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GECKOS

Mourning gecko

Lepidodactylus lugubris

A small, social climber from the islands of the Pacific, where the population consists almost entirely of females that lay eggs without mating. It lives in groups, eats prepared gecko diet and fruit flies and thrives at room temperature, so it is an obvious choice for a tall, planted terrarium full of life.

Family: Gekkonidae Former name: *Platydactylus lugubris; Hemidactylus meijeri; Gehyra neglecta*

KEY FACTS

THE ANIMAL

Adult size	**8-10 cm** total length incl. tail
Lifespan	**8-15 years**
Active	**At dusk and at night**
Lifestyle	**Arboreal**
Habitat	**Rainforest**
Difficulty	**Beginner**

CARE

Min. enclosure	**30 × 30 × 45 cm** L × W × H for 3 adults
Temperature, day	**21-27 °C**
Temperature, night	**18-24 °C**
Humidity	**60-80%**
UVB	**Optional**
Diet	**Insects, fruit and complete diet**
Kept	**In groups**

BREEDING

Reproduction	**Egg-laying**
Sexually mature	**8-10 months**
Clutch size	**1-2 eggs**
Incubation	**50-70 days** at 21-27 °C

PROTECTION AND PAPERWORK

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

About the species

Lepidodactylus lugubris is a small, modest gecko of 8-10 cm including the tail. About half of the length is the tail, which also serves as a fat store. The ground colour is light brown with darker spots or chevrons on the back and a dark stripe from the snout through the eye. The animal can shift between a light and a dark shade over the course of the day.

The most remarkable thing about the species is that it consists almost entirely of females. The females' eggs develop without fertilisation, a form of reproduction called parthenogenesis, and the young are genetic copies of the mother. A few males exist, but they are rare and usually sterile. The species arose from a cross between two bisexual species. The maternal species is *Lepidodactylus moestus*, and the paternal species is now thought to be the widespread species provisionally called *Lepidodactylus pantai*. There are several clonal lineages, some with a double and some with a triple set of chromosomes. The species itself was described as *Platydactylus lugubris* in 1836.

This makes the species easy to keep, because there is no need to find a male or a pair, and the animals on sale are captive-bred. On the other hand, a single female that escapes can in principle found a whole population, so the enclosure must be completely escape-proof.

Unlike most geckos, it is social and does best in a small group. The animals stay hidden by day in foliage and crevices and come out at dusk. They are fast and jumpy and are better suited to being watched than handled. In captivity the species can live 8-15 years.

Read more: Buying animals: captive-bred, wild-caught and transport

Distribution and habitat

The species is today one of the most widespread geckos in the world, but the original range is difficult to pinpoint. It comes from the Pacific, and genetic studies point to Micronesia, with the Marshall Islands as the most likely origin. As early as prehistoric times it travelled with people and boats to islands and coasts throughout the Pacific and the Indian Ocean.

Today it is found on countless islands in the Pacific, along the coasts of South-East Asia and East Africa and as an introduced species in Central and South America, Florida, Hawaii and many other places. The map therefore shows only the Marshall Islands as the native range, while the registered records spread far beyond it, and most of them are introduced populations. The spread has happened especially with ships: the hard-shelled eggs tolerate drying out and cling to cargo, building materials and plants.

> **Native range:** Marshall Islands.

HABITAT

In the wild the gecko lives in warm coastal regions: in coconut palms, shrubs and trees along the coast, but also on fences, walls and houses. It is a pronounced follower of human settlement and is often more numerous in built-up areas than in undisturbed forest. By day it hides behind bark, in leaf axils and behind trim, and in the evening it forages on trunks and walls, preferably near lights that attract insects.

The climate is tropical and humid with even temperatures all year round. The animals get water from dew and rain. The eggs can hatch at surprisingly low temperatures, and that has probably helped the species settle in so many new places.

Care

THE ENCLOSURE

An enclosure of at least 30 × 30 × 45 cm (length × width × height) is enough for two or three adults. A group of five or six animals needs a larger enclosure with plenty of hides and plants. Height matters more than floor area, because the gecko is a climber.

Furnish with many branches, cork bark, bamboo tubes and plants with large leaves, for example pothos and bromeliads. The plants are not just decoration: they provide cover, hold the humidity and are used for egg-laying. A layer of 5-8 cm of coconut fibre, fertiliser-free soil and a little sphagnum suits as substrate, preferably as a bioactive substrate with springtails and woodlice.

The gecko is a master escape artist. It can squeeze through very small gaps, so all vents, cable holes and joints must be closed with fine mesh or silicone. Check especially the gaps around the doors. Juveniles are best kept in small boxes until they are about two months old and eating well.

Read more: Humidity, misting and ventilation Read more: Terrarium construction and bioactive substrate Read more: Feeder animals: keeping and breeding

TEMPERATURE

The species thrives at ordinary room temperature: 21-27 °C by day and 18-24 °C at night. In most homes that is enough, and extra heat is only necessary if the room often falls below 18 °C. Then a weak heat mat on the side or a small bulb with a thermostat can help. A warm area of up to 29 °C can be used, but it is not necessary.

Cold is seldom a problem, but heat is. Above 30 °C the animals become stressed, and a longer time above 30 °C can kill them. Therefore do not place the enclosure in the sun, use a digital thermometer at the top and the bottom, and keep an eye on it on hot summer days.

Read more: Heat and temperature

HUMIDITY AND WATER

Keep humidity at 60-80 %, and let it fluctuate. Mist the enclosure thoroughly once or twice a day, so that humidity briefly rises to 80-90 %, and let it fall again over four to six hours, so the substrate and leaves can dry out. Constantly wet conditions cause mould and skin problems.

The geckos lick droplets from leaves and glass, and that is their most important water source. Provide a small, shallow water bowl all the same, changed daily and so shallow that nothing can drown. Juveniles dry out faster than adults and need more misting.

LIGHTING AND UVB

The gecko is active at dusk and at night and manages without UVB as long as the food contains vitamin D3. Whether UVB makes a difference is unclear. With UVB the plants grow better and the animals seem more active, but it is not necessary. If you want to use it, choose a weak UVB tube for shade-dwelling animals (Ferguson zone 1), and ensure shade and many hides in the rest of the enclosure.

Keep the light on for about 12 hours a day. An LED or T5 plant light is plenty. Do not use strong spotlights or coloured night lights. At night it must be dark.

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

FEEDING

The gecko is omnivorous. In the wild it eats insects, spiders, small crustaceans, fruit, nectar and pollen. As a staple diet, a ready-mixed powdered diet for fruit-eating geckos is used, mixed into a thick paste and served in a small dish or on a piece of cork some way up in the enclosure. Adults get a small dollop every other day. Remove leftovers after a day, and take care that the paste does not stick to the head and feet, where it can cause skin problems.

Also give live insects: fruit flies (especially *Drosophila hydei* for adults), small crickets, small dubia roaches and now and then waxworms as a treat. The insects must be smaller than the distance between the animal's eyes. A little ripe fruit such as banana or apricot can be given a couple of times a week to the animals that like it.

Adults get insects two to three times a week, juveniles every day. Dust the insects with calcium without D3 for most meals and once a week with a multivitamin. If the prepared diet contains D3 and the animals do not get UVB, calcium with D3 should be used only sparingly. Remove live insects that are not eaten, because they stress the animals.

BEHAVIOUR AND HANDLING

The gecko is social and can be kept in groups, which is not true of many other geckos. In the wild it lives in colonies. Since almost all are females, there is no fighting over males, but the animals may nip at each other a little when a newcomer arrives. It is seldom serious. Keep animals of roughly the same size together, and remove an animal if it keeps being bitten.

It is fast and nervous and easily jumps from the hand and disappears. Handling is therefore not its strong point, and it is perfectly happy just being looked at. If an animal has to be moved, use a small box. It can shed its tail if seized, and the tail grows back, but not always in the same form. Never keep different gecko species together, and quarantine new animals for a few weeks.

By day the animals sit in hiding, and they are most fun to watch in the evening when they come out.

Read more: Quarantine and hygiene

Breeding

SEXUAL MATURITY AND SEXING

There is no sex to determine, because almost all animals are females, and the rare males are usually sterile. Females become sexually mature early and typically begin laying eggs when they are 8-10 months old. Make sure they are in good condition and have had plenty of calcium before they begin. Young, thin animals can be drained of calcium by egg-laying.

Because the offspring are clones of the mother, there is no genetic variation within a clonal lineage. Hereditary weaknesses are therefore passed on to all the offspring.

MATING

There is no mating. The females lay eggs whether they are kept alone or in a group, typically from spring and for many months onwards, as long as temperature and food are in order. There is no fixed winter pause.

It is thus only the care that determines how many eggs you get. If you do not want juveniles, remove the eggs once they have hardened. Make sure you have new homes for the juveniles before you let them hatch.

EGG-LAYING AND CLUTCHES

The female usually lays two eggs at a time, occasionally only one, at intervals of four to six weeks. The eggs are small and white with a hard shell, and they stick to whatever they are laid on: glass, leaves, bark, cork or tubes. Never try to pry them loose, because they crack easily.

Set up bamboo tubes, pieces of cork or plastic tubes as egg-laying sites, so the eggs can easily be moved. Eggs on the glass can be protected with a small cup taped over them. Adults may eat newly laid eggs and newly hatched juveniles, so feed them well, and remove the eggs once the shell has hardened. Keep an eye on the females' condition.

INCUBATION

The eggs can be moved together with the tube or piece of cork to a small box with a couple of air holes and a little damp sphagnum in the bottom, or they can stay in the enclosure, with the juveniles moved after hatching. Temperature is not critical: 21-27 °C is fine, and ordinary room temperature is enough. The eggs hatch after 50-70 days, longest at low temperature. Keep humidity high, but avoid water dripping directly onto the eggs.

Since all the juveniles become females, temperature plays no role in sex. Eggs that collapse and go mouldy are dead. Remove them when you are sure.

REARING THE YOUNG

The juveniles are tiny and must quickly be moved away from the adults. Put them two by two in a small ventilated box with damp sphagnum and a couple of small hides, and mist once or twice daily. Keep humidity high, because they dry out quickly.

Give them the same powdered diet as the adults in a very small dish and fruit flies (*Drosophila melanogaster*), dusted with calcium, every day. The juveniles are fast and slip away easily, so keep the lid closed. When they are about two months old and eating well, they can move to a larger enclosure and gradually be put together with animals of similar size.

Health and common mistakes

The gecko is hardy and does well when temperature and humidity are right. The typical problems are:

- Heat above 30 °C, for example in an enclosure standing in the sun. It causes stress and in the worst case death.
- Lack of calcium and vitamins, especially in juveniles and females that lay many eggs. It causes bone weakness with soft jaws and bent legs. Use calcium and a good prepared diet.
- Retained shed on the toes and tail tip, especially if the animals have got paste on their feet or the air is too dry. Mist more, and gently loosen the remains with lukewarm water.
- Too much moisture without ventilation, which causes mould and skin fungus.
- Escapes. Animals that get out often dry out and die, so a secure enclosure is the best prevention.
- Bites and lost tails, if the animals have too little space or differ greatly in size.

A healthy gecko has clear eyes, a plump tail and a good grip. See a vet experienced with reptiles if it loses weight, does not eat for several weeks or seems limp.

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.