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GECKOS

Giant bent-toed gecko

Cyrtodactylus irianjayaensis

A large, robust and nocturnal ground gecko from the rainforest of western New Guinea, with sharply marked bands and long, sharp claws. The species is rare in captivity, needs high humidity and cool warmth, and suits a keeper who has kept geckos before.

Family: Gekkonidae Published 16 November 2026

KEY FACTS

THE ANIMAL

Adult size	**30-35 cm** total length incl. tail
Lifespan	**10-15 years**
Active	**At night**
Lifestyle	**Terrestrial**
Habitat	**Rainforest**
Difficulty	**Intermediate**

CARE

Min. enclosure	**90 × 45 × 60 cm** L × W × H for 1 adult
Temperature, day	**22-26 °C**
Temperature, night	**21-23 °C**
Humidity	**70-100%**
Water	**Water dish**
UVB	**Optional**
Diet	**Insects and vertebrates**
Kept	**Singly or in pairs**

BREEDING

Reproduction	**Egg-laying**
Clutch size	**1-2 eggs**
Incubation	**100-130 days** at 24-27 °C

PROTECTION AND PAPERWORK

CITES	**Not listed**
EU annex	**Not listed**
IUCN	**Data Deficient (DD)**

About the species

Cyrtodactylus irianjayaensis is a large and heavily built gecko in the genus *Cyrtodactylus*. Adults grow to more than 30 cm including the tail, and the 30-35 cm in the fact box is an estimate. The body is covered in small tubercles, and the pattern consists of dark crossbands on a paler ground. The edges of the bands are serrated, and this is the most widely used feature for distinguishing the species from *C. louisiadensis*, with which it was long confused. The toes are long and bend slightly at the joint, and all the feet have large, sharp claws.

The species was described in 2001 by Herbert Rösler from animals from the western part of New Guinea. The scientific species name refers to the type locality, the former Indonesian province of Irian Jaya. Before that, the animals were sold as a New Guinean form of *C. louisiadensis*. A later review of the genus's species in New Guinea has separated the two.

The gecko is a predator that eats large prey, and it has a reputation for being delicate. That is not the case if the requirements for humidity and temperature are met. It is not an animal for handling. It stresses easily and can deliver a solid bite with claws and jaws. On the other hand, it is fascinating to watch in the evening, when it comes out and hunts. Lifespan is not documented, and the 10-15 years in the fact box is an estimate based on other large geckos.

Read more: Humidity, misting and ventilation

Distribution and habitat

Cyrtodactylus irianjayaensis is found in the western part of New Guinea in Indonesia, in the area around the Bird's Head (Doberai Peninsula) with the island of Salawati and the Sorong region. Records have also been made further south, at Kaimana and Fakfak, but they are not confirmed in the scientific literature.

Reports that the species also occurs in Papua New Guinea are unclear. The genus's species in New Guinea have been split up, and earlier records probably cover several species. The species is known with certainty only from the type locality, but it is probably far less well surveyed than that suggests.

> **Native range:** Indonesia.

HABITAT

The species lives in humid tropical forest, where it stays on the ground and on the lowest branches, trunks and rock pieces. It is partly ground-dwelling and climbs only low. By day it hides in hollows, under bark and under fallen trunks, and at night it goes hunting.

It comes from a cool tropical environment where it is never dry. The air is saturated with moisture, and the animals may lie soaking in water at intervals. There are only a few measurements from the habitat. The temperatures recommended in the enclosure are therefore based on experience from captivity and not on measurements in the wild.

Care

THE ENCLOSURE

An adult needs an enclosure of at least 90 × 45 × 60 cm (length × width × height). The species is large and robust, and it uses both the floor and low branches, so floor area matters more than height. A pair needs more space. There are no fixed dimensions for the species, but the general requirements for nocturnal, ground-dwelling geckos from the humid tropics are at least 4 × 3 × 2 times the body length (snout-vent) for a pair, and the dimensions here lie well above that. Alternatively, a large plastic box of about 100 litres with ventilation holes can work.

Furnish it with thick branches, cork bark and cork tubes at different heights. There must always be at least one snug hide, because the animal feels safe only when it can crawl in. Plants, leaf litter and areas of live sphagnum hold humidity and provide cover. As substrate, use a thick, damp mixture of coconut fibre and peat, ideally with a layer of sphagnum on top. Wild-caught animals may carry parasites, so keep new animals separate and have them checked.

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

TEMPERATURE

Cyrtodactylus irianjayaensis comes from cool tropical areas and is not an animal that sits in the heat. By day 22-26 °C is suitable, and at night the temperature may fall to 21-23 °C. Animals that have been kept at room temperature, not exceeding 27 °C and not falling below 21 °C, have done well for several years and have even bred.

There should be no hot spot as for desert species. Do not use a basking spot or heat lamp. Keep the whole enclosure below 27 °C, and place it somewhere cool without direct sun. If the temperature rises to around 30 °C, the air dries out and the animal becomes stressed. A digital thermometer at the bottom and one higher up shows whether the temperature holds.

Read more: Heat and temperature

HUMIDITY AND WATER

The species requires high humidity, up to 100 % in the most humid periods. Mist the enclosure thoroughly at least twice a day, so that the substrate and the leaves are wet, and keep the substrate constantly damp without standing in water. The humidity should be 70-100 %. Good ventilation openings are necessary, so that the air does not become stagnant and musty.

The gecko regularly uses water to lie in. Provide a dish of fresh water large enough for the whole animal to sit in, and change the water often.

LIGHTING AND UVB

The species is nocturnal and does not require strong light. Ordinary, weak lighting for 12 hours a day is plenty, and a weak moonlight can be used to follow the animal at night. UVB is not documented as necessary for the species. A weak UVB light for shade-dwelling species can be an extra safeguard if there is shade and cover throughout the enclosure.

Do not use strong spotlights. They heat and dry out the enclosure, and the species avoids strong light.

Read more: Lighting and UVB

FEEDING

C. irianjayaensis is a greedy hunter and eats large prey. The staple diet is insects such as roaches, large crickets and grasshoppers. Occasionally a newborn mouse can be given for variety. The insects must not be larger than the width of the animal's head.

Dust the insects with calcium at every second feeding and at every feeding when the female is laying eggs. In addition, give a vitamin supplement with D3 now and then. Feed adults 2-3 times a week in the evening, and choose smaller prey for juveniles, which are fed more often.

Read more: Feeder animals: keeping and breeding Read more: Calcium, vitamins and supplements

BEHAVIOUR AND HANDLING

The species is calm but stresses easily and should not be handled. It has long, sharp claws and can bite very hard. Work slowly in the enclosure, and keep your distance from the animal's hide so it is not frightened. The animals are active at night and hide by day.

Most are kept singly or as pairs. Whether several females can be kept together is not documented, and two males should not be kept together. As with other species of the genus, it is wise to have a spare enclosure for separating the animals if unrest arises.

Breeding

SEXUAL MATURITY AND SEXING

The sex can be determined by the male's hemipenal bulges at the base of the tail and by the preanal pores in front of the vent. Age or weight at sexual maturity is not documented for the species. As a rule of thumb for large geckos, both males and females should be fully grown before they are put together. Females bred too early lose calcium and can suffer lasting damage.

MATING

There is only little information about mating. The species has been bred in captivity at room temperature all year round. A special winter rest is not documented. Put the male in with the female in her enclosure, and keep watch on the mating. Separate the animals if the female is chased or bitten.

EGG-LAYING AND CLUTCHES

The gecko lays eggs. Number and interval are not documented for the species, but as in most species of the genus, the female probably lays one or two eggs at a time and only a couple of times a year. The eggs are probably buried in the substrate, for example at the foot of a plant, so give the female a deep, damp egg-laying site. Some of the eggs may be infertile.

INCUBATION

The eggs are moved to a box with damp vermiculite, where the mixture is damp but not wet, and they should not be turned. Incubation temperature and duration are not documented for the species. The 24-27 °C and 100-130 days in the fact box are estimates, and hatching may take longer. Keep the temperature even, and avoid temperatures above 28 °C.

Read more: Incubating eggs

REARING THE YOUNG

There is only little experience with rearing the hatchlings. Use a small box with damp substrate, hides and shallow water, and keep the temperature at about 22-24 °C. Give small insects such as springtails and small crickets with calcium as soon as the hatchlings have begun to eat. Separate the hatchlings early if biting occurs or any fall behind.

Health and common mistakes

Cyrtodactylus irianjayaensis is not documented for specific diseases. The most likely problems are due to the wrong environment and are known from related geckos:

- Heat above 27 °C or air that is too dry, which causes stress and poor appetite.
- Mould and skin problems in a substrate that is constantly wet and poorly ventilated.
- Parasites in wild-caught animals. Have a faecal sample examined by a vet experienced with reptiles.
- Calcium deficiency if the food is not supplemented with calcium, especially in females that lay eggs.
- Bites and stress if the animal is handled or has too few hides.

See a vet if the gecko loses weight, does not eat for several weeks or seems limp.

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.