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GECKOS

Bavay's gecko

Eurydactylodes vieillardi

Eurydactylodes vieillardi is a small, calm, nocturnal gecko from the forests of the main island of New Caledonia, with large, irregular scales that look like drops of oil on water, and a prehensile tail. It can squirt a foul-smelling fluid from its tail when frightened.

Family: Diplodactylidae Former name: *Platydactylus vieillardi; Eurydactylus vieillardi* Published 16 November 2026

KEY FACTS

THE ANIMAL

Adult size	**10-13 cm** total length incl. tail
Weight	**4-12 g**
Lifespan	**10-15 years**
Active	**At night**
Lifestyle	**Arboreal**
Habitat	**Rainforest**
Difficulty	**Intermediate**

CARE

Min. enclosure	**45 × 45 × 60 cm** L × W × H for 1 adult
Temperature, day	**22-26 °C**
Basking spot	**27-29 °C**
Temperature, night	**20-23 °C**
Humidity	**60-80%**
UVB	**Recommended** Ferguson zone 1
Diet	**Insects, fruit and complete diet**
Kept	**Singly, in pairs or one male with several females**

BREEDING

Reproduction	**Egg-laying**
Clutch size	**1-2 eggs**
Incubation	**50-90 days** at 22-26 °C

PROTECTION AND PAPERWORK

CITES	**Not listed**
EU annex	**Not listed**
IUCN	**Near Threatened (NT)**

About the species

Eurydactylodes vieillardi is a small, slender gecko with a triangular head, a rounded snout, large eyes without eyelids and vertical pupils. The body is flattened from the sides, and the large, smooth, irregularly placed scales give the animal a distinctive look reminiscent of drops of oil in water. The colour is most often a shade of olive or green, with grey, green, yellow or rust-coloured skin between the scales. Like many other geckos, it can change between a light, bright tone and a dark, almost black dress. Males are smaller and often more strongly coloured than females, especially in the breeding season.

The body alone (snout to vent) reaches at most about 6 cm. The tail is prehensile and in its original form is 100-115 % of the body length, so the total length is around 10-13 cm. Figures of up to 18 cm for the genus do occur, but they do not fit the body measurements. The weight is not documented for *E. vieillardi*; in the closely related *E. agricolae*, females weigh 10-12 g and males 4-7 g. There are adhesive lamellae under the tail tip. The tongue and the inside of the mouth are yellow to orange. In males there is a row of pores in front of the vent, and they are used to tell the sexes apart.

The species was described by Bavay in 1869 as *Platydactylus vieillardi* and is the type species of the genus *Eurydactylodes*. The species name honours Eugène Vieillard, a doctor in the French navy, who collected the type specimen. The genus has four species, and the two most often seen in vivaria are *E. vieillardi* and *E. agricolae*. They can be told apart by the yellow groove

running from the mouth towards the ear: when it reaches all the way to the ear, it is *E. agricolae*, and when it does not, it is *E. vieillardi*.

In both species there are glands in the tail, and the animal can squirt a sticky, foul-smelling fluid when it feels threatened. This has only been described in *Eurydactylodes* and the genus *Strophurus*, and has evolved twice independently among geckos. The fluid is hardly harmful to the skin, but can cause painful eye irritation.

With good care the animal can live at least 10 years and probably longer.

Distribution and habitat

The species is endemic to New Caledonia in the south-west Pacific and is known from the main island, Grande Terre. The type locality is Houagape, and the range is given as the central and eastern part of the main island. The genus as a whole is also found on the Belep Islands and Île Yandé, but there are no documented records of *E. vieillardi* there.

The exact limits of the range are unclear, so the map shows an estimated area in the central and eastern part of the island. Any records outside New Caledonia on the map probably come from captive animals or misidentifications.

> **Native range:** New Caledonia.

HABITAT

The habitat is forest and scrub up to about 950 metres above sea level. The animals live in shrubs and foliage and move mostly along branches in the shaded understorey of humid forest, only rarely up in the tree canopy. They are nocturnal and hide in the foliage by day, but they also venture out onto the branches and bask during the daytime.

The climate of New Caledonia is subtropical, with a humid season and a cooler, drier part of the year. There are no measurements of temperature and humidity at the very places where *E. vieillardi* lives, so the figures for the enclosure are based on the care of the genus as a whole.

Read more: Humidity, misting and ventilation

Care

THE ENCLOSURE

For one adult the enclosure should be at least 45 × 45 × 60 cm (length × width × height). Bigger is always better, and height matters more than floor area, because the species climbs. A pair or a small group of one male and two females can be kept in the same enclosure. Without breeding there is no reason to keep more than one animal. Up to three animals can have room in 45 × 45 × 60 cm, but more space is clearly preferable. A glass enclosure with a mesh or partly mesh lid suits well, because the species needs high humidity, but also fresh air.

Furnish it with many small branches of different thicknesses, lianas, cork and leaves, so the animal can climb, hide and sleep in the foliage. There must be hiding places at all heights and not only on the ground. Live or artificial plants provide cover, and live plants also help to hold humidity.

A moisture-retaining mixture works as substrate, for example 60 % organic potting soil and 40 % coconut fibre, ideally with a thick layer of leaves on top. The substrate cushions a possible fall and helps keep the humidity up. Remove droppings daily, and replace soiled substrate as you go. The whole substrate is changed every three to four months. No separate setup has been documented for *E. vieillardi* specifically, so the recommendations apply to the genus as a whole.

TEMPERATURE

Eurydactylodes vieillardi is nocturnal and does best at moderate temperatures. Provide a warm spot under a lamp at 27-29 °C and a cool zone at 21-24 °C. By day the temperature in most of the enclosure is 22-26 °C, and at night it should fall to 20-23 °C.

The simplest heating is a white heat bulb of about 40 W, mounted over a branch at the top of the enclosure. If the spot is too hot, switch to a weaker bulb; if it is too cold, to a stronger one. The heat is highest at the top and lowest at the bottom, and there must be branches and foliage at all heights, so the animal can choose for itself. Measure with a digital thermometer, and fix the probe to the branch under the lamp. If the temperature rises above 30 °C, it must be brought down at once.

HUMIDITY AND WATER

The species does best in high humidity, and an average of 60-80 % is the goal, measured in the middle of the enclosure. It is natural for the humidity to be lower at the warm end and higher at the cool end. It should rise at night and fall during the day, but never drop below 50 %. Persistently too high or too low humidity causes health problems.

Mist the enclosure thoroughly with a pressure sprayer every evening and in the morning as needed. This raises the humidity and gives the animal drinking water in the form of droplets on the leaves. Also put in a bowl of fresh water, for example on the feeding ledge, and scrub it with a disinfectant for animals once a week. Ventilation must be good enough for the substrate and branches to dry out between mistings.

Read more: Quarantine and hygiene

LIGHTING AND UVB

The species is nocturnal, but ventures out onto branches and basks during the daytime. It can manage without UVB when it receives vitamin D3 through its food, but does better with weak UVB light, which also brings out the colours. Use a UVB tube for shade-dwelling species (Ferguson zone 1), for example a 7 % T5 tube, at a height of 20-30 cm above mesh or 25-40 cm below mesh. A smaller 2.4 % tube must sit closer, about 10 cm above the mesh. The aim is a UV index of 1-2 on the uppermost branch, and this is best checked with a UV meter. There must always be shade in the rest of the enclosure.

Keep the light on for 10-12 hours in winter and slightly longer in summer, ideally controlled by a timer. At night it should be dark.

Read more: Lighting and UVB Read more: Calcium, vitamins and supplements

FEEDING

The species eats both insects and fruit. The diet can be made up of about half a ready-mixed powdered diet for fruit-eating geckos, which is mixed with water into a thick paste, and half live insects. Give the paste in a small dish on a wall-mounted feeding ledge and not on the ground. Use several different flavours and switch between them, so the diet is varied.

Juveniles up to one year of age get insects every other day and paste two to three times a week. Adults get insects two to three times a week and paste two to three times a week. Suitable insects are crickets, dubia roaches, other roaches, grasshoppers, silkworms and waxworms. The insects should be small, 6-13 mm for a small animal, and must not be longer than the distance between the animal's eyes.

Dust the insects lightly with calcium to correct the calcium-to-phosphorus ratio, and let them eat a good feed for two to three days before feeding. The prepared diet is already enriched with vitamins and minerals. Fresh fruit is not necessary once the prepared diet is in place.

Read more: Feeder animals: keeping and breeding

BEHAVIOUR AND HANDLING

Eurydactylodes vieillardi is a small, robust and relatively slow gecko that can become quite tame. Let a new animal settle in peace for two weeks before handling begins, and only if it has eaten. Start with short visits where the hand is simply held still in the enclosure, so the animal gets used to it, and let it come to you of its own accord. After that, handling can begin, at under five minutes at a time. Support the feet, body and tail, and let the animal walk from hand to hand instead of holding on to it. Stay close to the floor or a soft surface in case the animal jumps. Never grab the tail. Preferably handle it in the evening, so you do not disturb the animal's rest.

If the animal is frightened, it may squirt a sticky, stinking fluid from its tail. It is hardly a danger to the skin, but causes pain in the eyes if it hits them. Wait a moment before putting the animal back, so it does not learn that squirting brings it home, and then wash your hands thoroughly with soap.

In the genus, animals have been kept successfully together in pairs or small groups of one male and two females. Males should not be kept together, and no reliable group arrangement has been documented for this species specifically.

Breeding

SEXUAL MATURITY AND SEXING

Males are smaller than females and have a row of pores in front of the vent. No reliable age or weight at which the animals are ready for breeding has been documented for *Eurydactylodes vieillardi*. As a rule of thumb, the animal should be fully grown before it is put to breeding, and a female must have good calcium reserves and be in good condition.

MATING

The male is more colourful than the female in the breeding season. In the related *E. agricolae*, a cool period is described as a help in getting the animals to breed: the daytime temperature is lowered to 20-22 °C for two to three months and then raised again to 22-26 °C. This is not documented for *E. vieillardi*, but is probably a good idea as well, because the care of the two species is almost the same. Put the male in with the female or a small group and keep an eye on the animals.

EGG-LAYING AND CLUTCHES

Eurydactylodes vieillardi is egg-laying. In the related *E. agricolae*, the female buries the eggs and takes on a dark, cross-banded pattern while she lays. She can lay several clutches a year at intervals of three to four weeks, and a single female has laid 14 eggs in her first year. The clutch size is not documented for *E. vieillardi*, but as in most geckos it is probably one or two eggs at a time. Give the female a lay box with damp coconut fibre or soil, so she can dig. Give her plenty of calcium and insects throughout the season.

INCUBATION

Carefully move the eggs, without turning them, to a separate small box with damp vermiculite or another damp substrate and a humidity of 70-80 %, and open the lid every fourth to seventh day so that the air is changed. The box is kept at 22-26 °C. At that temperature the eggs hatch after 50-90 days; the figures vary from about 50 days in the close relative *E. agricolae* to 70-90 days at 23-24 °C for *Eurydactylodes vieillardi* and *E. agricolae*.

REARING THE YOUNG

Rearing of young has not been described for *Eurydactylodes vieillardi*. The young are small and probably get the same care as the adults, but in a smaller faunarium with kitchen roll or moss, branches and leaves, daily misting and a dish of prepared diet. They get small insects dusted with calcium every other day. Give each juvenile plenty of space, and keep an eye on its growth and weight.

Health and common mistakes

There are no health data for *Eurydactylodes vieillardi* specifically. Typical problems in geckos of the genus are caused by husbandry:

- Persistently too high or too low humidity, which causes skin and respiratory problems. Keep the humidity at 60-80 % and let the enclosure dry out during the day.
- Too much heat. Keep the temperature below 30 °C.
- Lack of calcium and vitamin D3, especially in breeding females. Dust the insects with calcium and provide weak UVB light.
- Loss of the tail after handling. Never grab the tail.
- Eye irritation in yourself after contact with the secretion from the tail.

See a vet experienced with reptiles if the animal loses weight, does not eat for several weeks or looks limp. New animals that do not eat after two weeks should not be handled, but checked by a vet.

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.