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GECKOS

Raukawa gecko

Woodworthia maculata

A small, nocturnal, stone-coloured gecko from New Zealand that lives on rocks, beaches and in scrub and can live beyond 30 years. It gives birth to live young and is very rare in enclosures outside its country of origin, so little is known about its care.

Family: Diplodactylidae Former name: *Hoplodactylus maculatus; Naultinus maculatus*

KEY FACTS

THE ANIMAL

Adult size	**12-18 cm** total length incl. tail
Lifespan	**30-40 years**
Active	**At night**
Lifestyle	**Rock-dwelling and terrestrial**
Habitat	**Rocky terrain and temperate woodland and meadow**
Difficulty	**Intermediate**

CARE

Min. enclosure	**50 × 50 × 100 cm** L × W × H for 2 adults
Temperature, day	**18-24 °C**
Temperature, night	**10-16 °C**
Humidity	**50-70%**
UVB	**Optional** Ferguson zone 1
Diet	**Insects, fruit, nectar and complete diet**
Kept	**In pairs, one male with several females or in groups**

BREEDING

Reproduction	**Live-bearing**
Sexually mature	**18-24 months**
Litter size	**1-2 young**
Clutches per year	**1**
Gestation	**90-150 days**

PROTECTION AND PAPERWORK

CITES	**Appendix III**
EU annex	**Annex C**
IUCN	**Least Concern (LC)**

About the species

Woodworthia maculata is a compact, ground-oriented gecko with grey to brown, stone-like colours. The back is often broken by black spots and lichen-like markings in white, yellow, orange and olive green, either as crossbands or as longitudinal stripes. The underside is usually uniform and pale. The mouth and tongue are pink, and the toes are short and broad, in contrast to the slender toes of the tree-dwelling New Zealand geckos.

The body length (snout to vent) is up to 89 mm, and the tail is as long as the body or longer. In total the animal is therefore about 12-18 cm, and the weight is up to 14 g. The tail can be shed if the animal is grabbed or frightened.

The species was described in 1845 and has been listed as *Hoplodactylus maculatus*. The genus *Woodworthia* contains several closely related forms that look alike but differ genetically and in range, e.g. *Woodworthia chrysosiretica* with two light stripes from the snout to the tail tip. The species is sociable and often lives in large groups where there are good hides, but the males may defend territories in the mating season. The animals are shy and quickly disappear into a hide when anyone approaches.

Distribution and habitat

The species is found only in New Zealand: over large parts of the North Island and in the north-western part of the South Island (Marlborough, Nelson/Tasman and the West Coast) as well as on a number of offshore islands. In the north-eastern North Island it lives almost only along the coast from the Bay of Islands to the Bay of Plenty. Further south the range extends inland along the central fault zone of the North Island and out to Whanganui. It is absent from the west coast of the North Island north of the Whanganui River.

Live animals are not exported from New Zealand for trade, so animals outside the country are very rare.

> **Native range:** New Zealand.

HABITAT

Woodworthia maculata is tied to rocky terrain and is found on stony and sandy beaches, in rock crevices, scree, scrub, coastal forest and inland forest with beech and broad-leaved trees. By day it hides under stones, bark and wood or in holes in rocks and trunks, often several animals together. At night it hunts on the ground, on rocks and in bushes and trees, and it likes to bask in the shelter of the entrance to its hide, often only half out.

The climate is temperate and oceanic: mild summers, cooler winters and even rainfall. Coastal habitats have small fluctuations, while inland populations experience cooler winters. The species is not threatened.

Care

THE ENCLOSURE

Little is known about the care of *Woodworthia maculata*, because the species is hardly kept outside New Zealand. The care is based on experience with the genus *Woodworthia* in New Zealand, on the habitat and on the climate of the range. *Dactylocnemis pacificus* and *Mokopirirakau granulatus* live in the same regions and have the same climate.

An enclosure for two animals should be at least 50 × 50 × 100 cm (length × width × height). A group of 3-6 animals, at most two males and three or four females, needs more floor area, e.g. 80 × 50 × 100 cm. The enclosure should have many hides at several heights: stacks of thin pieces of board or flat stones with narrow gaps, cork tubes and hollow bamboo tubes with one end closed. Add branches and dense plants, because many populations also climb in bushes and trees.

A mix of soil without fertiliser and coir works as substrate, with areas of stone and dead leaves on top. The enclosure must have good ventilation. Do not keep different species of *Woodworthia* together, because they hybridise.

TEMPERATURE

There are no documented temperatures for animals in captivity. The recommendation is based on the climate of the range: 18-24 °C by day and 10-16 °C at night, with a drop across the night and cooler conditions in winter. The species needs no basking spot, but a corner a couple of degrees warmer than the rest gives the animals a choice. The temperature must not exceed 28 °C for long, because the animals come from a cool, oceanic climate.

Keep the enclosure in a cool spot, away from south-facing windows and heat sources. Measure the temperature both at the top and at the bottom with a digital thermometer.

Read more: Heat and temperature

HUMIDITY AND WATER

Humidity should be 50-70 %, and the enclosure should be able to dry out partly during the day. Mist part of the enclosure lightly in the evening, so there is dew on leaves and stones. Keep one side dry and another slightly moist, so the animals can choose for themselves. Always provide a shallow dish of fresh water, changed regularly.

Read more: Humidity, misting and ventilation

LIGHTING AND UVB

The species is nocturnal, but it often sits at the entrance of its hide and takes a little light and warmth. UVB is not documented as necessary, but a weak UVB light on one side (Ferguson zone 1) is a safe solution when there is plenty of cover and shade. Day length follows the season: about 14 hours in summer and 10 hours in winter. The night must be dark. Use a faint red light when you want to watch the animals in the evening.

Read more: Lighting and UVB

FEEDING

Woodworthia maculata eats mainly nocturnal insects and other arthropods: crickets, moths, small cockroaches, spiders, beetles and flies. For juveniles use fruit flies, small moths, small flies and small crickets. The insects must be smaller than the distance between the animal's eyes. Feed adults twice a week and juveniles every other day, and dust the food lightly with calcium with vitamin D3.

The species also drinks nectar and honeydew from scale insects and takes small fruits. Therefore offer a little ready-made food for fruit-eating geckos once a week, stirred to a thick porridge, in a shallow dish. Remove leftovers after a day.

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

BEHAVIOUR AND HANDLING

Woodworthia maculata is shy and quickly retreats into hiding. It is not an animal for handling, and animals that are grabbed can lose the tail. In the evening some animals may chirp and squeak for a long time from the entrance of the hide.

It can be kept in small colonies of 3-6 animals with plenty of space and many hides. Check them regularly for bite marks on the tail, lost tails and missing toes, which are signs of unrest. Remove the animal that is being chased. The males may be territorial in the mating season, so a group should have at most two males.

Breeding

SEXUAL MATURITY AND SEXING

The animals become sexually mature after 1.5-2 years. The males have a distinct bulge behind the vent at the base of the tail. Females should be fully grown before they are bred.

MATING

Mating takes place in April-May, which is autumn in New Zealand. The male bites the female repeatedly on the neck and head, and it looks violent. Watch the animals, so the female is not injured, and give her the chance to withdraw. In winter the animals are kept cooler and with shorter days, as in the wild.

EGG-LAYING AND CLUTCHES

The species gives birth to live young. The female has 1-2 young a year, most often twins, in February-May the year after mating, that is, late summer and autumn in New Zealand. Gestation is counted from ovulation in spring and lasts 3-5 months in warm populations of the genus; in cool mountain populations the female can carry the young through the winter. The figure is borrowed from closely related populations of *Woodworthia*. The female needs plenty of food, calcium and peace, and there must be many hides where she can give birth.

INCUBATION

The species does not lay eggs, so there is no incubation. Temperature determines how long gestation lasts: the cooler, the longer. Keep the female at the usual 18-24 °C by day; which temperatures give the best result in captivity is not documented.

Read more: Incubating eggs

REARING THE YOUNG

The young must be removed from the adults, so they do not compete for food. Keep them in a small faunarium with kitchen roll or moist moss, flat hides and a shallow water dish. Give them fruit flies, small moths, small flies and small crickets, dusted with calcium with vitamin D3, every other day. Mist lightly every day and keep them at 18-24 °C. The growth rate is not documented.

Health and common mistakes

Little documented knowledge exists about diseases in the species in captivity. The typical risks are:

- Heat above 28 °C, which stresses animals from a cool climate.
- A constantly damp substrate and poor ventilation, which cause fungus and skin problems.
- Lack of calcium and vitamin D3, especially in juveniles and pregnant females.
- Biting and stress in groups with too little space or too few hides.
- Parasites: the species hosts nematodes (*Skrjabinodon*), mites and bacteria such as *Salmonella*, so wash your hands after

contact with animals and the enclosure.

See a reptile-experienced vet if the animal loses weight, does not eat for several weeks or seems lethargic.

Read more: Quarantine and hygiene

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.