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GECKOS

Northern leaf-tailed gecko

Saltuarius cornutus

Saltuarius cornutus is a large, nocturnal leaf-tailed gecko from the rainforests of north-eastern Queensland in Australia. The skin resembles lichen-covered bark and is studded with pointed tubercles, the tail is broad and leaf-shaped, and the toes have claws instead of adhesive lamellae. It needs cool conditions and is a species for the experienced keeper.

Family: Carphodactylidae Former name: *Phyllurus cornutus; Gymnodactylus cornutus* Published 16 November 2026

KEY FACTS

THE ANIMAL

Adult size	**14 cm** snout-vent length
Lifespan	**10-15 years**
Active	**At night**
Lifestyle	**Arboreal**
Habitat	**Rainforest and montane forest**
Difficulty	**Experienced**

CARE

Min. enclosure	**60 × 40 × 80 cm** L × W × H for 2 adults
Temperature, day	**20-24 °C**
Temperature, night	**15-19 °C**
Humidity	**55-100%**
UVB	**Not required**
Winter rest	**10-16 °C** 8-13 weeks
Diet	**Insects**
Kept	**Singly or in pairs**

BREEDING

Reproduction	**Egg-laying**
Sexually mature	**18-48 months**
Clutch size	**1-2 eggs**
Clutches per year	**2-4**
Incubation	**90-110 days** at 21-28 °C

PROTECTION AND PAPERWORK

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

About the species

Saltuarius cornutus is a large, flattened gecko with a triangular head, a narrow neck and long, thin limbs. The back is covered with pointed tubercles, and it is these that the species name alludes to: *cornutus* means "horned" in Latin. The skin pattern of grey, brown and greenish spots resembles lichen-covered bark, and the animal is hard to spot when it sits still on a trunk. The tail is broad and leaf-shaped. Unlike most geckos, the species has claws on the toes and no adhesive lamellae.

The body grows to about 14 cm from snout to vent, and the tail can be about 8 cm wide. The species was described in 1892 as *Gymnodactylus cornutus* and has since stood in the genus *Phyllurus*, before it received its present genus *Saltuarius* in 1993. The genus name can be translated as "guardian of the forest". The species name has been used for a collection of several populations, which are now divided among other species, so older descriptions may concern animals that today belong to other *Saltuarius* species.

When in danger the gecko arches its back, raises the tail and waves it from side to side to draw attention away from the head. It may also open its mouth and attack with a hissing sound. The tail is easily dropped and grows back, but the new tail is broader and flatter, with a different colour and a short tip.

The species is rare in vivaria, and there is no documented care guide for *S. cornutus* itself. The care sections here are therefore based on experience with close relatives, namely *Saltuarius salebrosus* and *Phyllurus platurus*, and it is stated where figures are borrowed.

Distribution and habitat

Saltuarius cornutus lives in north-eastern Queensland in Australia. The type locality is the Bellenden Ker Range near Cairns, and the species has also been described from the area around Mount Bartle Frere. The core of the range lies in the tropical rainforests of the Wet Tropics area between Cooktown and Townsville.

Older overviews mention four separate populations, including on the Cape York Peninsula and all the way down to Stanthorpe and south-eastern Queensland. Those populations are now divided among other species, and the same applies to information about New South Wales. The map therefore shows only the northern area. Records outside it may be misrecordings or animals identified to species under the older, broader concept of *S. cornutus*.

> **Native range:** Australia.

HABITAT

Saltuarius cornutus is a nocturnal tree-dweller in the rainforest. It sits on tree trunks and rocks, where the skin makes it almost invisible, and it is active at night and in cool conditions, when many other reptiles rest. Older descriptions, which also include the southern populations, give tropical and warm-temperate rainforest and humid sclerophyll forest, typically above 750 metres. How much of that elevation range applies to the Wet Tropics population has not been resolved.

In the mountain forests it is cooler than in the lowlands, and the air is humid for most of the year. The precise temperature and humidity rhythm at the species' habitats is not documented. The gecko eats large arthropods such as cockroaches, woodlice and spiders. The females lay one or two parchment-like eggs in a shallow nest covered with leaves and soil, and in a communal nest up to 14 eggs from several females have been found.

Read more: Humidity, misting and ventilation

Care

THE ENCLOSURE

There is no documented recipe for *Saltuarius cornutus*, so the dimensions are borrowed from close relatives. *S. salebrosus* is kept two or three together in an enclosure of about 60 × 40 × 80 cm (length × width × height), and a pair of *P. platurus* manage in about 50 × 50 × 50 cm. Use at least 60 × 40 × 80 cm for a pair of *S. cornutus*, and preferably choose larger, because the animal is large and lives on trunks.

Furnish with vertical pieces of rigid bark and a few branches, so that the animal can get around the whole enclosure. The geckos sit on branches or bark, and hides on the ground are not necessary. As substrate 1 cm of fine sand or sand mixed with coconut compost is enough, but for females that are to lay there must be a deep laying substrate (see breeding). The enclosure must have good ventilation with openings both at the top and at the bottom, so that the air moves and does not stand still and turn musty.

TEMPERATURE

The species comes from cooler mountain forest, and the close relatives are kept at moderate temperatures. *P. platurus* is kept at 22-26 °C by day and about 19-22 °C at night. As *S. cornutus* lives higher up, the temperature should lie at the cooler end: about 20-24 °C by day and 15-19 °C at night. The figures are a cautious estimate and have not been measured on the species itself.

Heat is the greatest danger. *S. salebrosus*, the genus's most heat-tolerant species, tolerates a few days in the high 30s if the animals are not in direct sun, but a longer time at heat above that can be fatal. *S. cornutus* probably tolerates less. *S. salebrosus* is given a heat source of at most 32 °C, but none in the middle of summer and none at night in the cool period. For

S. cornutus a weak heat source is probably necessary only if the room is cold. Keep the enclosure out of direct sun, and mist on hot days so that the temperature falls a degree or two.

A cool rest period is a fixed part of keeping the species. See under breeding.

HUMIDITY AND WATER

The humidity should fluctuate. Mist the enclosure thoroughly in the evening, so that the humidity rises towards 100 %, and let it fall to about 55-60 % between mistings, so that bark and substrate can dry out. During the rest period the enclosure is misted every evening, so that the animals can drink the water droplets and the humidity does not fall too low.

For *S. salebrosus* a heavy misting two to three times a week is recommended outside the rest period, but *S. cornutus* from humid rainforest probably needs to be misted more often. The substrate must not be constantly wet, because that causes mould and skin problems. Poor humidity can cause problems with shedding, to which all species in the genus are prone.

LIGHTING AND UVB

The species is nocturnal and lives hidden by day, and no UVB lighting is mentioned for the relatives. UVB is therefore not necessary for *Saltuarius cornutus*, but a weak light in the daytime with a fixed daily rhythm is natural. Do not use strong spotlights or coloured night lights, and keep the enclosure dark at night. The enclosure must have shaded areas, and direct sun must not reach it.

If you do have a weak UVB light, always give the animal the chance to withdraw into shade.

Read more: Lighting and UVB

FEEDING

The species feeds on large arthropods such as cockroaches, woodlice and spiders, and in vivaria ordinary feeder insects such as crickets and roaches work. *S. salebrosus* is fed three times a week in the breeding season, and every second to third week in winter. For *P. platurus* the insects must be at most the size of the animal's head.

Dust the food regularly with calcium and a multivitamin, and give only two to three insects per animal at each feeding, so that they do not become too fat. The tail is used to store fat and is a good sign of the animal's condition. Remove leftovers the next morning.

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

BEHAVIOUR AND HANDLING

Saltuarius cornutus is a calm, secretive and nocturnal species that sits still on bark during the day. It is not an animal to be handled, and it may be stressed by being picked up. Keep handling to a minimum and never by the tail, which it drops.

In the wild the animals are often seen alone at night, but several may share the same crevice by day. In captivity related species are kept in pairs or in small groups with only one male per enclosure. Watch the animals, and separate them if one becomes larger or dominates the other.

Breeding

SEXUAL MATURITY AND SEXING

Males have a distinct hemipenal bulge at the base of the tail, which females lack. In *P. platurus* the animals are bred only when they are at least 18 months old and weigh at least 18 g. *S. salebrosus* grows slowly and becomes sexually mature only after 3-4 years. For *S. cornutus* the age is not documented, but it is presumed to lie in that interval.

MATING

In related species breeding is triggered by a cool rest period of two to three months. For *P. platurus* the animals are first starved for a week while the temperature is held stable, and then the daytime temperature is lowered by 2-3 degrees a day to about 10-16 °C. The rest period lasts two to three months with daily misting, and the animals do not eat during the period. After the period the temperature is raised over a week to normal, and feeding resumes.

Take an animal out of the rest period if it loses more than a few grams. Matings are seldom seen. The figures are borrowed from *P. platurus* and are not documented for *S. cornutus*.

EGG-LAYING AND CLUTCHES

The female usually lays two eggs at a time, and in the wild one or two eggs are documented. In related species two to four clutches are laid per season with about a month between them, and laying begins only late in the season, from mid-October for *S. salebrosus*. The female digs a nest in damp substrate, lays the eggs in the middle and covers them.

Give the female a deep laying substrate of damp peat or coconut fibre, 8-10 cm deep, that clumps but is not wet. It must never dry out. The female may sit on the nest and guard it. She looks thinner after laying, and the two white ovals that can be seen through the belly are gone.

INCUBATION

Remove the eggs from the nest, and incubate them in a mixture of perlite and water in the ratio 1:1 by weight. In *P. platurus* incubation is at 21-22 °C, and in *S. salebrosus* at 26-28 °C. In *P. platurus* no more than 25 °C is recommended, because high temperature can kill the embryos, so be careful at the warm end for *S. cornutus*.

Hatching takes place after about 90-110 days depending on the temperature, in *S. salebrosus* up to 100 days. The effect of temperature on sex is not resolved. The figures are borrowed from related species and not documented for *S. cornutus*.

Read more: Incubating eggs

REARING THE YOUNG

The hatchlings shed their skin almost immediately after hatching. Keep them in a small enclosure, for example 15 × 15 × 25 cm, furnished like the adults', with kitchen roll as substrate and a piece of cork bark as a hide. Mist every other day, and offer the first food two to three days (*P. platurus*) to about ten days (*S. salebrosus*) after hatching.

Give small insects, no larger than the animal's head, dusted with calcium and a multivitamin, and only two to three per animal. The hatchlings eat little in the first weeks and then pick up well. Hatched siblings can usually be kept together, but separate them if one becomes larger or dominates. The species grows slowly.

Health and common mistakes

There are no documented disease overviews for *Saltuarius cornutus*, so the list is based on experience from related species. The typical mistakes are:

- Too high temperatures, especially on hot summer days. A longer time of heat in the high 30s is fatal for the relatives, and *S. cornutus* probably tolerates less. Keep the enclosure cool and in shade.
- Air that is too dry, which causes problems with shedding, where remnants of skin stick to the toes and tail tip.
- A constantly wet substrate and stagnant air, which cause mould and skin problems.
- A lack of calcium if the food is not dusted with calcium and vitamins.
- Weight loss during the cool rest period. Take an animal out of the period if it loses weight, and build it up again.

The tail is a good sign of the animal's condition, because it stores fat. See a vet experienced with reptiles if the animal loses weight, does not eat or looks 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.