Keep only one animal per enclosure; males can become quarrelsome when kept together, and the species does not benefit from company.

### TEMPERATURE

The air should be kept at 27-30 °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 dedicated basker, so the basking spot should be small and only moderately warm, and all lamps must be guarded so the animal cannot burn itself. Use a low-wattage halogen spot or a white heat bulb above the basking branch. If the room is cold at night, a ceramic heat emitter or a radiant heat panel on a thermostat can maintain the minimum temperature without producing light. Heat mats and coloured bulbs are not suitable. Measure with digital probes at the basking spot and at the cool end.

Read more: Heat and temperature

### HUMIDITY AND WATER

Humidity should be 60-70 % by day and rise to 70-80 % at night. Mist the enclosure and the plants 1-2 times a day with a pressure sprayer, or use a fogging or rain system on a timer, and measure with a digital hygrometer in the middle of the enclosure. The animals drink water droplets from the leaves and will seldom drink from a bowl.

A night-time humidifier can keep the humidity up, but use only distilled water in it, and clean it every week. If the air is wet and still, mould grows, so ventilation must not be sacrificed for humidity. Humidity that is too low causes problems with shedding.

Read more: Humidity, misting and ventilation

### LIGHTING AND UVB

*Corytophanes cristatus* is active by day and needs UVB all day, even though it is a shade species. The UVB lamp should provide Ferguson zone 1, i.e. a low UV index on the highest branches and almost none lower down in the enclosure. A T5 HO tube or a similar shade-dweller lamp in a reflective fitting is suitable, but the distance depends on the lamp type, so follow the manufacturer's instructions and measure if you can. UVB does not pass through glass or plastic, and 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 plant light of around 6500 K, 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 discoid and dubia), silkworms, hornworms, grasshoppers, superworms and earthworms. Feeder insects should be about as large as the animal's head. Variety is important, and fatty feeders such as mealworms and waxworms are given only occasionally. In the wild the species occasionally takes small lizards, but this is not necessary in captivity.

Juveniles are fed daily, adults every other day, with as much as the animal eats in about 5 minutes. The animal sits and waits, so the feeder insects must be alive and moving; tweezers or a feeding cage in the upper part of the enclosure help. Lightly dust the feeders with calcium at most meals and with a vitamin supplement 1-2 times a week. Gut-load the feeders for 1-2 days before offering them. Provide fresh water in a shallow bowl, and mist so the animal can drink droplets.

Read more: Feeder animals: keeping and breeding 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 perfectly still for hours and moves slowly. When frightened, it first freezes, then spreads its throat fan and crest with its mouth open; biting is a last defence. Approach and leave the enclosure calmly, and leave the animal in peace during feeding.

Keep only one animal per enclosure. Males can become quarrelsome towards each other. 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 moisture and small, frequent meals are the first priority. Captive-bred animals are far preferable.

Read more: Quarantine and hygiene

## Breeding

### SEXUAL MATURITY AND SEXING

The male has a larger helmet and a more prominent crest than the female, and the sex is only clearly visible in adult animals. Age and weight at sexual maturity are not documented, and neither is lifespan; the 5-8 years in the box are an estimate. The animals should be fully grown and in good condition before being put together.

### MATING

Captive breeding is sparsely documented. The species apparently breeds all year round in the wild, without a marked season. A pair can be put together in a large, densely planted enclosure with many hiding places, so the female can get out of the male's sight, but keep an eye on them and separate them at any sign of stress or biting.

### EGG-LAYING AND CLUTCHES

The female lays 4-11 soft-shelled eggs per clutch in a shallow nest she digs in moist soil or leaf litter. Give her a deep tray or box with a moist, loose mixture of soil, coconut fibre and leaves, so she can dig and cover the eggs. She may dig for several days before laying. If she digs without laying, or appears lethargic and loses her appetite, it may be a sign of egg-laying

problems, and a vet should be contacted.

### INCUBATION

The eggs are moved carefully, with the same side up, to an incubator with moist vermiculite (about 1:1 by weight) and half buried. The eggs have soft shells and must not dry out, but must not stand wet either. At 26-28 °C and about 80 % humidity the eggs hatch after 2-3 months. The figure is based on few breeding records.

Read more: Incubating eggs

### REARING THE YOUNG

The hatchlings are about 8-10 cm long at hatching and independent straight away. House them in a smaller enclosure with the same climate as the adults' and many twigs and plants. Feed them daily with small crickets, fruit flies and small cockroaches, dusted with calcium, and mist daily so they can drink. Keep the hatchlings 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 to mistakes in care:

- Dehydration and emaciation in newly bought, wild-caught animals.
- Metabolic bone disease from too little UVB, calcium and D3.
- Shedding problems from low humidity and respiratory infections from poor ventilation.
- 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 with experience in 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.