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GECKOS

Bauer's chameleon gecko

Eurydactylodes agricolae

Eurydactylodes agricolae is a small, slender climber from the forests of north-western New Caledonia with olive to moss-green, granular skin and yellow markings around the mouth and on the limbs. It tolerates heat poorly, but is not difficult to keep in a cool, humid and densely planted enclosure.

Family: Diplodactylidae

KEY FACTS

THE ANIMAL

Adult size	**5-6 cm** snout-vent length
Lifespan	**10-15 years**
Active	**By day and at dusk**
Lifestyle	**Arboreal**
Habitat	**Rainforest**
Difficulty	**Intermediate**

CARE

Min. enclosure	**30 × 30 × 45 cm** L × W × H for 1 adult
Temperature, day	**18-24 °C**
Temperature, night	**16-20 °C**
Humidity	**60-90%**
UVB	**Optional** Ferguson zone 1
Diet	**Insects and complete diet**
Kept	**Singly, in pairs or one male with several females**

BREEDING

Reproduction	**Egg-laying**
Sexually mature	**18-36 months**
Clutch size	**1-2 eggs**
Clutches per year	**5-7**
Incubation	**60-120 days** at 22-25 °C

PROTECTION AND PAPERWORK

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

About the species

Eurydactylodes agricolae is one of four species in the genus *Eurydactylodes*, which occurs only in New Caledonia. It is small and slender, and adults reach up to 6 cm from snout to vent. With the tail it reaches about 10 cm. The scales give the skin a rough, granular appearance. The colour is olive to moss green with conspicuous yellow markings around the mouth and on the fore and hind limbs, and there may be dark green bands across the back and tail.

The species was described in 2001 by Friedrich Wilhelm Henkel and Wolfgang Böhme from animals from a site about 20 km north of Koumac. The species name *agricolae* honours the American herpetologist Aaron M. Bauer: Bauer means farmer in German, and in Latin this becomes *agricola*. The species has previously been confused with *Eurydactylodes vieillardi*. Today it is listed as Near Threatened (NT) on the IUCN Red List.

In enclosures the species is far less common than *Correlophus ciliatus* and *Rhacodactylus auriculatus*. It is fast and fragile, and although it can get used to calm handling, it is first and foremost an animal to look at. The species probably lives 10-15 years. The tail does not grow back if lost, so never grab it.

Distribution and habitat

Eurydactylodes agricolae occurs only on the main island of Grande Terre in New Caledonia in the south-western Pacific. The species is known from the north-western part of the island, and the type locality lies about 20 km north of Koumac. The registered records lie in the same area, between about 19.7 and 20.8 degrees south.

The distribution is thus small. Precise limits and the size of the population are not known. The IUCN assesses the species as Near Threatened.

> **Native range:** New Caledonia.

HABITAT

Eurydactylodes agricolae lives in trees and shrubs in forest and scrub up to about 1,000 metres' altitude. The genus lives in humid rainforest from lowland to mid-elevation and in dense maquis, the dense shrub thicket that is widespread in New Caledonia. Here the animals sit on thin branches, climbers and broad leaves, typically a couple of metres above the ground.

The forests are humid with dense foliage, which the gecko uses as cover, and its colours make it hard to spot among bark, lichen and leaves. Temperature and humidity at the habitat have not been measured.

Read more: Humidity, misting and ventilation

Care

THE ENCLOSURE

An adult *Eurydactylodes agricolae* or a pair can be kept in an enclosure of at least 30 × 30 × 45 cm (length × width × height), and taller is always better. Height is more important than floor area, because the species lives in the trees and climbs a great deal. A trio benefits from a little more space. Young animals do best in small, simple plastic boxes, where you can easily keep an eye on food, droppings and shedding.

Furnish it with many thin branches and climbers at different heights, flat pieces of cork bark and small cork tubes that the gecko can hide behind. Dense planting is important, either with live plants such as pothos, bromeliads and small figs or with artificial ones. Cork bark also helps at shedding. A substrate of soil, coconut fibre and fine orchid bark with a layer of leaves on top works well and can be made bioactive, while kitchen roll is easy to keep clean for young animals and in quarantine.

The enclosure should have good ventilation with fine mesh, because the animals are very small and can escape through gaps you can barely see. Check the lid, joints and ventilation panels thoroughly, and preferably choose a lid with a lock.

Read more: Terrarium construction and bioactive substrate Read more: Quarantine and hygiene

TEMPERATURE

Eurydactylodes agricolae comes from forests with moderate temperatures and tolerates heat poorly. Keep 18-24 °C by day, and the animals do well at ordinary room temperature. At night the temperature may well fall to 16-20 °C. There is no need for a basking spot, and the enclosure may have roughly the same temperature throughout.

Avoid longer periods above 25-26 °C. More than 26 °C causes stress, and temperatures around 28 °C or above can be fatal. Place the enclosure far from windows and heat sources, and keep an eye on the temperature in warm periods, if necessary with a fan in the room.

If the room temperature in winter falls below 16 °C at night, a weak heat mat on the side, controlled by a thermostat, can help. Never use heat bulbs or spotlights. Measure with a digital thermometer, preferably at several places in the enclosure.

Read more: Heat and temperature

HUMIDITY AND WATER

The humidity for *Eurydactylodes agricolae* should be moderate to high and fluctuate over the day. Aim for 60-70 % in the daytime and 80-90 % after misting in the evening. Mist the walls and plants with a fine fog, so that the gecko can drink the droplets, and let the enclosure partly dry out between each misting. Constantly wet conditions cause respiratory infections, mould and bacteria.

The gecko drinks mostly droplets from leaves and walls, but a very shallow bowl of fresh water, changed daily, is a good extra safeguard. The bowl must be so shallow that a small gecko cannot drown in it. It does not replace misting, however, and the young must be able to drink every time you mist.

If you cannot keep the humidity up, you can cover part of the mesh lid, use more live plants or mist more often in winter, when central heating dries the air. A hygrometer shows whether the rhythm is holding.

LIGHTING AND UVB

Eurydactylodes agricolae is active by day and at dusk and likes to bask under the UVB light. Provide a fixed daily rhythm with 10-14 hours of light.

UVB is not strictly necessary. Animals without UVB are just as healthy and breed just as well, but a weak UVB light in Ferguson zone 1 (UV index 0.0-0.7), for example a 2% tube, can also be recommended. If you choose UVB, use a weak tube over one side of the enclosure, and provide plenty of shade and dense foliage. If you do not provide UVB, dust the insects with calcium with vitamin D3.

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

FEEDING

The staple food for *Eurydactylodes agricolae* is a ready-mixed powder diet for fruit-eating New Caledonian geckos, mixed into a smooth paste. Serve it in a small dish or a bottle cap, because the animals are so small, preferably mounted high up. Avoid diets with a lot of fat and calcium, because the genus is probably sensitive to them. Give fresh paste every second or third day, and remove leftovers after a day.

Live insects are not strictly necessary, but the breeding animals do better and lay more eggs when they get insects once or twice a week: fruit flies and tiny crickets for young, small crickets, dubia nymphs or small soldier fly larvae for adults. The insects must not be wider than the distance between the animal's eyes, because if they are too large the animals ignore them. Dust them with calcium with vitamin D3, and give a multivitamin once a month.

Read more: Feeder animals: keeping and breeding

BEHAVIOUR AND HANDLING

Eurydactylodes agricolae is small, quick and fragile and first and foremost an animal to watch. With patience it can get used to brief, calm handling. Give a new animal 3-4 weeks' peace to settle in, and wait to handle it until it eats calmly. Stay low over a bed or sofa, and let the animal walk freely from hand to hand rather than holding on.

Never grab the tail. The tail does not grow back.

Young animals are best kept alone, because they can fight. Adults can be kept singly, as pairs or as one male with one or two females if the enclosure is large enough and has many hides. Never keep two males together. Females usually get on fine together, but may nip at each other's tails, so watch for bites, dropped tails and animals that do not get enough food. More than two females to one male gives fewer eggs.

Breeding

SEXUAL MATURITY AND SEXING

In *Eurydactylodes agricolae* the sex is only clearly visible once the animals are adult. Males have a distinct hemipenal bulge at the base of the tail and prominent, often yellow and waxy pores on the thighs. Females lack both. In juveniles it is harder. Males can get pores as early as 2-3 months, and they can then be seen with a magnifying glass, but females can have false pores that look similar. The females' pores, however, lack the yellow, waxy plug and sit gathered in a small diamond pattern instead of all the way across the thighs.

Wait with breeding until the animals are at least a year and a half old and until the female has reached a suitable weight or has laid infertile eggs. Sexual maturity occurs after 1.5-3 years. Breeding too early can cause hemipenal prolapse in the male and laying problems in the female. It is safest to wait longer.

MATING

Pairs or trios of *Eurydactylodes agricolae* can stay together all year, and with good care and food they breed readily. Breeding follows the season: laying begins in spring (February-April), declines from October to December and pauses during the cool winter months.

A rest period of two to three months with shorter days (under 12 hours of light) and slightly lower temperature, for example 20-22 °C, puts breeding on pause. After that you return to normal days and temperatures to get the animals going again. At mating the male bites the female on the neck, and both may make sounds. The male may also vibrate his body, head or tail. This is normal. If you put a new male with a female, watch that she is not treated too roughly.

EGG-LAYING AND CLUTCHES

The female of *Eurydactylodes agricolae* lays two eggs at a time and a new clutch every three to four weeks during the season, in all about 5-7 clutches a year. The female buries the eggs, often quite deep, and you can often see where she has dug.

Place a lay box at least 10 cm deep in the enclosure, and fill it with a mixture of half peat moss and half vermiculite, which is always damp but not soaking wet. Females often lay eggs outside the box, but these are usually bad eggs. Give the female calcium and insects throughout the season, and watch that she does not lose weight. Laying problems, where an egg gets stuck, can affect females with low calcium or fat reserves and require a vet experienced with reptiles.

INCUBATION

Take the eggs of *Eurydactylodes agricolae* out and place them in a small container with damp, but not wet, vermiculite or a similar substrate. Open the lid every four to seven days to check the eggs and change the air. Do not let the medium dry out, and avoid standing water.

At 22-25 °C the eggs hatch after 60-120 days, most often after 70-90 days. It is not documented whether the sex depends on temperature.

REARING THE YOUNG

Young of *Eurydactylodes agricolae* are cared for like the adults, but with a little more attention. They must be misted regularly, so that they can drink the droplets, because small animals quickly dry out. On the other hand, conditions that are too wet and poor ventilation are just as dangerous, because they cause respiratory infections. Therefore ensure good air circulation, so that the enclosure can dry out between mistings.

Keep the young in small, simple boxes with kitchen roll, thin branches, artificial plants and a piece of cork bark to help at shedding. Give them fresh powdered diet every other day in small portions and now and then fruit flies or tiny crickets. Keep the young singly, and weigh them regularly. If a youngster does not gain weight, a vet with reptile experience should see it quickly.

Health and common mistakes

Most problems in *Eurydactylodes agricolae* are caused by wrong conditions. The typical faults are:

- Too much heat. The species is very sensitive to heat, and around 28 °C or more can be fatal. Keep the enclosure cool and away from windows and heat sources.
- Too little humidity and too little water, especially in young. It causes dehydration, remnants of skin that stick and animals that do not thrive.
- Too damp and poor ventilation. Constantly wet conditions and stagnant air cause respiratory infections, mould and bacteria. Let the enclosure dry out between mistings.
- Lack of calcium and vitamin D3. It causes metabolic bone disease (MBD). Dust the insects with calcium, and use D3 or weak UVB if the animal gets no other D3.
- Laying problems in females with poor calcium or fat reserves. Contact a vet quickly if a female is clearly ill and does not lay her eggs.
- Dropped tails after handling or fighting. They do not grow back.

A healthy animal is alert, has clear eyes and a plump body with no visible ribs and hip bones. See a vet experienced with reptiles if the gecko loses weight, will not eat for a longer period, is limp or has unexplained spots or discolouration. Small geckos become ill faster than large ones. Always wash your hands before and after touching the animal or enclosure, because reptiles can carry salmonella.

Read more: Common diseases and signs of illness

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.