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GECKOS

Northern spiny-tailed gecko

Strophurus ciliaris

Strophurus ciliaris is a slender, delicate gecko from inland and northern Australia with long spines above the eyes, a spiny tail and a brightly coloured mouth. It climbs about in shrubs and spinifex, likes to bask and can squirt a foul-smelling fluid from the tail if threatened.

Family: Diplodactylidae Former name: *Diplodactylus ciliaris*

KEY FACTS

THE ANIMAL

Adult size	**12-15 cm** total length incl. tail
Lifespan	**6-10 years**
Active	**By day, at dusk and at night**
Lifestyle	**Arboreal**
Habitat	**Semi-desert**
Difficulty	**Intermediate**

CARE

Min. enclosure	**30 × 30 × 45 cm** L × W × H for 1 adult
Temperature, day	**25-29 °C**
Basking spot	**30-32 °C**
Temperature, night	**18-25 °C**
Humidity	**30-50%**
UVB	**Recommended** Ferguson zone 2
Diet	**Insects**
Kept	**Singly, in pairs or one male with several females**

BREEDING

Reproduction	**Egg-laying**
Sexually mature	**12-24 months**
Clutch size	**1-2 eggs**
Clutches per year	**6-10**
Incubation	**55-65 days** at 27-29 °C

PROTECTION AND PAPERWORK

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

About the species

Strophurus ciliaris is the largest of the spiny-tailed geckos in the genus *Strophurus*. The species name *ciliaris* means "with eyelashes" and refers to the row of long spines above each eye. More spines run down the tail. The species was described by Boulenger in 1885 as *Diplodactylus ciliaris* and has since been moved to *Strophurus*.

The colour is highly variable, from uniform grey with a few black or orange scales to rich brown with a pattern of grey, white and orange scales. The animal can shift between cream and chocolate brown depending on time of day, temperature, light and mood, and many have a contrasting tail with spots of yellow to orange. The females are clearly larger than the males.

Adults reach 12-15 cm in length including the tail, a few up to 16 cm. The weight is not documented. In captivity spiny-tailed geckos live 6-10 years or more.

Like all species in the genus, the gecko can squirt a viscous, foul-smelling and harmless fluid from the tail at enemies such as birds. When it feels threatened, it opens its mouth wide to show a brightly coloured palate while raising the tail. Two subspecies are recognised: the tropical *S. c. ciliaris* in the north and the desert form *S. c. aberrans* in the dry interior.

In the enclosure the species is lively and fairly bold, but not an animal for daily handling. It is mostly for watching, especially in the evening, when it comes down the branches to take the insects.

Distribution and habitat

Strophurus ciliaris occurs only in Australia, where it lives in the interior and northern part of the continent. The subspecies *ciliaris* is known from the northern half of the Northern Territory and right up into the far north of Western Australia, with the type locality at Port Darwin. The subspecies *aberrans* occurs from the north-west coast of Western Australia through the dry interior to the southern Northern Territory, northern South Australia, western New South Wales and south-western Queensland.

Just under half of all recorded finds are from the Northern Territory, just under a third from Western Australia and about a tenth from South Australia. The rest are divided between Queensland and New South Wales. The species has not been recorded in Victoria.

> **Native range:** Australia.

HABITAT

Strophurus ciliaris lives in dry and semi-arid country: open shrubland, acacia scrub, subtropical scrub and tussocks of spinifex grass. It is more arboreal and shrub-dwelling than most desert geckos and often sits in the open on thin branches. The spiny-tailed species of the genus are known to bask in full sun among the small branches, and this species is also seen basking by day, even though it is mainly nocturnal.

At night it hunts insects and other arthropods among the branches and goes down to the ground only to get from shrub to shrub. It has also been seen licking sap from acacias. The climate in the distribution area ranges from tropical in the north to dry desert climate in the interior, with hot days, cooler nights and a cool dry season. There are no detailed temperature and humidity measurements for the species in the wild, so the enclosure figures are based on experience in captivity.

Read more: Humidity, misting and ventilation

Care

THE ENCLOSURE

Height matters more than floor area, because *Strophurus ciliaris* is a climber. One adult needs an enclosure of at least 30 × 30 × 45 cm (length × width × height). A pair or a trio needs at least 40 × 40 × 60 cm; the size is an estimate. Keep males apart.

Furnish with many slanting and vertical branches, preferably dry branches with forks, so the gecko can climb, bask and rest in shade. A few pieces of cork bark provide cover, and tall dry grass works as extra cover. The animal can climb smooth surfaces, so the enclosure must be closed tightly. Use a 1-2 cm layer of sand as substrate. Young animals manage in small, simple boxes with mesh in the lid and a couple of branches.

TEMPERATURE

The enclosure for *Strophurus ciliaris* should have a warm zone at the top and a cooler zone at the bottom. By day it should be 25-29 °C with a hot spot of 30-32 °C high up. At night the heat is switched off completely, and the temperature falls to room temperature, 22-25 °C. During the winter rest (see breeding) the day is 24-29 °C and the night down to about 18 °C.

The gecko tolerates cold well, but also provide heat by day during the winter rest. Use a small heat bulb or a halogen spot at one top end of the enclosure, controlled by a thermostat, and measure with a thermometer both at the top and at the bottom. Check that the animal is not standing gaping or hiding in the shade all day; then it is too hot.

Read more: Heat and temperature

HUMIDITY AND WATER

Strophurus ciliaris needs low humidity. Concrete figures are not documented, but 30-50 % suits the species' dry habitats. Mist the sides of the enclosure and the branches lightly in the evening two or three times a week, and let it dry out completely, so that almost no droplets are left the next morning. The gecko drinks droplets from leaves and branches rather than from a bowl, but a small bowl of fresh water should still be available.

Keep the substrate dry. Wet sand causes mould, and the females lay eggs where it is damp, so the only damp spot should be the lay box. At shedding a little extra misting can help. During winter dormancy, mist only once a week.

Read more: Brumation and the seasons

LIGHTING AND UVB

Strophurus ciliaris is active at dusk and at night, but also basks by day. UVB is probably beneficial and is recommended. A good solution is a UV gradient with a UV index of about 3.0 at the highest point and shade in the rest, corresponding to Ferguson zone 2. Use a UVB tube, and make sure the animal can retreat from the light.

For breeding the daylight can be 14 hours in summer and 6 hours in winter. Without breeding, 12 hours of light in summer and 10 in winter is a simple rhythm. It must be dark at night.

Read more: Lighting and UVB

FEEDING

Strophurus ciliaris lives on arthropods and is not fussy. Adult animals get crickets, roaches and other insects of a suitable size three times a week, preferably gut-loaded with vegetables and insect feed for a day or two beforehand. The gecko has a surprisingly large mouth and takes large prey. Soldier fly larvae or hornworms can be given now and then for variety.

Give calcium and a vitamin and mineral supplement according to the manufacturer's instructions, and use calcium with vitamin D3 if there is no UVB. Egg-laying females need extra calcium. Young animals get small crickets and large fruit flies (*Drosophila hydei*) every day and later every other day. Feed in the evening, when the light goes off, and only when it is warm enough for the food to be digested. Fruit or fruit paste is not described as part of the diet.

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

BEHAVIOUR AND HANDLING

Strophurus ciliaris is curious and bold at feeding and often comes forward to meet the insects, but it is easily stressed by handling and is not an animal to be picked up every day. When in danger it can squirt its foul-smelling fluid, and it can drop its tail. The tail grows back, but often in a different shape. Wash your hands afterwards, and avoid getting the fluid in your eyes.

A trio can live together over the summer without signs of aggression, and the sexes are separated during winter dormancy. Never keep two males together, and watch for bites and stress. Tameness and handling are only sparsely described, so proceed with caution.

Breeding

SEXUAL MATURITY AND SEXING

Males of *Strophurus ciliaris* are recognised by the two hemipenal bulges at the base of the tail, which typically become visible at 6-12 months of age. Females are larger than males. Sexual maturity usually occurs at 12-18 months, but some animals take up to 24 months. Breeding too early drains the female of calcium, so wait until she is fully grown and in good condition.

MATING

Strophurus ciliaris normally breeds in a particular season, but can reproduce all year round in captivity. It gives the best results to separate male and female in late autumn, when the days and the temperature fall. A cool period of eight to ten weeks is given, with daytime temperatures of about 24-29 °C and night temperatures down to about 18 °C, shorter days, misting once a week and only a little food. When temperature, light and food rise again, the breeding season gets going, and the animals are put together.

Without breeding, a pair can live together all year.

EGG-LAYING AND CLUTCHES

The female of *Strophurus ciliaris* normally lays two eggs at a time, occasionally only one. During the season a new clutch comes every third to fifth week. A season typically gives 6-8 clutches, and a female can lay up to 10 clutches in a year. It is hard on the female, so cut down on food after about three clutches to dampen egg production, and give plenty of calcium.

The female sheds her skin one to seven days before laying and then has a clearly thick belly. Put a laying box on the bottom, for example an upturned terracotta dish or a plastic box with a hole in the lid, with 5 cm of damp sand, a mix of sand and peat, or damp sphagnum. The female goes in at night and lays the eggs right at the bottom. Keep the rest of the enclosure dry, so she does not lay eggs elsewhere.

INCUBATION

The eggs of *Strophurus ciliaris* are carefully removed and placed in a small box with perlite mixed 1:1 with water and incubated at 27-29 °C. At that temperature they hatch after 55-65 days. The substrate must be evenly damp without being wet.

Temperature-dependent sex determination has not been investigated in the species. Do not turn the eggs, and mark the top side with pencil.

Read more: Incubating eggs

REARING THE YOUNG

The young of *Strophurus ciliaris* are very small, but there are no reliable figures for weight and length at hatching. They are raised individually in small tubs (about 1 litre) with mesh in the lid and kept like the adults. They eat small crickets, large fruit flies and bean weevils and are fed first every day, later every other day. If the young are fed very heavily, a female can lay eggs as early as her first year, but this is not recommended. Growth curves are not described.

Health and common mistakes

Illnesses in *Strophurus ciliaris* are only sparsely described, so the following is based on general experience with small insectivorous geckos:

- Too little calcium and vitamin D3, especially in the young and in breeding females with many clutches. It causes soft bones and tremors. Dust the insects and provide UVB.
- Overbreeding. A female who lays clutch after clutch without rest becomes thin and weakened. Cut down on the food and take a break.
- An enclosure that is too damp, with mould and skin problems. Keep the substrate dry, and mist only in the evening.
- Remnants of skin on toes and tail, which can constrict and cause loss of toes. Give a little extra humidity at shedding.
- A dropped tail from handling or fighting. The tail grows back, but looks different.

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