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GECKOS

McIlwraith Leaf-tailed Gecko

Orraya occultus

Orraya occultus is a nocturnal leaf-tailed gecko known only from a small area in the McIlwraith Range on the Cape York Peninsula in north-eastern Australia. It has an unusually long, thin neck and a spiny tail and is the only species in its genus. The species is hardly kept in enclosures, and little is known about its husbandry.

Family: Carphodactylidae English name: McIlwraith leaf-tailed gecko Former name: *Saltuarius occultus*

KEY FACTS

THE ANIMAL

Adult size	**10-11 cm** snout-vent length
Lifespan	**10-15 years**
Active	**At night**
Lifestyle	**Rock-dwelling**
Habitat	**Rainforest and rocky terrain**
Difficulty	**Expert**

CARE

Min. enclosure	**60 × 40 × 80 cm** L × W × H for 2 adults
Temperature, day	**22-26 °C**
Temperature, night	**17-21 °C**
Humidity	**60-100%**
UVB	**Not required**
Diet	**Insects**
Kept	**Singly or in pairs**

BREEDING

Reproduction	**Egg-laying**
Clutch size	**2 eggs**
Incubation	**90-110 days** at 21-26 °C

PROTECTION AND PAPERWORK

CITES	**Appendix III**
EU annex	**Annex C**
IUCN	**Vulnerable (VU)**

About the species

Orraya occultus is a medium-sized, flattened gecko with an unusually long, thin neck caused by elongated neck vertebrae. This is the most distinctive feature and separates the species from all close relatives. The body is moderately covered with pointed tubercles, and the regenerated tail is edged with large, spiny scales. The males have a distinct, raised field of preanal pores, which the females lack.

The body reaches 11 cm from snout to vent. The species was described in 1993 as *Saltuarius occultus* and moved in 2000 to its own genus, *Orraya*, in which it is the only species. The genus is an old, separate branch alongside the other Australian leaf-tailed geckos. The species name is Latin for "hidden" and refers to its being hard to find. The genus name comes from Morrobalama, the language of the Indigenous people of the area, and means "older brother".

Weight and lifespan are not documented; close relatives live 10-15 years.

Distribution and habitat

Orraya occultus is endemic to the McIlwraith Range on the Cape York Peninsula in north-eastern Queensland. The type locality lies at Peach Creek about 19 km east-north-east of Mount Croll. The species has been recorded only in a very small area in the higher parts of the range and is among Australia's most threatened reptiles.

A single record near Sydney, as the map shows, is hardly correct.

> **Native range:** Australia.

HABITAT

Orraya occultus lives in forest at 500-825 m altitude. The range is predominantly covered with rainforest, and the climate is tropical with a distinct rainy season and dry season; the altitude makes the air cooler than in the lowlands. The species is nocturnal and lives on rocks and stones, where the skin works as camouflage.

The exact temperature and humidity rhythm at the habitat is not documented. The female lays two eggs; nest site and egg-laying time are not described.

Read more: Humidity, misting and ventilation

Care

THE ENCLOSURE

Little is known about the husbandry of *Orraya occultus*, and the species is hardly kept. Husbandry is based on the climate of the habitat and on the close relatives *Saltuarius cornutus* and *Saltuarius salebrosus*, which are better known in enclosures. The figures are borrowed from them.

A pair needs at least 60 × 40 × 80 cm (length × width × height). Preferably choose larger, because the animal is large and climbs. Furnish with vertical surfaces of cork, stiff bark or artificial rock walls, preferably with crevices, so that the animal can get around the whole enclosure and sit hidden by day. A thin layer of damp coconut fibre or leaves suits as substrate. The enclosure must have good ventilation so that the air does not become stagnant.

TEMPERATURE

The habitat lies at 500-825 metres altitude in a tropical climate, so the air is mild and does not vary much. By day the temperature should be 22-26 °C and at night 17-21 °C.

Heat is the greatest danger for leaf-tailed geckos. Keep the enclosure out of direct sun, and avoid temperatures above 28 °C. A heat source is only necessary if the room is cold. Measure the temperature at both the top and the bottom with a digital thermometer.

HUMIDITY AND WATER

Humidity should fluctuate. Mist the enclosure thoroughly in the evening so that humidity rises towards 100 %, and let it fall to about 60 % between mistings, so that bark and substrate can dry out. The animal drinks water droplets from surfaces and furnishings.

The substrate must not be constantly wet, because this causes mould and skin problems. Air that is too dry causes problems with shedding, to which all leaf-tailed geckos are prone.

LIGHTING AND UVB

Orraya occultus is nocturnal and lives hidden by day. UVB is not documented as necessary, and the relatives are kept without. Use a weak light with a fixed daily rhythm of 12 hours, no strong spotlights and no coloured night light. The night must be dark, and the enclosure must have shaded areas.

Read more: Lighting and UVB

FEEDING

Orraya occultus eats arthropods. Crickets, cockroaches and other feeder insects suit when they are no longer than the distance between the animal's eyes. Adults are given two to three insects at each feeding, two to three times a week, and young animals are fed more often.

Dust the food regularly with calcium and a multivitamin preparation. The tail stores fat and shows the animal's feeding condition. Remove leftovers the next morning.

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

BEHAVIOUR AND HANDLING

Orraya occultus is nocturnal and sits still on rocks and stones by day. It is shy and not suited to handling. Like other leaf-tailed geckos, it can lose its tail, which grows back in a shorter and different form. Never grab the tail.

Keep a single animal or a pair that are used to each other. Behaviour towards conspecifics is not documented, so separate the animals if one of them is being pressured or they injure each other.

Breeding

SEXUAL MATURITY AND SEXING

The males have a distinct hemipenal bulge at the base of the tail and a raised field of preanal pores, which the females lack. Age and size at sexual maturity are not documented; expect 3-4 years as in the close relatives.

MATING

Mating and breeding are not described for *Orraya occultus*. In the relatives, a cool rest period sets breeding in motion, but such a period is not documented for a tropical species from Cape York. A slight cooling and less misting in the dry season is a cautious starting point. Take the animals out of the period if they lose weight.

EGG-LAYING AND CLUTCHES

The female lays two eggs at a time. The number of clutches per year is not documented. Give the female a laying substrate of moist peat or coconut fibre, 8-10 cm deep, that clumps but is not wet.

INCUBATION

At 21-26 °C the eggs hatch after 90-110 days. High temperature is harmful to the eggs, so stay at the low end. The influence of temperature on sex is unknown.

REARING THE YOUNG

Rearing of *Orraya occultus* is not described. In the relatives the young are kept in a small enclosure furnished like the adults', with kitchen paper as substrate and cork bark as hides. Mist every other day, and offer the smallest feeder insects, dusted with calcium. Keep each young one separately.

Health and common mistakes

There are no disease overviews for *Orraya occultus*, so the list is based on related leaf-tailed geckos:

- Overheating. Prolonged heat above 28 °C can be fatal. Keep the enclosure cool and in shade.
- Air that is too dry, which causes problems with shedding, where remnants of skin stick to the toes and tail tip.
- A constantly wet substrate and stagnant air, which cause mould and skin problems.
- Calcium deficiency if the food is not dusted with calcium and vitamins.
- Weight loss. The tail stores fat and is a good sign of the animal's condition.

Contact a vet experienced with reptiles if the animal loses weight, does not eat for several weeks or seems lethargic.

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.