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GECKOS

Eastern Prickly Knob-tailed Gecko

Nephrurus asper

Nephrurus asper is a stocky, spiny knob-tailed gecko from eastern and northern Queensland with rough, tuberculate skin and a short tail ending in a round knob. It is nocturnal, feeds on insects and is one of the few geckos that cannot shed its tail.

Family: Carphodactylidae English name: Eastern prickly knob-tailed gecko

KEY FACTS

THE ANIMAL

Adult size	**10-12 cm** snout-vent length
Lifespan	**10-15 years**
Active	**At night**
Lifestyle	**Rock-dwelling and terrestrial**
Habitat	**Savanna and rocky terrain**
Difficulty	**Intermediate**

CARE

Min. enclosure	**60 × 45 × 30 cm** L × W × H for 1 adult
Temperature, day	**24-28 °C**
Basking spot	**30-32 °C**
Temperature, night	**20-23 °C**
Humidity	**30-50%**
UVB	**Optional**
Diet	**Insects**
Kept	**Singly or in pairs**

BREEDING

Reproduction	**Egg-laying**
Sexually mature	**18 months**
Clutch size	**1-2 eggs**
Incubation	**65-100 days** at 27-29 °C

PROTECTION AND PAPERWORK

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

About the species

Nephrurus asper is a knob-tailed gecko whose short tail ends in a small, round knob. The body is compact with a large head and large eyes, and the skin is covered in pointed tubercles, which give the species its scientific name: *asper* means rough. The species was described by Albert Günther in 1876 and is the type species of the genus *Nephrurus*.

Adults measure 10-12 cm from snout to vent. The young are about 4 cm at hatching. Weight is not documented. Lifespan in captivity is not known; 10-15 years is an estimate based on the genus.

Like its closest relatives, *N. asper* cannot shed its tail. The tail must therefore never be grasped, and the animal must not be lifted by it. When the gecko feels threatened, it raises itself high on its legs, opens its mouth and barks.

Distribution and habitat

The species lives in eastern and northern Queensland, Australia, from the Cape York Peninsula in the north to central Queensland in the south and inland to around the central highlands. The type locality is Peak Downs in central Queensland.

Previously, populations in the Northern Territory and northern Western Australia were also counted as *N. asper*. After the most recent revision of the group in 2022, the western and central populations belong to other species, including *Nephrurus amyae*, *Nephrurus sheai* and the newly described *Nephrurus eromanga* from western Queensland, and *N. asper* in the narrow sense lives only in Queensland.

> **Native range:** Australia.

HABITAT

Nephrurus asper lives in dry, open woodland and on rocky outcrops. By day it lies hidden in crevices, under stones and in hollows, and at night it comes out and hunts insects and other small arthropods on the ground. The climate is tropical to subtropical with a hot, rainy summer and a long, dry winter. The rock crevices hold a more stable temperature and humidity than the open ground.

Read more: Humidity, misting and ventilation

Care

THE ENCLOSURE

Little is known about the husbandry of *Nephrurus asper*. The figures here are borrowed from *Nephrurus amyae*, which is the closest and best-known relative with the same way of life.

An adult needs an enclosure of at least 60 × 45 × 30 cm (length × width × height). Floor area matters more than height. A pair can be kept together in an enclosure of 80 × 45 × 30 cm or larger with a hide for each animal. Males are not kept together, and the safest option is one animal per enclosure.

The substrate is fine sand in a layer of 2-3 cm. Provide at least two hides with a single opening, for example of cork bark, flat stones or an upturned plant saucer, and a humid hide with slightly moist sand at one end. Stones must stand directly on the bottom of the enclosure, not on top of the sand, so that they do not topple when the animal digs under them. The lid must fit tightly and provide good ventilation.

TEMPERATURE

Keep the background at 24-28 °C during the day and a warm spot at one end at 30-32 °C. At night the temperature falls to 20-23 °C.

Heat from below with a heat mat under one end, controlled by a thermostat, and measure with a digital thermometer at floor level. A weak lamp from above can supplement, but a nocturnal animal has no need for bright light. A cooler and drier period in winter with shorter days corresponds to the dry season in the species' range.

Read more: Heat and temperature

HUMIDITY AND WATER

The species comes from a climate with a long dry season and is kept dry at a humidity of 30-50 %. Mist the top of the hide once or twice a week so that the gecko can lick water from the surface. A water bowl is not necessary.

There must always be one humid hide with slightly moist sand. This is where the animal lies when it is about to shed, and retained shed on the toes and tail tip is a sign that the hide is too dry. The rest of the enclosure must be dry, and surfaces must be dry again after a few hours.

LIGHTING AND UVB

The species is nocturnal and does not need bright light. UVB is optional; a weak UVB light over part of the enclosure can be used when there is plenty of cover, so that the animal can always retreat from it. Keep a fixed daily rhythm of 12 hours of light and 12 hours of darkness, and make sure it is dark at night.

Read more: Lighting and UVB

FEEDING

The species feeds on insects and other small arthropods. Offer crickets, small cockroaches and locusts as the staple, and occasionally soldier fly larvae, waxworms or mealworms. The prey must not be wider than the distance between the animal's eyes. Nocturnal knob-tailed geckos respond mainly to movement, so live prey is better than mealworms alone.

Young are fed small insects every day or every other day, and adults are given four to five insects three to five times a week. The insects must have been fed a nutritious diet for the last day. Dust them lightly with calcium with vitamin D3 at most feedings and with a multivitamin once a week. The tail shows condition: a plump tail means the animal is getting enough, a thin tail that it needs more.

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

BEHAVIOUR AND HANDLING

The animal is calm and tolerates short handling, but it is an animal to watch rather than to hold. Keep sessions short and close to the floor, and do not pick it up during the day when it is sleeping. It readily takes possession of a hide and may close the entrance with sand, which is normal behaviour.

The animal cannot shed its tail, so never grab it. When it feels threatened, it raises itself on its legs, opens its mouth and barks, but this is harmless.

Breeding

SEXUAL MATURITY AND SEXING

Females can breed from about 18 months of age; the figure is based on few animals. Males are recognised by a distinct bulge at the base of the tail, where the hemipenal pouches sit. Wait to breed a female until she is fully grown and in good condition.

MATING

Breeding is sparsely described for *Nephrurus asper*. In *Nephrurus amyae* and *Nephrurus levis* it is triggered by a cool winter with shorter days, followed by warmer and longer days in spring and summer. Put the female together with the male in a roomy enclosure with many hides, and separate them if unrest arises.

EGG-LAYING AND CLUTCHES

The female lays 1-2 eggs at a time. The number of clutches per season is not documented; *Nephrurus amyae* lays 2-6 clutches.

The eggs are laid in moist sand. Provide a laying box with moist sand or a mix of sand and coconut peat, for example a plastic box with an opening in the side, or keep a corner of moist sand damp throughout the season. Give the female plenty of calcium and insects so that she is not drained.

INCUBATION

Move the eggs carefully to a small box with moist vermiculite or perlite without turning them, and incubate at 27-29 °C. The incubation time is not documented for *Nephrurus asper*; in *Nephrurus amyae* and *Nephrurus levis* the eggs hatch after 65-100 days. Whether temperature determines sex has not been investigated.

Read more: Incubating eggs

REARING THE YOUNG

Keep each hatchling separately in a small box with fine sand, a small hide and a slightly moist corner at the same temperature as the adults. Offer small insects every day, dusted with calcium, and weigh the young regularly so that you can see that they are growing.

Health and common mistakes

The typical problems are the same as in other terrestrial geckos from dry regions:

- Too much moisture, which causes fungus and skin problems. Keep the enclosure dry with one humid hide.
- Retained shed on the toes and tail tip if the humid hide is missing.
- Too little calcium, especially in young animals and egg-laying females. Dust the insects.
- Stress from bright light or too much handling, which can cause loss of appetite.

A healthy animal has clear eyes and a plump tail and is active at night. Contact a vet experienced with reptiles if the animal loses weight, does not eat for several weeks 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.