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AGAMAS

Chameleon Forest Dragon

Gonocephalus chamaeleontinus

Gonocephalus chamaeleontinus is a slender, green forest agama with a tall crest of pointed spines along the neck and back. It lives in the rainforest of Java and Sumatra, sits vertically on the trunks and reaches 30-40 cm in length. The species needs a tall, well-ventilated glass enclosure, constantly high humidity and water droplets to drink from. Animals in the trade are usually wild-caught, so the species is only for experienced keepers.

Family: Agamidae Former name: *Agama tigrina; Iguana chamaeleontina*

KEY FACTS

THE ANIMAL

Adult size	**30-40 cm** total length incl. tail
Weight	**100-120 g**
Lifespan	**8-15 years**
Active	**By day**
Lifestyle	**Arboreal**
Habitat	**Rainforest**
Difficulty	**Experienced**

CARE

Min. enclosure	**60 × 60 × 120 cm** L × W × H for 1 adult
Temperature, day	**24-27 °C**
Basking spot	**30-35 °C**
Temperature, night	**21-24 °C**
Humidity	**80-95%**
Water	**Water dish**
UVB	**Recommended** Ferguson zone 2
Diet	**Insects and worms/snails**
Kept	**Singly or one male with several females**

BREEDING

Reproduction	**Egg-laying**
Clutch size	**4-13 eggs**
Clutches per year	**1-2**
Incubation	**70-90 days** at 25-26 °C

PROTECTION AND PAPERWORK

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

About the species

Gonocephalus chamaeleontinus is a robust, laterally compressed agama with a long, banded tail and a crest of sharp spines that are longest over the neck. The male has a throat pouch, which can be bluish or brownish, and a more distinct crest than the female. The colour can change from bright green to dark brown within seconds. Green animals have a pattern of white, yellow, turquoise and green scales, with the yellow ones forming round spots. Females are most often brown. The eyes are relatively small with a brown to yellow iris and blue pigment in the corners, and there are no spines directly above the eye.

The body is up to 16 cm from snout to vent, and with the tail the animal reaches about 30-40 cm. Males weigh at most about 120 g, females about 100 g.

The species uses camouflage as its defence. It sits motionless with its head upwards on a vertical trunk and moves round to the back of the trunk if disturbed. Males are very territorial and threaten rivals with an extended throat pouch, an arched back, stretched limbs and wide-open eyes. Fights are rare, because disputes are normally settled by display. The name *chamaeleontinus* refers to the animal's resemblance to chameleons. Lifespan has not been documented; 8-15 years in captivity is borrowed from *Gonocephalus grandis*.

Distribution and habitat

Gonocephalus chamaeleontinus lives on Java, Sumatra and a number of smaller islands around Sumatra, on Natuna Besar in the South China Sea and on the island of Tioman off the east coast of the Malay Peninsula. The type locality is given as "America", but this is an error.

The species can live at altitudes up to about 1,500 m. Its status is not threatened (LC).

> **Native range:** Indonesia and Malaysia.

HABITAT

The species lives in tall, largely undisturbed rainforest and is found in trees and bushes, often close to streams. It is diurnal and arboreal and typically sits clinging to vertical trunks with its head upwards.

In the wild the animal does not drink from standing water, but from droplets on leaves and bark. Its food is snails, worms and insects, which it takes by ambush. During the day it is exposed to a fair amount of sunlight, and it basks on top of branches and foliage.

Care

THE ENCLOSURE

An adult needs a glass enclosure of at least 60 × 60 × 120 cm (length × width × height). The species is arboreal, so height is important, and a tall enclosure also provides a vertical temperature gradient. Glass retains humidity far better than mesh, and metal mesh can rust and catch the claws. Give the enclosure good ventilation all the same, so the air does not become stagnant.

Furnish with plenty of climbing branches, flexible vines and pieces of cork bark, and place some branches under the heat and UVB lamp so the animal can bask. For substrate use a thick layer of moist sphagnum, rinsed thoroughly first because it can contain a lot of salt. A false bottom with drainage makes it easy to keep the enclosure humid without water pooling.

A male can be kept with several females, and a group of up to four animals can live in the same dimensions when there are many branches and perches. Bigger is always better. Never keep two males together, because the subordinate male lives in constant stress and does not thrive. Little is known about the species in captivity, and it is not for beginners.

Read more: Lighting and UVB Read more: Heat and temperature Read more: Humidity, misting and ventilation

TEMPERATURE

By day the temperature should be 24-27 °C. Under a spot there should be a basking spot of 30-35 °C, and the animal must always be able to choose a cooler position higher or lower in the enclosure. At night the temperature should be 21-24 °C; the night temperature has not been documented for the species, but suits the lowland rainforest climate. A heat mat in the base does not help, because the animal sits in the branches and not on the floor.

Measure the temperature at several heights and use a thermostat. The species lives in forest with both sun and shade, so it must be able to withdraw from the heat. An animal sitting with its mouth open and pale in colour is too hot.

HUMIDITY AND WATER

Humidity should be high all year, approx. 80-95 %. The figure is an estimate and corresponds to what applies to *Gonocephalus grandis*. An automatic misting system is the best solution. Without one, mist the enclosure generously three to four times a day with a plant mister.

The animal drinks droplets from leaves, branches and the glass of the enclosure. The droplets must be fairly large before the animal responds to them, and a fogger alone does not provide them. Let water run down the glass or collect on the leaves. If the air is too dry, the animal becomes dehydrated, especially in the first period after purchase.

WATER AND WATER QUALITY

In addition to the droplets, a large water bowl should stand in the enclosure, no deeper than the animal can easily climb out of. Change the water regularly. The animal is unlikely to drink from the bowl, but it helps keep humidity up.

LIGHTING AND UVB

The species needs UVB and a basking spot. Use a high-output UVB tube (T5 HO) so the animal can produce D3 and absorb calcium, which is particularly important for young animals. Ferguson zone 2 is an estimate based on the species living in shaded forest but basking on top of branches and foliage. Mount the tube so the animal can get close to it and also hide in shade. The light is on 12 hours a day. Replace the UVB tube according to the manufacturer's instructions.

Read more: Calcium, vitamins and supplements

FEEDING

The species is an insectivore and in the wild eats snails, worms and insects. In captivity it takes earthworms, waxworms, mealworms and crickets. Adults are fed every other day, and they like large prey: they can eat up to four whole earthworms in a few seconds. Small feeder animals are sometimes ignored altogether. Prey can be offered with tweezers or attached to a piece of cork bark.

Juveniles are fed every day with fruit flies, small crickets and small mealworms and soon switch to larger prey. All feeders are dusted at every meal with a supplement containing calcium and D3, because the species is prone to metabolic bone disease, especially when young.

Read more: Feeder animals: keeping and breeding Read more: Common diseases and signs of illness

BEHAVIOUR AND HANDLING

The animal is shy and prefers to sit completely still. It is suited to being watched rather than handled. Work calmly when you open the enclosure, and keep to what is necessary.

The male is territorial and displays to other males. Keep only one male in the enclosure. Newly purchased animals are usually wild-caught, stressed and infested with parasites, so they need peace and quiet, and a faecal sample should be examined by the vet promptly.

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

Breeding

SEXUAL MATURITY AND SEXING

The male has a taller crest and a distinct throat pouch and is slightly larger than the female. Age at sexual maturity has not been documented. Females should weigh more than 60 g before being put together with a male. They can ovulate earlier, but if they are lighter and become gravid, there is a greater risk of egg-laying difficulties.

MATING

The male displays to the female with an extended throat pouch and bobs up and down, runs to her and bites the crest on her neck. Mating lasts up to 10 minutes, usually less. If the animals are housed separately, the female is put in with the male and not the other way round. The best results are obtained when the male and female live together for a longer period.

EGG-LAYING AND CLUTCHES

After six to eight weeks the female's belly begins to swell, and the eggs can be felt gently through the skin. She digs a nest hole that can be up to 15 cm deep, so the substrate must be loose. The female lays four to 13 oval eggs of about 2-3 cm. Afterwards she pushes soil over them with her snout. The female normally lays eggs once or twice a year.

INCUBATION

The eggs hatch best with artificial incubation in slightly moist vermiculite at 25-26 °C and about 87 % relative humidity. Hatching takes 70-90 days, and most eggs hatch around day 80. An egg that does not hatch by itself can be opened carefully, but young that have to be helped out do less well.

Read more: Incubating eggs

REARING THE YOUNG

The young weigh under 2 g at hatching and must be fed every day. Sort them by size as they grow, so they do not compete for food. Young are at greatest risk of calcium deficiency, so give them UVB and calcium with D3 at every meal. Length at hatching has not been documented.

Health and common mistakes

Animals in the trade are usually wild-caught, so problems are often due to transport, dehydration and parasites. Typical problems are:

- Intestinal parasites in newly purchased animals. Have a faecal sample examined.
- Dehydration, if the animal does not get enough water droplets or the humidity is too low.
- Metabolic bone disease from too little UVB and calcium, especially in juveniles.
- Injuries to the snout if the animal runs into glass or mesh.
- Egg-laying difficulties in females that become gravid when too small.

See a vet with reptile experience if the animal stops eating, has its mouth open or develops sores.

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.