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GECKOS

Beaded gecko

Lucasium damaeum

Lucasium damaeum is a small, fast ground gecko from the dry interior of Australia, reddish-brown on the back with chains of pale beads along a cream-coloured dorsal stripe. It is nocturnal, lives on the ground and manages with simple furnishings, but it is rare in enclosures outside Australia.

Family: Diplodactylidae Former name: *Diplodactylus damaeus; Ceramodactylus damaeus*

KEY FACTS

THE ANIMAL

Adult size	**6-8 cm** total length incl. tail
Lifespan	**5-8 years**
Active	**At night**
Lifestyle	**Terrestrial**
Habitat	**Semi-desert and savanna**
Difficulty	**Beginner**

CARE

Min. enclosure	**40 × 30 × 25 cm** L × W × H for 1 adult
Temperature, day	**22-26 °C**
Basking spot	**28-30 °C**
Temperature, night	**16-20 °C**
Humidity	**30-50%**
UVB	**Optional**
Diet	**Insects**
Kept	**Singly, in pairs or one male with several females**

BREEDING

Reproduction	**Egg-laying**
Sexually mature	**12-18 months**
Clutch size	**1-2 eggs**
Incubation	**40-75 days** at 27-30 °C

PROTECTION AND PAPERWORK

CITES	**Not listed**
EU annex	**Not listed**
IUCN	**Least Concern (LC)**

About the species

Lucasium damaeum is easy to recognise by the pattern on its back. The ground colour is reddish brown, and down the middle runs a pale, cream-coloured dorsal stripe framed by pale spots that look like pearls on a string. Down the flanks run a few rows of pale spots, and the dark brown limbs are speckled with small dots. The upper eyelid is white or cream. The body is slender, the snout rounded, and the tail is a straight continuation of the body. If the animal loses its tail, a new one grows back, but it is a uniform brown or more darkly spotted than the original.

The gecko has large eyes without movable lids. They are covered by a transparent scale, and the animal keeps them clean by licking them with its long, flat tongue. In daylight the pupil is a narrow vertical slit, and in the dark it is round and wide open. The toes are flat and lack the adhesive pads that many other geckos have, so it is a ground-dweller and not a climber.

The species was described in 1896 by Lucas and Frost from animals from Charlotte Waters in the Northern Territory and is the type species of the genus *Lucasium*. The genus is named after the physician and herpetologist Arthur Henry Shakespeare Lucas. For long periods the species stood in the genus *Diplodactylus*, and it still appears under that name in many older books and care guides. The genus *Lucasium* was reinstated in 2007 after a DNA study of the relationships.

Adults grow 6-8 cm long, so it is a small gecko. The weight is not documented; closely related ground-dwelling *Diplodactylus* species with a body of 5 cm weigh 3-5 g. The gecko is fast and shy and more an animal to watch than to hold in the hand.

Distribution and habitat

Lucasium damaeum is distributed in the dry and semi-arid interior of Australia, from south-eastern Western Australia across South Australia to southern Queensland, western New South Wales and Victoria. The type locality, Charlotte Waters, lies in the southern Northern Territory, and the species occurs in all the mainland states and the Northern Territory. By far most recorded finds come from South Australia, New South Wales and Victoria, while there are relatively few from Western Australia, the Northern Territory and Queensland.

The distribution is large, and the species is not considered threatened. In the wild it occurs only in Australia.

> **Native range:** Australia.

HABITAT

Lucasium damaeum lives in many kinds of dry terrain: spinifex-covered sand dunes, dry shrubland and savanna woodland. What they have in common is loose, well-drained soil and plenty of places to hide. By day it stays hidden in holes made by insects and spiders, in soil cracks, under stones and under fallen branches.

When it gets dark, it comes out onto open ground to hunt. It is fast and covers long distances in search of food. The climate is hot in summer and cool, at times cold, in winter, and the difference between day and night is large.

The threats are loss of habitat and feral predators such as cats, foxes and dogs.

Care

THE ENCLOSURE

Care of *Lucasium damaeum* is hardly described, so the advice here is based on the ground-dwelling Australian *Diplodactylus* species the species was formerly counted among. A single gecko needs an enclosure of at least 40 × 30 × 25 cm (length × width × height), and a pair or a male with up to three females needs more floor area. Floor area matters more than height, because the animal stays on the ground. Very large enclosures are unnecessary, because the animals use only a small part of the floor, but a tight-fitting lid is important, since the gecko can climb smooth surfaces.

Use a substrate of sandy loam in a layer of 1-5 cm, so the animal can dig a little. Provide two to three hides: upturned clay saucers, pieces of bark, a small stack of flat stones, or half plastic tubes pressed into the sand as artificial spider burrows. One of the hides should be moist. Plants are unnecessary, and plastic boxes or small glass terrariums with lids work fine.

TEMPERATURE

The enclosure should have a warm and a cool side. Use a heat mat or heat tape under one end, so that part of the floor reaches 28-30 °C in summer. The rest of the enclosure is kept at 22-26 °C during the day. At night the heat can be switched off, so the temperature falls to 16-20 °C.

Always control the heat source with a thermostat, and measure with a thermometer at both ends. In winter the temperature may stay lower for a period, down to 15-20 °C. This matches the natural annual cycle and helps get the animals breeding.

Read more: Heat and temperature

HUMIDITY AND WATER

Lucasium damaeum comes from dry regions and should not have high humidity. Ordinary room air with 30-50 % humidity is plenty. Do not mist the enclosure, because the thin film of water after misting can spread bacteria and parasites. Use a humid hide instead.

Fill one of the hides with slightly damp sphagnum or damp sand, and check it every week, so that it neither dries out nor goes mouldy. Here the gecko can shed without problems. Put a shallow bowl of fresh water at the cool end, and change the water regularly. The rest of the substrate should be dry.

Read more: Humidity, misting and ventilation

LIGHTING AND UVB

Lucasium damaeum is nocturnal and has no need for special lighting. UVB is optional, and there is no documented Ferguson zone for the species.

If you want to give UVB anyway, choose a very weak tube, and make sure the gecko can always retreat into a dark hide. Let the daylight in the room set the daily rhythm, or use a timer set to 10-12 hours in summer and shorter days in winter. The night must be dark.

Read more: Lighting and UVB

FEEDING

Lucasium damaeum feeds on small insects and spiders and is easy to feed. In captivity it takes crickets, cockroaches, termites, flies, maggots, moths and waxworms. Use small crickets, dubia nymphs and perhaps a few waxworms for variety. The prey should be about 60 % as large as the animal's head.

Adults are fed every 4-7 days in summer and every 7-10 days in winter, when short periods without appetite are normal. Juveniles are fed every 2-4 days all year. Dust the insects lightly with calcium and vitamins at every second or third feeding, and give them greens for a day or two before they go into the enclosure. Remove insects that are not eaten, so they do not disturb the gecko during the day.

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

BEHAVIOUR AND HANDLING

Lucasium damaeum is fast and shy and stays hidden by day. It is a species to watch, not to handle. If you have to pick it up, do so briefly and low over the floor, because it darts away quickly. Never grab it by the tail.

The gecko can be kept singly, in pairs or as a male with up to three females. Start carefully with several animals, choose animals of the same size, and separate them if an animal is chased, loses its tail or loses weight. Two males must not be kept together. The animals are most active at night and can be hard to see, so sit quietly by the enclosure after dark.

Breeding

SEXUAL MATURITY AND SEXING

The male of *Lucasium damaeum* is recognised by a clear bulge at the base of the tail, where the two hemipenis pouches lie, and, as in the related species, by a small group of enlarged scales, cloacal spurs, at the top of the bulge. Females can have a slight, smooth bulge, but without a depression in the middle. The young can be sexed when they have reached 60-70 % of adult body length, which with good feeding happens after 6-12 months. Adult size is reached after 12-18 months, and breeding can begin when the animals are about 70-80 % grown.

MATING

In the wild *Lucasium damaeum* breeds from the end of September to December, and the related ground geckos breed from September to February. The natural winter cooling is enough to start breeding, the pair can stay together all year, and most animals breed at the same time every year.

Mating has not been described for the species; in related species the male may bite the female on the neck just before mating. The first eggs can come four to eight weeks after the temperature rises above 25 °C in spring. Separate the animals if the female seems stressed.

EGG-LAYING AND CLUTCHES

The female of *Lucasium damaeum* lays 2 eggs per clutch, and in the related ground geckos it is occasionally only 1. How many clutches are laid per season is not documented for the species. Other species in the group lay up to five clutches in a season at intervals of 2.5-6 weeks.

The eggs have a soft, leathery shell. The female likes to bury them in moist sand or lay them under a hide, but in captivity she often lays them on open ground, where they quickly dry out. Put a closed laying box with moist sphagnum or sand in the enclosure, and check regularly for eggs. Give the female extra calcium and insects during the season, and let her rest if she loses weight.

INCUBATION

Place the eggs of *Lucasium damaeum* in a small box with perlite or vermiculite mixed with water in a ratio of 1:1 by weight. The box should have a couple of small air holes, and the eggs must not be turned. Incubate at 27-30 °C. The eggs grow visibly during incubation, the shell becomes almost transparent just before hatching, and they hatch after about 40-75 days. The figures are borrowed from related species.

Incubation at room temperature works, but takes much longer, and the eggs are more exposed to mould.

Read more: Incubating eggs

REARING THE YOUNG

The young probably have the same pattern as the adults, only slightly clearer, and their body is 25-30 % as long as the adults'. Take them out of the incubation box after a day, and move them to a small box with the same kind of substrate as the adults. The young settle better on sand than on kitchen roll.

Feed them every 2-4 days with small insects, for example newly hatched crickets, small cockroaches or termites, which are easy to catch, and remember calcium and vitamins. Keep them singly or in small groups of the same size, and make sure each young one has a moist hide. With good feeding they become adult after one to one and a half years.

Health and common mistakes

There are almost no published health data for *Lucasium damaeum*, but the ground-dwelling Australian geckos are regarded as hardy. The typical faults are:

- Too little moisture in the hide, so that shedding goes badly and remnants stick to toes and tail.
- Too little calcium and vitamin D3, especially in young animals and egg-laying females. It causes soft bones and tremors.
- A constantly damp or dirty enclosure and misting of the whole enclosure, which can cause bacteria and parasites.
- Sand that is swallowed together with the prey. Feed from a shallow bowl or a flat stone.
- Eggs that dry out on open ground. Give the female a damp place to lay them.
- Too high a temperature or an enclosure without hides, which stresses the animal.

A healthy animal has clear eyes and a plump body and tail. See a vet experienced with reptiles if the gecko loses weight, does not eat for several weeks, seems limp or has visible eggs in the body without being able to lay them.

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.