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MONITOR LIZARDS

Bogert's Monitor

Varanus bogerti

Varanus bogerti is a black, arboreal monitor from the islands off the south-eastern tip of New Guinea, and it belongs to the group of tree monitors around *Varanus prasinus*. The species is known only from a handful of museum specimens and is almost unknown in captivity, so its care is based on its closest relatives.

Family: Varanidae Former name: *Varanus prasinus bogerti*

KEY FACTS

THE ANIMAL

Adult size	**82-94 cm** total length incl. tail
Lifespan	**10-15 years**
Active	**By day**
Lifestyle	**Arboreal**
Habitat	**Rainforest and wetland**
Difficulty	**Expert**

CARE

Min. enclosure	**120 × 80 × 180 cm** L × W × H for 1 adult
Temperature, day	**24-34 °C**
Basking spot	**45-50 °C**
Temperature, night	**22-25 °C**
Humidity	**70-95%**
UVB	**Recommended** Ferguson zone 2
Diet	**Insects and vertebrates**
Kept	**Singly or in pairs**

BREEDING

Reproduction	**Egg-laying**
Clutch size	**2-3 eggs**
Incubation	**157-203 days** at 29-30 °C

PROTECTION AND PAPERWORK

CITES	**Appendix II**
EU annex	**Annex B**
IUCN	**Least Concern (LC)**

About the species

Varanus bogerti is a slender, arboreal monitor in the group of tree monitors around *Varanus prasinus*. Adults are uniformly black above, like *Varanus beccarii*, with an ash-grey belly and often a paler, grey head. The species is recognised by rough head scales, knobbly nape scales, a higher number of scales around the body and a nostril set further back on the snout. Subadults may have narrow yellow crossbands of scattered yellow scales on the back, and the young are ash-grey with 15-19 transverse rows of pale spots on the nape and back.

The species was described in 1950 as a subspecies of *V. prasinus* and has been regarded as a separate species since 1991. The scientific name honours Charles Mitchill Bogert, former curator of herpetology at the American Museum of Natural History in New York. Genetic studies place it within *V. prasinus*, so *V. prasinus* is hardly a uniform species, and the relationships have not yet been resolved.

Adults measure 29-32 cm from snout to vent and 82-94 cm in total, and the tail is 1.6-2.1 times as long as the body. A subadult of 41 cm weighs about 44 g. The weight of adults and lifespan are not documented. Adult *V. beccarii* of 74-80 cm weigh about 210 g, and the lifespan of 10-15 years in the box is borrowed from *V. prasinus*.

Keeping the species is a long-term and demanding task: a tall, warm and humid enclosure, often custom-built, live insects every week and experience with tree monitors. The animal is shy, and there is no documented experience of keeping and breeding it, so the answers to many questions are not known.

Distribution and habitat

Varanus bogerti lives on the islands of Milne Bay Province off the south-eastern tip of New Guinea in Papua New Guinea. It is known from Fergusson and Normanby in the D'Entrecasteaux Islands, and the type locality is Fergusson (Moratai). On Normanby it is reported by locals to be common. An older museum specimen comes from Misima in the Louisiade Archipelago, while a young animal from the Trobriand Islands remains to be confirmed. The map therefore shows the D'Entrecasteaux Islands and Misima.

The distribution has been inadequately mapped, and it is uncertain whether all the old museum specimens are correctly localised or belong to the same species. The species is listed on the IUCN Red List as Least Concern (LC), but population sizes are not known.

> **Native range:** Papua New Guinea.

HABITAT

Varanus bogerti lives in forest from sea level up to about 400 m. On Fergusson it occurs in secondary lowland rainforest, and on Normanby in both mangrove forest and lowland rainforest. The species is arboreal and, like its closest relatives, is assumed to stay in the tree canopy and only rarely come down to the ground. Food, daily rhythm and egg-laying are not documented in the wild. The species lays eggs.

The closely related *Varanus prasinus* eats large arboreal arthropods such as grasshoppers, katydids and cockroaches, and the females lay their eggs in termite nests high up in the trees. This has not been seen in *V. bogerti*, but is a reasonable starting point. There are no climate measurements from the species' own habitats; the islands lie in the tropics, and the climate is hot and humid all year.

Care

THE ENCLOSURE

Little is known about the care of *Varanus bogerti*, and the species has hardly been seen in captivity. Care is based on its closest relatives, *Varanus beccarii*, *Varanus kordensis* and *Varanus prasinus*, and the figures in this and the following sections are borrowed from them. Animals that come into the trade as *V. bogerti* should be checked carefully, because they are easily confused with the black *V. beccarii*.

One adult needs a tall enclosure of at least 120 × 80 × 180 cm (length × width × height), and bigger is better. A pair needs at least 160 × 120 × 185 cm, preferably with a sliding partition so that the animals can be separated. Height is more important than floor area. The enclosure is often custom-built from waterproof plywood, or it is an entire room.

Line the back wall and sides with cork panels. Place thick and thin branches at many heights and angles, and let some hang freely, so that the animal has to coordinate its movements. Make several closed hides at the top and boxes with damp leaf litter where the animal can sleep and lay eggs. For the substrate use a 5-15 cm layer of forest soil with dead leaves, and live plants such as monstera and pothos provide cover and retain moisture. A heated water basin helps with humidity. The animal is fast, so make double doors or an airlock, and screen all lamps and heat sources so that the animal cannot burn itself. Ventilation must be good.

Read more: Humidity, misting and ventilation

TEMPERATURE

By day the temperature should be 24-34 °C and at night 22-25 °C. The surface temperature at the basking spots should be 45-50 °C. Measure it with an IR thermometer, not as air temperature, and ensure a large gradient so that the animal can choose between warm and cool zones. All heat sources are controlled by a thermostat. The temperatures are borrowed from *V. beccarii* and are not documented for *V. bogerti*.

Read more: Heat and temperature

HUMIDITY AND WATER

Humidity should be 70-95 %. Mist the enclosure several times a day with fresh water, preferably with an automatic system, and let the substrate dry out a little between mistings. The animals drink water droplets from leaves and branches. A heated water basin of about 15 cm depth helps keep humidity up. Good ventilation prevents stagnant air and mould.

LIGHTING AND UVB

The species is diurnal and needs UVB light. Use a combined heat and UVB lamp over the basking spot, so that the animal can choose between shade and light, and aim for Ferguson zone 2. The zone is not documented for the species and is borrowed from related tree monitors. The light is switched on for 12 hours a day. Replace UVB lamps according to the manufacturer's instructions, even if they still light up. Too little UVB, calcium and vitamin D3 causes metabolic bone disease.

Read more: Lighting and UVB Read more: Calcium, vitamins and supplements Read more: Common diseases and signs of illness

FEEDING

Feeding is borrowed from *V. beccarii* and *V. prasinus*, which mainly eat large arthropods. More than 90 % of the food should be insects such as cockroaches, rose chafer grubs, superworms and grasshoppers, dusted with calcium and a vitamin and mineral supplement with D3. Fish, eggs in the shell and day-old chicks can be included now and then; rodents and other vertebrates may make up only a small part, because the animal otherwise becomes fat. Adults are fed once or twice a week with a total of 10-20 g of food per animal.

Let the insects roam freely in the enclosure, or fill small holes in cork and branches with pieces of food, so that the animal has to hunt and fish the food out. A population of cockroaches and woodlice in leaf litter and rotting wood provides extra small prey. Newly hatched young often refuse to eat for up to two weeks and sometimes longer, so they must be weighed regularly.

BEHAVIOUR AND HANDLING

The species is probably shy and nervous like other tree monitors, and handling stresses the animal. Bites and claws are a real risk: the teeth are sharp, the claws are long, and a frightened animal may also defecate on whoever is holding it. The injuries are far smaller than with large monitors, but wounds can become infected, so they must be cleaned and disinfected.

Keep a calm routine, open the enclosure calmly, and let the animal come to your hand rather than grabbing down over it. Avoid taking hold of the tail. Handle only for short periods; many animals should not be handled. Wash hands thoroughly after touching animals, enclosure and food, because reptiles often carry salmonella. The species is kept singly, and pairs must always be able to get away from each other.

Read more: Quarantine and hygiene

Breeding

SEXUAL MATURITY AND SEXING

Age and size at sexual maturity are not documented for *Varanus bogerti* or its closest relatives. The animals must be fully grown and in good condition before being put together. Sex is most reliably determined by a vet with reptile experience.

MATING

Mating is not documented for the species. In *V. beccarii* the male chases the female violently, and mating lasts about two hours. The female must be able to get out of sight behind screens, and the animals are separated if the chase becomes too violent. Brumation is not documented and should not be attempted.

Read more: Brumation and the seasons

EGG-LAYING AND CLUTCHES

The species lays eggs. Clutch size and number of clutches per year are not documented; 2-3 eggs is borrowed from *V. beccarii* and *V. prasinus*. Give the female at least three boxes with damp leaf litter where she can sleep and lay eggs, and also search the damp substrate, because the eggs may be buried there. The female must be well fed and have plenty of calcium and D3, because poor condition produces weak eggs and dead embryos.

INCUBATION

Incubation time is not documented for the species. In *V. beccarii* and *V. prasinus* the eggs hatch after 157-203 days at 29-30 °C. Place the eggs in damp vermiculite in a box with small air holes, do not turn them, and avoid a substrate that is too wet and sudden changes in moisture, especially in the last third. Dead, fully developed embryos are a known problem in the

group, and excessive moisture late in incubation and deficiencies in the female are the most frequently cited causes.

Read more: Incubating eggs

REARING THE YOUNG

There are no husbandry data for young *V. bogerti*. Young *V. beccarii* are about 18 cm long and weigh 8-10 g at hatching. They are kept singly in a smaller enclosure with cork, thin branches, live plants and a basking spot with UVB, at high humidity and daily misting so that they can drink droplets. Offer small insects and flies daily, dusted with calcium and D3, and weigh the young animal regularly. As it grows, move it to an enclosure of about 80 × 60 × 110 cm.

Health and common mistakes

The species is hardly in the trade, and it is uncertain whether animals sold as *V. bogerti* are correctly identified. Animals from Indonesia and New Guinea are most often wild-caught or farmed and often have intestinal parasites. Have a faecal sample examined by a vet with reptile experience before the animal is placed in its final enclosure, and keep it in quarantine for at least three months. Preferably buy captive-bred animals.

Typical problems:

- Stress and lack of appetite in newly arrived animals. They need peace, many hides and fixed routines.
- Humidity that is too low, causing dehydration and shedding problems.
- Metabolic bone disease from too little UVB, calcium and D3.
- Obesity from too much fatty food.
- Dead, fully developed embryos in the eggs when moisture and temperature are not right.
- Salmonella. Wash your hands, and do not use kitchen utensils for the enclosure.

See a vet if the animal loses weight, refuses food for more than two weeks or has sunken eyes, dry skin or breathing difficulty.

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

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.