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GECKOS

Reef gecko

Sphaerodactylus notatus

A small, ground-dwelling dwarf gecko from Cuba, the Bahamas and southernmost Florida, no more than 5-6 cm long including the tail. *Sphaerodactylus notatus* is brown with dark spots and stripes on the head, is active mostly in the morning and evening in the leaf litter, and can be kept in pairs in a small, tight enclosure.

Family: Sphaerodactylidae Former name: *Sphaerodactylus notatus amaurus; Sphaerodactylus notatus atactus; Sphaerodactylus notatus peltastes*

KEY FACTS

THE ANIMAL

Adult size	**5-6 cm** total length incl. tail
Lifespan	**10-20 years**
Active	**By day and at dusk**
Lifestyle	**Terrestrial**
Habitat	**Dry forest and rainforest**
Difficulty	**Intermediate**

CARE

Min. enclosure	**20 × 20 × 20 cm** L × W × H for 2 adults
Temperature, day	**26-28 °C**
Temperature, night	**20-22 °C**
Humidity	**60-70%**
Water	**Water dish**
UVB	**Optional**
Diet	**Insects and small invertebrates (springtails, fruit flies)**
Kept	**Singly or in pairs**

BREEDING

Reproduction	**Egg-laying**
Sexually mature	**6 months**
Clutch size	**1 eggs**
Incubation	**70 days** at 26 °C

PROTECTION AND PAPERWORK

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

About the species

Sphaerodactylus notatus is a small dwarf gecko that measures up to 34 mm from snout to vent and no more than 5-6 cm including the tail, which makes up about half of the length. The dorsal scales are relatively large, strongly keeled and overlap like roof tiles, and the head is less pointed than in most other species in the genus. Both sexes are brown and turn yellowish towards the tail, and the body is flecked with dark brown scales. From the tip of the snout, black stripes run through the eyes and along the middle of the head and fade out on the front part of the body. The underside is light brown and the throat almost white.

The pattern varies greatly, both from animal to animal and between the subspecies. The species name is Latin and means marked, referring to the male's spotted pattern in the nominate form. *S. n. peltastes* has a shoulder patch with eyespots, in *S. n. amaurus* they are absent, and in *S. n. atactus* some animals have them and others do not.

The species was described in 1859 by Spencer Fullerton Baird, and four subspecies are regarded as valid: *S. n. notatus*, *S. n. amaurus*, *S. n. atactus* and *S. n. peltastes*. The former subspecies *S. n. exsul* is now a separate species. Like other dwarf geckos, the animal has adhesive lamellae under the toes. Lifespan in captivity is not documented; the 10-20 years in the fact box are borrowed from *Sphaerodactylus elegans* and are uncertain.

Distribution and habitat

Sphaerodactylus notatus occurs in Cuba, especially in the east, and on most of the Bahamas, including Bimini, Andros, New Providence, Eleuthera, Long Island, Ragged Island and Great Abaco. *S. n. amaurus* lives on the Great Bahama Bank, including Cat Island and Little San Salvador, *S. n. peltastes* on the Little Bahama Bank and *S. n. atactus* on the Cayos Ballenatos off Cuba. *S. n. atactus* has probably been introduced to Great Inagua in the Bahamas and to the Morant Cays and Pedro Cays off Jamaica. The populations on Isla de la Juventud and in the Canarreos Archipelago have an unresolved taxonomic status.

The species was described from Key West and lives in the Florida Keys and southernmost Florida. Whether it is native there is disputed: it may have arrived with shipping from Cuba in the 1800s, but genetic studies suggest that it colonised Key Largo naturally, probably on driftwood. The map shows only Cuba and the Bahamas.

> **Native range:** Cuba and Bahamas.

HABITAT

Sphaerodactylus notatus lives on the ground in the leaf litter, under stones, dead branches and other plant material, in both natural and man-made habitats. It is found especially in humid forest and scrub. The microclimate must be slightly damp, so the species lives in partial shade and rarely in places in full sun all day. In Florida it is closely associated with *Coccoloba uvifera* along the coasts.

The species is most active in the morning and evening. The climate in its range is tropical to subtropical, and the biotope in the fact box is an estimate based on the habitat.

Care

THE ENCLOSURE

Little is known about the care of *Sphaerodactylus notatus*, but the species is easy to keep. It is looked after like the related *Sphaerodactylus elegans* and *Sphaerodactylus macrolepis*.

A pair can be kept in an enclosure measuring 20 × 20 × 20 cm (length × width × height). Larger is an advantage and gives room for more hiding places. The species lives on the ground, so floor area matters more than height. The enclosure must be completely tight, including the lid, because the gecko and its small feeder insects escape through very small gaps.

The substrate should be a mixture of soil and sand. Lay pieces of bark and leaves flat on the floor as hiding places, and stand bark on edge against the walls as extra hiding places and egg-laying sites. A bioactive substrate with springtails and small woodlice provides extra food and keeps the substrate clean. Heavy stones and pieces of wood must sit directly on the base of the enclosure, so the animal cannot be crushed.

Read more: Terrarium construction and bioactive substrate Read more: Feeder animals: keeping and breeding

TEMPERATURE

By day the temperature should be 26-28 °C. A small fluorescent tube or a compact fluorescent bulb usually gives enough heat. A spotlight is not necessary and can easily overheat such a small enclosure. The night temperature is not documented; 20-22 °C suits the climate in the species' range. During the winter rest period the temperature should be a little lower (see Mating). Measure the temperature with a digital thermometer down at the substrate.

HUMIDITY AND WATER

Humidity should be around 70 %, and the substrate should be slightly damp. Mist the enclosure once a day, so that droplets sit on leaves and glass for the animal to drink, and also put out a small, shallow water dish. Ensure good ventilation, so the enclosure dries out easily between mistings and does not become mouldy.

Read more: Humidity, misting and ventilation

LIGHTING AND UVB

Keep the light on for 12 hours a day in summer, and use small fluorescent tubes or compact fluorescent bulbs in daylight colour. During the winter rest period the days should be shorter.

The need for UVB is not documented. A weak UVB tube for shade-dwelling species with plenty of shade can be used, but is optional when the feeder insects are dusted with calcium and vitamin D3.

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

FEEDING

The gecko feeds on small arthropods. Offer small crickets, small woodlice, springtails, small wax moths and wax moth larvae. Feeder insects must not be larger than the animal's head.

Adults are fed twice a week, while the young must have constant access to springtails and newly hatched crickets. Dust all food with calcium and vitamins at every feeding, and put out a small dish of crushed cuttlebone. It can be harder to obtain enough small feeder insects than to look after the gecko itself, so ensure a steady supply before acquiring the animal.

BEHAVIOUR AND HANDLING

Keep one pair per enclosure. Not only the males but also the females can be very aggressive towards each other, so two animals of the same sex must not be housed together. The species can, however, be kept together with other small *Sphaerodactylus* species with a different colour pattern, for example *Sphaerodactylus nigropunctatus* and *Sphaerodactylus torrei*.

S. notatus moves by creeping through the leaf litter and is seen mostly when foraging in the morning and evening. It is too small and fragile to be handled. If the animal has to be moved, let it crawl into a small container.

Breeding

SEXUAL MATURITY AND SEXING

Both sexes are brown with the same basic pattern, but the markings on the head vary from animal to animal. Females often have two eyespots in the middle of the back of the head, but these can also be absent, so they are not a reliable distinguishing feature. The young resemble the adults, but have more contrast in their colours and a white tail tip, which disappears at six months of age. The species is fully grown and can breed after about half a year.

MATING

A pair kept together in an enclosure with many hiding places and plenty of food breeds without special help. The species normally observes a rest period of about three months in winter. During this period give shorter days and a slightly lower temperature, so the female gets a break from egg-laying. How much the temperature should be lowered is not documented.

EGG-LAYING AND CLUTCHES

In the season the female lays one small, hard-shelled egg about every third week, usually in bark or under leaves. In the wild the eggs are laid higher up, in tree stumps and under loose bark about a metre above the ground, where they are probably better protected, so bark on edge makes a good egg-laying site.

The adults leave the young alone, but it is still an advantage to remove the eggs and incubate them in an incubator, so that temperature and humidity can be controlled. Give the female plenty of food and calcium while she is laying.

Read more: Incubating eggs

INCUBATION

At about 26 °C the eggs hatch after roughly 70 days. Place the egg in a small container with air holes and damp vermiculite or perlite, and do not turn it, as with other geckos. The air in the container must be humid, but the egg must not lie wet.

REARING THE YOUNG

The young measure about 22 mm including the tail at hatching. They can grow up with their parents or in small groups in a tight plastic box of about 1.3 litres, set up like the adults' enclosure with soil and sand, leaves and bark.

There must be micro-food such as springtails and newly hatched crickets available at all times, dusted with calcium and vitamins. The young grow quickly and are fully grown after about half a year.

Health and common mistakes

Sphaerodactylus notatus is regarded as easy to keep, but there is little information on diseases in the species. The typical mistakes with small dwarf geckos are:

- Too little calcium and D3, especially in young animals and in females that lay eggs. Dust the feeder insects.
- An enclosure that is too dry or too wet. Constantly wet conditions cause mould and skin problems.
- A one-sided diet. Alternate between several kinds of feeder insects.
- Heavy items the animal can be crushed under. Place them directly on the base.
- Fights between adult animals. Separate them in case of bites or injuries.

A healthy animal is active, has clear eyes and a plump tail. See a vet with experience in reptiles if the animal loses weight, does not eat 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.