herpy

GECKOS

Fantastic least gecko

Sphaerodactylus fantasticus

A small, diurnal dwarf gecko from Guadeloupe, Dominica and Montserrat in the Lesser Antilles. Adults measure only 22-29 mm from snout to vent. The species lives in leaf litter and debris on the ground, most often near the coast, and males and females each have their own pattern on the head.

Family: Sphaerodactylidae

KEY FACTS

THE ANIMAL

Adult size	**22-29 mm** snout-vent length
Lifespan	**10-20 years**
Active	**By day**
Lifestyle	**Terrestrial**
Habitat	**Dry forest and rainforest**
Difficulty	**Intermediate**

CARE

Min. enclosure	**20 × 20 × 30 cm** L × W × H for 2 adults
Temperature, day	**24-28 °C**
Basking spot	**29-32 °C**
Temperature, night	**18-22 °C**
Humidity	**60-70%**
UVB	**Recommended** Ferguson zone 1
Diet	**Insects and small invertebrates (springtails, fruit flies)**
Kept	**Singly or in pairs**

BREEDING

Reproduction	**Egg-laying**
Clutch size	**1 eggs**
Incubation	**80-90 days** at 24-28 °C

PROTECTION AND PAPERWORK

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

About the species

Sphaerodactylus fantasticus is a small dwarf gecko. Adults measure 22-29 mm from snout to vent, and the tail is about as long as the body, so the total length is at most about 6 cm. The dorsal scales are large and keeled and overlap slightly like roof tiles. Under the toes there are adhesive lamellae, so the gecko climbs on glass.

Both sexes are brown to ochre on the back, speckled with pale and dark scales and often with a dark stripe along the middle of the back. The difference lies in the head. Females and young have dark longitudinal stripes on the head and a pale, dark-edged spot on the nape. Males have a light brown head that may be without markings, have scattered dark dots or be almost entirely dark with pale stripes and spots. The tail may have pale eyespots with a dark edge, often in pairs.

The species name is Latin and means imaginary or unreal, after the unusual colours. The species is divided into eight subspecies, each with its own small range, including *S. f. fantasticus*, *S. f. karukera*, *S. f. orescius*, *S. f. fuga* and *S. f. ligniservulus*. The former subspecies *Sphaerodactylus phyzacinus* is now regarded as a separate species.

Distribution and habitat

Sphaerodactylus fantasticus is endemic to the Lesser Antilles. The species lives on Guadeloupe, on both Basse-Terre and Grande-Terre, on the nearby islands of Marie-Galante, La Désirade and Îles de la Petite Terre, on Montserrat and along the west coast of Dominica.

Most islands and stretches of coast have their own subspecies: *S. f. fantasticus* on the west coast of Basse-Terre, *S. f. orescius* on the eastern part of Basse-Terre, *S. f. tartaropylorus* on northern Grande-Terre, *S. f. karukera* at Gosier and on Petite Terre, *S. f. anidrotus* on Marie-Galante, *S. f. hippomanes* on La Désirade, *S. f. ligniservulus* on Montserrat and *S. f. fuga* on Dominica. The population on Dominica is genetically close to a population on Guadeloupe and probably arrived on the island recently.

> **Native range:** Guadeloupe, Dominica and Montserrat.

HABITAT

Sphaerodactylus fantasticus lives on the ground in many kinds of habitat, most often near the coast: dry forest and scrub, damper forest, beaches and slopes and also in and around houses. During the day the animals are active in shaded heaps of leaves and organic debris, and they hide under stones, tree trunks and accumulated debris. The eggs have been found in rotting wood, and the animals eat small snails, among other things.

The climate is tropical and warm all year with a rainy season in summer and autumn and a drier period in winter and spring. The sheltered coasts on the west side of the islands are drier than the windward side. Altitude is not documented in more detail, but *S. f. orescius*, whose name means mountain-dwelling, lives inland on Basse-Terre.

Care

THE ENCLOSURE

Little is known about keeping *Sphaerodactylus fantasticus*. The species is kept and bred in small enclosures like other dwarf geckos, but the figures for temperature, humidity, incubation and lifespan are borrowed from the better-known *Sphaerodactylus elegans*. *Sphaerodactylus macrolepis* from the Virgin Islands lives in the same kind of leaf litter and makes almost the same demands.

A pair can be kept in an enclosure of 20 × 20 × 30 cm (length × width × height). A larger enclosure, for example 30 × 30 × 30 cm, gives room for more microclimates and more leaf litter. The gecko lives on the ground, so floor area matters more than height.

The substrate is the most important part: coconut fibre mixed with fertiliser-free soil and a little sand, covered by a layer of dry leaves, for example oak, beech or almond. A bioactive substrate with springtails and small woodlice keeps the substrate clean and provides extra food. Place cork bark, cork tubes, flat stones and twigs, and plant small climbing plants such as pothos or creeping fig, so that there are many hides and different microclimates. Heavy stones must stand directly on the floor so that the animal is not crushed if it creeps in under them.

The lid must be of fine mesh and fit tightly, because both the geckos and the small feeder animals escape through even small gaps. A completely open mesh lid dries the enclosure out too quickly, while a completely closed lid causes mould; a smaller mesh panel is a good compromise. A piece of soft, rotting wood on the floor resembles the place where the eggs are laid in the wild.

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

TEMPERATURE

Keep *Sphaerodactylus fantasticus* at 24-28 °C during the day, and let the temperature fall to 18-22 °C at night. A small warm spot of 29-32 °C under a weak lamp with a thermostat can be provided, but it is not necessary, and the animal must always be able to withdraw into a cooler and damper leaf layer.

In most homes no extra heat is needed in summer. In winter a weak heat mat on the side of the enclosure, controlled by a thermostat, may be enough. Never heat the whole floor, because the leaf layer will then dry out. Measure the temperature with a digital thermometer down at the substrate and not only in the air. An animal that stays out in the open during the hottest hours is too hot or too dry.

Read more: Heat and temperature

HUMIDITY AND WATER

Humidity should be 60-70 %. Mist the enclosure daily, preferably in the morning or evening, so there are droplets on leaves and glass for the animals to drink from. Down in the leaf litter the substrate must be damp all the time but not wet, and the surface must dry out within a few hours, otherwise mould appears.

A very shallow water bowl, preferably filled with pebbles, can be left out. A deep bowl is a drowning trap for so small an animal. A hygrometer shows whether the humidity holds.

LIGHTING AND UVB

The gecko is diurnal but stays in shade and in the leaf litter. Keep the light on for about 12 hours in summer and 10-11 hours in winter, and keep the night dark. If there are live plants, an LED plant lamp is also needed. Avoid spotlights that heat and dry out the enclosure.

The need for UVB has not been studied for *Sphaerodactylus fantasticus*. Since the animal lives in shade, Ferguson zone 1 fits: a weak UVB tube for shade-dwelling animals over one end of the enclosure and plenty of hides, so that the animal can choose for itself.

Read more: Lighting and UVB

FEEDING

The animals are insectivores and take only very small prey. Young need springtails, small fruit flies (*Drosophila melanogaster*), newly hatched crickets and small woodlice. Adults take crickets of 3-6 mm, large fruit flies (*Drosophila hydei*), small woodlice and small black soldier fly larvae. The feeder animals must not be larger than the animal's head.

Young animals are fed every day and adults every second day, as much as they eat in a few minutes. Alternate between several kinds of food. Dust the feeder animals with calcium at every feeding and with a multivitamin powder with D3 every second to third time. It can be more difficult to obtain enough small food than to care for the animals themselves, so make sure you have a steady supply of springtails and small crickets before the animals move in.

Read more: Calcium, vitamins and supplements

BEHAVIOUR AND HANDLING

Keep *Sphaerodactylus fantasticus* singly or as a pair. Males must not be put together, because they fight, and in several dwarf geckos females too are incompatible. Separate the animals at signs of fighting.

The gecko is fast and shy and spends much time in the leaves, so it can be hard to spot. It is too small and fragile to be handled and can escape through even small openings. Move it by letting it crawl up into a small container, and work calmly when you touch the substrate.

Breeding

SEXUAL MATURITY AND SEXING

The sexes are recognised by the head: females have dark longitudinal stripes on the head and a pale, dark-edged nape spot, while males have a light brown head with dots or a dark head with pale markings. The young resemble the females. Age at sexual maturity is not documented. Wait until the animals are fully grown before putting them together for breeding.

MATING

A well-fed pair in an enclosure with many hides normally breeds without special help. Mating behaviour and seasonal rhythm are not documented for *Sphaerodactylus fantasticus*. Shorten the light period slightly in winter; this fits the drier and slightly cooler winter in the range. Make sure the female is not being chased, and separate the animals if she is bitten.

EGG-LAYING AND CLUTCHES

The female lays one egg at a time; gravid females carry only one mature egg. The egg is elongated, about 6.5 × 5 mm, and hard-shelled. In the wild it is laid in rotting wood, and in the enclosure it is laid in the substrate, in the leaf litter, under bark or in hollow stems. Dry stems of Japanese knotweed, stood up against the wall, are readily used.

The female repeats egg laying at intervals of a few weeks when she gets plenty of food. The eggs can be hard to find. Move them to an incubator when you find them.

INCUBATION

The egg hatches after about 80-90 days at 24-28 °C. Move it in the same orientation as it lies to a small box with air holes and a slightly moist medium such as vermiculite or perlite, and keep the air in the box humid so that the egg does not dry out. The shell is hard, and the egg must not lie wet. The newly hatched young are very small and dry out easily, so they must be moved at once to a damp rearing box.

REARING THE YOUNG

The newly hatched young are very small and have the same striped head pattern as the females. Rear the young in a small, tight box, e.g. a plastic box of about 1 litre with small air holes, furnished like the adults': damp coconut fibre, leaf litter, hides and a small plant. Mist daily. First food is springtails and the smallest fruit flies, which must be available all the time. Keep the young separately.

Health and common mistakes

Most problems are caused by incorrect conditions. The typical mistakes are:

- An enclosure that is too dry. The body is so small that the animal dries out quickly. Lethargy, sunken eyes and wrinkled skin are signs of dehydration.
- An enclosure that is too wet without air exchange, which causes mould and skin problems.
- Too little calcium and vitamin D3, especially in young animals and egg-laying females.
- Feeder animals that are too large or only one kind of food.
- Heavy items that the animal can be crushed under.
- Fights between adult animals. Separate them in cases of bites or injuries.

A healthy animal is active, has clear eyes and a plump tail. The animal is too small to treat yourself. Contact a vet with experience in reptiles if the gecko loses weight, does not eat or sits lethargically in the open all day.

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.