herpy

GECKOS

Carter's rock gecko

Pristurus carteri

A small, diurnal rock gecko from the Arabian Peninsula that basks on rocks and curls its tail up over its back like a scorpion. It grows to 8-11 cm including the tail, needs heat, strong light and UVB, and is best as an animal to watch.

Family: Sphaerodactylidae Former name: *Spatalura carteri*

KEY FACTS

THE ANIMAL

Adult size	**8-11 cm** total length incl. tail
Lifespan	**5-10 years**
Active	**By day**
Lifestyle	**Rock-dwelling**
Habitat	**Semi-desert and rocky terrain**
Difficulty	**Intermediate**

CARE

Min. enclosure	**60 × 60 × 40 cm** L × W × H for 1 adult
Temperature, day	**28-30 °C**
Basking spot	**40-45 °C**
Temperature, night	**20-22 °C**
Humidity	**30-40%**
Water	**Water dish**
UVB	**Essential** Ferguson zone 3
Diet	**Insects and small invertebrates (springtails, fruit flies)**
Kept	**Singly, in pairs or one male with several females**

BREEDING

Reproduction	**Egg-laying**
Sexually mature	**10 months**
Clutch size	**1-2 eggs**
Incubation	**70-90 days** at 28 °C

PROTECTION AND PAPERWORK

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

About the species

Pristurus carteri is a small gecko with a slender body, an elongated snout and a tail that is often held curled up over the back. The tail is shorter than the body and has an uneven crest along the upper side. The flanks may have enlarged, knobbly scales. Under the first hind toe there are 10-12 lamellae and under the fourth 18-22. On the back there are six or seven dark patches from the neck to the vent.

The species was described in 1863 by John Edward Gray, then under the name *Spatalura carteri*. The species name honours Henry J. Carter, ship's surgeon on the survey vessel that mapped the south coast of Arabia in 1844-46 and collected the type specimens. Today the species is placed in *Pristurus*, and it is the largest in its species group. There are two subspecies: *P. c. carteri* and *P. c. tuberculatus*, which lives in the coastal areas of Dhofar.

The body typically grows to 5-6 cm from snout to vent and 8-11 cm with the tail. In many populations 6 cm of body length is the maximum, but a few animals reach 8 cm. Males are paler, greyish brown with small orange or reddish spots and stripes on the flanks, while females are darker slate grey and slightly smaller. Adult males develop small, fleshy spines on the tail. The

species is diurnal, which is unusual among geckos. When the animal feels threatened, it curls the tail up and waves it like a scorpion, and tail movements are also used to signal to conspecifics.

The species is rare in vivaria, and experience of long-term care and breeding is limited. Where figures are based on general practice for small desert geckos, the text says so.

Distribution and habitat

Pristurus carteri lives in the southern and eastern part of the Arabian Peninsula. The species is known from Oman, Yemen and the United Arab Emirates, and there are also records from Saudi Arabia, but they are uncertain. The type locality is Masirah, an island off the east coast of Oman. The subspecies *P. c. tuberculatus* lives in the coastal areas of Dhofar in southern Oman.

In the United Arab Emirates the species has a small and scattered range, and in the national assessment of the country's reptiles it is classed as critically endangered, even though on the IUCN global Red List it is assessed as not threatened. The species has not been recorded in any of the country's protected areas.

> **Native range:** Oman, Yemen, United Arab Emirates and Saudi Arabia.

HABITAT

Pristurus carteri lives in dry, open terrain: rock crevices, stony slopes, dry wadis and sandy areas, often near the coast. It is also seen in built-up areas, where it basks on walls. The species is diurnal and basks on rocks, roots and low bushes, while staying close to crevices and holes where it can take cover.

The climate is dry and hot with large swings between day and night. By day it is often above 40 °C, and at night the temperature can fall below 20 °C. The animals avoid the worst heat and their enemies by retreating into rock crevices or burrowing into the sand.

Care

THE ENCLOSURE

One adult needs an enclosure with a floor of at least 60 × 60 cm. Floor area matters more than height, because *Pristurus carteri* lives on rocks and stones, and 40 cm of height is enough. A pair or a male with several females requires a larger enclosure, so that the male does not pressure the females. A glass or PVC enclosure holds the dryness and heat best.

Furnish with stacked flat stones, slate, roots and raised platforms, so that crevices and basking spots arise at several heights. All stones must lie stably and preferably be glued, so that they cannot slip if the animal digs under them. An actual cave is not necessary, because the animal often sleeps on top of a root or a stone, but the set-up must provide several hides, in both the warm and the cool end.

Use a substrate of fine sand mixed with soil and preferably crushed shells, so that the animal can dig and the female can lay eggs. The enclosure should have good ventilation and a tight-fitting lid, because the species is small and fast and can squeeze through small openings.

TEMPERATURE

Create a clear temperature gradient. Keep the cool end at 28-30 °C and make a basking spot of 40-45 °C under a spotlight, so the animal can choose for itself. At night the temperature may fall to 20-22 °C without extra heat, but no lower.

Use digital thermometers at both ends of the enclosure and an infrared thermometer to measure the basking spot itself. Place the heat lamp at one end so there is always a cooler area to retreat to, and control it with a thermostat. If the animal lies gaping or keeps seeking shade, it is too hot.

Read more: Heat and temperature

HUMIDITY AND WATER

The air should be dry, about 30-40 %. The dry substrate and good ventilation keep the humidity down, and a hygrometer shows whether the level is holding.

Provide a shallow bowl of fresh water, changed daily. Small animals can drown in a bowl that is too deep, so use a very shallow bowl or add stones. The animals also drink droplets and lick the water off their eyes after misting. Mist the set-up lightly once a week in winter and twice a week in the hottest period, and let it dry out again. A small hide with damp moss

can help during shedding and egg-laying.

Read more: Humidity, misting and ventilation

LIGHTING AND UVB

Pristurus carteri is diurnal and basks, so light is very important. Provide strong daylight and a UVB tube, for example a T5 tube with 10-12 % UVB, over the basking spot. UVB is necessary for the species, because it gives the animal vitamin D3 and prevents bone disease. Ferguson zone 3 suits a diurnal, basking desert gecko: a UV index of about 3-4 at the basking spot and shade in the rest of the enclosure. The zone has not been measured for the species. A metal halide lamp gives both heat and UVB and can replace the spot and tube.

Keep the light on for about 12 hours a day from May to October and 8-9 hours from October to May, controlled by a timer. Replace the UVB tube according to the manufacturer's instructions, as the output falls even though the tube still lights.

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

FEEDING

The species is an insectivore. Offer as varied a selection as possible: crickets, small cockroaches, small grasshoppers and flies. The prey must not be wider than the animal's head, and it is a good idea to give one or a few insects at a time so that the animal is not stressed.

Juveniles are fed daily and adults every second or third day with what they can eat in 15-20 minutes. Remove the rest afterwards. The insects should themselves have been given fruit, vegetables or prepared feed before they are passed on. Dust them with calcium and vitamins at every second or third feeding; juveniles and breeding females need calcium more often. If the animal loses weight or will not eat, it is often due to the wrong temperature, light or nutrition.

Read more: Feeder animals: keeping and breeding

BEHAVIOUR AND HANDLING

Pristurus carteri is a small, fast and wary animal that is not suited to handling. It is easily stressed, and the tail can break off if you grip it. Pick it up only when necessary, and never outdoors.

The tail is used for signalling: the animal waves it at conspecifics and curls it up like a scorpion when it feels threatened. Males are strongly territorial, and two males must never be kept together, because they can injure or kill each other. The species can be kept singly, as a pair or as a male with several females in a spacious enclosure with many hiding places. Watch whether a female is being chased, and separate the animals at once if so.

Breeding

SEXUAL MATURITY AND SEXING

The species reaches sexual maturity after about 10 months, but wait to breed until the animals are 2-3 years old and fully developed. Males are paler with orange spots, have distinct hemipenal bulges at the base of the tail and develop small, fleshy spines on the tail when they reach sexual maturity. Females are darker and slightly smaller.

MATING

In the breeding season males show off with a raised and waving tail, chase the females and become aggressive towards other males. An actual winter rest has not been documented, but the shorter day length in winter (8-9 hours from October to May) gives the animals a clear annual rhythm.

Watch the first contact between the male and the female, and remove the male if he chases the female persistently or bites.

EGG-LAYING AND CLUTCHES

The female lays 1-2 hard-shelled eggs at a time and lays several times during the season. There are 8-10 days to a few weeks between clutches. This is taxing for her, so she needs plenty of calcium-dusted insects, and it may be necessary to remove the male so she can recover. How many clutches she lays per year is not documented.

Give her a laying box with at least 10 cm of damp sand or coconut fibre where she can bury the eggs. If she digs around without laying, it may be a sign that she has no suitable site.

INCUBATION

The eggs are carefully moved, without turning them, to a small box with slightly damp vermiculite or perlite. At 28 °C they hatch after about 70-90 days. The species has temperature-dependent sex determination, so the temperature during incubation can affect whether males or females result. Therefore keep the temperature even, and do not change it along the way.

Keep the substrate slightly damp, but not wet, and check that the eggs do not go mouldy. Which temperatures give males and which give females has not been documented for the species.

Read more: Incubating eggs

REARING THE YOUNG

The hatchlings are 3-4 cm long at hatching and can fend for themselves immediately. They need a small, tight faunarium or a small enclosure with hides, a warm spot, UVB and a very shallow water bowl. Give them the smallest insects, such as fruit flies and newly hatched crickets, daily and dusted with calcium. The hatchlings grow quickly, but are sensitive to fluctuating temperature and humidity. Keep them apart from the adults, and split them up when the males begin to show. Growth curves have not been documented for the species, so weigh and measure them regularly.

Health and common mistakes

No diseases specific to *Pristurus carteri* in captivity have been documented. The typical mistakes for small, diurnal desert geckos are:

- Too little UVB and calcium, which can cause soft bones, bent limbs and tremors. Use UVB lighting, and dust the insects.
- Too high humidity and poor ventilation, which cause skin and respiratory problems.
- Overheating under a lamp that is too strong without a cool area. The animal becomes sluggish or desperately seeks shade.
- Depleted females that lay eggs close together in the season without enough calcium and food.
- Dropped tail. The tail is dropped under stress or restraint, almost always at the base, and only partly grows back.
- Shed skin on toes and tail tip. Shedding normally goes easily, and the animal often eats the skin itself. If remnants remain, put the animal for a couple of hours in a box with wet kitchen roll.
- Mites, which can sit in pockets in the armpits. Look for small red or orange dots.

A healthy animal is fast and wary, has clear eyes and a plump tail. See a vet experienced with reptiles if the animal loses weight, stops eating or lies 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.