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AGAMAS

Bell's Forest Dragon

Gonocephalus bellii

Gonocephalus bellii is a forest dragon with a heavy nuchal and dorsal crest, living in montane forest on the Thai and Malay peninsulas. It perches vertically on tree trunks, shifts between greyish green and brown, and drinks water droplets from leaves and bark. Little is known about its care, so this guide draws on the closely related *Gonocephalus chamaeleontinus*. The species is for experienced keepers only.

Family: Agamidae Former name: *Lophyrus bellii; Lophyrus bornensis*

KEY FACTS

THE ANIMAL

Adult size	**30-40 cm** total length incl. tail
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	**22-26 °C**
Basking spot	**28-32 °C**
Temperature, night	**18-22 °C**
Humidity	**80-95%**
Water	**Water dish**
UVB	**Recommended** Ferguson zone 2
Diet	**Insects and worms/snails**
Kept	**Singly**

BREEDING

Reproduction	**Egg-laying**
Clutch size	**3-5 eggs**
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 bellii is a laterally compressed agamid with a long tail and a crest of sharp spines along the nape and back. The colour ranges from greyish green to brown with dark brown crossbands. The male has a gular pouch, which can be blue-green to pinkish purple.

The size is not documented for the species. The 30-40 cm in total shown in the specification box is borrowed from the closely related *Gonocephalus chamaeleontinus*, and the lifespan of 8-15 years is borrowed from *Gonocephalus grandis*.

The species name *bellii* honours the British zoologist Thomas Bell. The species was described in 1837 under the name *Lophyrus bellii*. It is closely related to *Gonocephalus bornensis*, and in some of the literature the two are treated as the same species.

Distribution and habitat

Gonocephalus bellii lives in the southern part of the Thai peninsula (between Surat Thani and Nakhon Si Thammarat) and on the Malay Peninsula, including Perak, Pahang and Selangor and the islands of Pangkor and Penang. Records from Borneo in older sources are due to confusion with *Gonocephalus bornensis*.

The species lives in forest, especially at 1,000-1,800 m elevation. It is assessed as Least Concern (LC).

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

HABITAT

Gonocephalus bellii lives in mountain forest. Like other forest dragons, it is diurnal and perches head upwards on vertical trunks and in bushes. At 1,000-1,800 m the climate is cooler than in the lowlands, so the species does not need the heat of lowland rainforest.

The female lays 3-5 eggs per clutch. Almost everything else about the species' way of life in the wild is undocumented. The forest dragons of the genus drink droplets from leaves and bark and eat insects, worms and snails.

Care

THE ENCLOSURE

Little is known about the care of *Gonocephalus bellii*, and the species is rarely kept. The climate in its range is cool and humid because of the elevation. The closely related *Gonocephalus chamaeleontinus* has the same way of life and also lives up to about 1,500 m. Enclosure size, humidity, lighting and food are borrowed from it and from the other species in the genus, and the temperatures are set slightly lower because of the mountain climate.

An adult needs a glass enclosure of at least 60 × 60 × 120 cm (length × width × height). The species is arboreal, so height matters, and a tall enclosure gives a vertical temperature gradient. Glass holds 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. A false bottom with drainage makes it easy to keep the enclosure humid without pooling water. Keep one animal per enclosure. Males of the genus are territorial, and two males must never be kept together.

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

TEMPERATURE

Gonocephalus bellii needs 22-26 °C by day. Provide a localised basking spot under a lamp at 28-32 °C where the animal can bask, and make it possible to choose a cooler spot higher or lower up. At night the temperature should be 18-22 °C. The figures are an estimate: they are slightly below those for *Gonocephalus chamaeleontinus* (24-27 °C by day) because *G. bellii* lives higher up. A heat mat on the floor does not help, because the animal sits in the branches.

Measure the temperature at several heights and use a thermostat. The species comes from shaded forest, so make sure it can retreat from the heat.

HUMIDITY AND WATER

Humidity for *Gonocephalus bellii* should be high all year, about 80-95%. The figure is borrowed from *Gonocephalus chamaeleontinus*. An automatic misting system is the best solution. Without one, mist the enclosure generously three to four times a day with a plant sprayer.

Forest dragons drink droplets from leaves, branches and the glass of the enclosure, and the droplets need to be fairly large before the animal responds. A fogger 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 after purchase.

WATER AND WATER QUALITY

In addition to the droplets, a large water bowl can stand in the enclosure for *Gonocephalus bellii*, shallow enough that the animal can easily climb out again. The animal is unlikely to drink from the bowl, but it helps keep humidity up. Change the water regularly.

LIGHTING AND UVB

Gonocephalus bellii is diurnal and needs UVB light and a basking spot. The UVB tube should be a high-output one, so the animal can synthesise D3 and absorb calcium. Ferguson zone 2 is borrowed from *Gonocephalus chamaeleontinus*. Mount the tube so the animal can get close to it and also retreat into 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

Forest dragons eat insects, worms and snails. The diet for *Gonocephalus bellii* is not documented, so the advice is borrowed from *Gonocephalus chamaeleontinus*: earthworms, waxworms, mealworms and crickets. Adults are fed every other day, and juveniles every day with fruit flies, small crickets and small mealworms. All feeder insects are dusted at every meal with a supplement containing calcium and D3, because forest dragons are 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

Gonocephalus bellii and the other forest dragons are shy and prefer to sit perfectly still. They are animals to watch, not to pick up. Work calmly when you open the enclosure, and stick to what is necessary.

Males of the genus are territorial and display to other males. Animals in the trade are usually wild-caught, stressed and carry 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 more pronounced crest and a larger gular pouch than the female. The age and size at sexual maturity are not documented for *Gonocephalus bellii*. In the related *Gonocephalus chamaeleontinus*, females should weigh more than 60 g before being introduced to a male.

MATING

Mating of *Gonocephalus bellii* in captivity is not documented. In the related *Gonocephalus chamaeleontinus*, the male displays to the female with his gular pouch extended, bobs up and down and grips her nuchal crest in his jaws. Mating lasts ten minutes at most. If the animals are housed separately, the female is placed with the male and not the other way round.

EGG-LAYING AND CLUTCHES

The species lays eggs, and a clutch is 3-5 eggs. How often the female lays, and what the nest looks like, is not documented for the species. In the related *Gonocephalus chamaeleontinus*, the female digs a nest hole that can be up to 15 cm deep, so the substrate should be loose and moist.

INCUBATION

Incubation period and temperature are not documented for *Gonocephalus bellii*. The figures in the box are borrowed from *Gonocephalus chamaeleontinus*, whose eggs hatch after 70-90 days at 25-26 °C in slightly moist vermiculite and about 87% relative humidity. Since *G. bellii* lives in the mountains, a slightly lower temperature may suit it better.

Read more: Incubating eggs

REARING THE YOUNG

Rearing of the young is not documented for *Gonocephalus bellii*. In the related *Gonocephalus chamaeleontinus*, the young are fed every day with fruit flies and small insects and sorted by size so they do not compete for food. Young forest dragons are prone to calcium deficiency, so they need UVB and calcium with D3 at every meal.

Health and common mistakes

Animals in the trade are usually wild-caught, so problems are often caused by transport, dehydration and parasites. Typical problems in forest dragons are:

- Intestinal parasites in newly bought 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.
- Injuries to the snout if the animal runs into glass or mesh.

See a vet with reptile experience if the animal stops eating, keeps 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.