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TORTOISES AND TURTLES

Tent Tortoise

Psammobates tentorius

Psammobates tentorius is a small, domed tortoise from the Karoo and other semi-deserts of south-western Africa. The shell is 11-15 cm long and has a pattern of yellow or orange rays on a dark ground. The species is difficult to keep: it dies easily in damp, cool air and rarely survives long in captivity. It is only for specialists who can give it a sunny, dry and well-drained set-up.

Family: Testudinidae Former name: *Testudo tentoria; Testudo boettgeri; Testudo oscarboettgeri; Psammobates depressa; Testudo trimeni; Testudo verroxii*

KEY FACTS

THE ANIMAL

Adult size	**11-15 cm** total length incl. tail
Lifespan	**40-50 years**
Active	**By day**
Lifestyle	**Terrestrial**
Habitat	**Semi-desert and rocky terrain**
Difficulty	**Expert**

CARE

Min. enclosure	**120 × 60 × 40 cm** L × W × H for 1 adult
Temperature, day	**22-28 °C**
Basking spot	**32-35 °C**
Temperature, night	**12-18 °C**
Humidity	**30-50%**
Water	**Water dish**
UVB	**Essential** Ferguson zone 3
Diet	**Plants**
Kept	**Singly**

BREEDING

Reproduction	**Egg-laying**
Clutch size	**1-3 eggs**
Clutches per year	**1**
Incubation	**94-198 days** at 28-30 °C

PROTECTION AND PAPERWORK

CITES	**Appendix II**
EU annex	**Annex B**
IUCN	**Near Threatened (NT)**

About the species

Psammobates tentorius has a domed, oval carapace with steeply sloping sides. Each scute has a cone- or pyramid-shaped top, and these are what give the species its name. The scutes have yellow or orange rays on a black or dark brown ground, and colour and pattern vary greatly, both between areas and within the same population. The plastron is yellow or orange, often with dark markings. Carapace length is up to about 15 cm. All measurements in the text are carapace length. Newly hatched young are 25-30 mm long.

Females are clearly larger than males: the largest females are about 15 cm and the largest males about 12 cm, and animals of that size are about 40 years old. The sexes can be told apart when the shell is about 8-10 cm long and the animals are 8-10 years old. Males have a concave plastron and a longer, thicker tail.

The species is highly variable. Three subspecies are recognised, which grade into one another: the nominate form *P. t. tentorius* has sharply raised cones and lives in the southern and eastern Karoo, *P. t. trimeni* is the smallest and most strongly coloured and lives along the west coast, and *P. t. verroxii* has a flatter shell with weakly raised cones and lives in the dry part of the Karoo further inland. The subspecies are poorly defined. Genetic studies show seven lineages, which may be separate species.

Distribution and habitat

Psammobates tentorius is found in south-western Africa: from southern Namibia through the Northern Cape and Western Cape to the Eastern Cape in South Africa. The nominate form lives below 900 m in the southern and eastern Karoo between Matjiesfontein and Grahamstown, *P. t. trimeni* below 900 m in the far western Cape from Lambert's Bay north across the Orange River into Namibia, and *P. t. verroxii* above 900 m from the Northern Cape north-westwards into Great Namaqualand in southern Namibia.

The species lives at very low densities, and the animals are widely scattered; in the southern Karoo there are about 50 animals per km².

The type locality is unknown.

> **Native range:** South Africa and Namibia.

HABITAT

The species lives in semi-desert with scattered shrubs and succulents, in sandy desert and on rocky hills, and only on the margins in dry savanna. Rainfall is low and summers are hot. In the cooler parts of the range the animals may hibernate from June to September, while in the warmer parts they may retreat in the heat of summer.

The animals seek shelter at the base of shrubs, where the shade falls in stripes, and here the high-contrast shell makes them almost invisible. They feed in the morning and late in the afternoon. The food is grasses, sedges and other low herbs, and the species is particularly fond of flowers, low Karoo shrubs and succulents such as mesembs. The dry climate and the specialised diet are the background to the species doing badly in damp and cold surroundings.

Care

THE ENCLOSURE

Almost nothing is known about keeping *Psammobates tentorius*, and the animals rarely survive long away from their habitat. Damp is the most common cause of death in captivity. Temperatures, measurements, incubation and rearing are borrowed from *Chersina angulata*, which lives in the same region and is kept under the same conditions, and its figures are themselves partly based on Mediterranean tortoises such as *Testudo hermanni*. The species must be kept completely dry and well drained, and it must be kept alone, because it easily gets respiratory diseases if mixed with other species.

Indoors the minimum is 8 times the carapace length in length and 4 times in width, that is 120 × 60 cm for an animal of 15 cm, and at least 40 cm high. The substrate is dry, sandy soil, 10 cm deep, so that the animal can dig itself half in. Provide flat stones and dry hides at both ends and a low, stable food dish. Young animals do best in raised boxes where moisture from the ground cannot rise up. Put an opaque border in front of the glass.

Outdoors the animal can only go out in the warmest summer months, in an enclosure in full sun that is very well drained, with bare sandy soil, low shrubs, stones and a heated shelter. Keep the animal dry in rain and on cool, damp days; a small greenhouse or a cold frame with a heat lamp gives warmth when the weather is cold. Walls must be at least 30 cm high and opaque.

Read more: Incubating eggs

TEMPERATURE

By day it should be 22-28 °C in the enclosure and, under a lamp, a basking spot of 32-35 °C, measured on the surface. At night 12-18 °C is suitable. The species is adapted to a South African semi-desert climate, and cold and damp are more dangerous than heat. The species may hibernate in the cooler parts of its range, but it is not documented whether it should be hibernated in captivity, so it is kept active with warmth, light and food all year. Use a radiant heat panel or halogen lamps with a thermostat.

Read more: Heat and temperature

HUMIDITY AND WATER

Humidity should be low, 30-50%, and the substrate should be dry. Damp is the most common cause of death, so misting is used only in very small amounts, and there must be no damp soil in the enclosure. Keep a low, heavy water dish available with clean water and change it daily. Young animals can have a short, lukewarm bath, but must be dried thoroughly afterwards and returned to the warmth straight away.

Read more: Humidity, misting and ventilation

LIGHTING AND UVB

The species is diurnal and basks a great deal. Sunlight is best, and the animal should be out in the sun as often as the weather allows. Indoors there must be UVB lighting with a UV index of 2.0-3.0 at the basking spot (Ferguson zone 3). The light follows the seasons, with about 12 hours a day. Glass and Perspex block UVB.

Read more: Lighting and UVB

FEEDING

In the wild the species feeds on grasses, sedges and other low herbs and succulents, and it has a preference for flowers. Offer wild herbs and grasses, succulents and edible flowers such as dandelion and clover, preferably from your own outdoor area and free of pesticides. Vegetables and fruit are not part of the natural diet and are given at most as a small addition. Keep a cuttlebone available, and dust a little calcium and vitamins over the food. The species has a narrow, specialised diet and feeds in the cooler part of the day, so feeding time is placed in the morning and late in the afternoon. Young animals are fed daily and adults every other day.

Read more: Calcium, vitamins and supplements

BEHAVIOUR AND HANDLING

The species is shy and retreats under shrubs or digs itself half in. It is highly susceptible to respiratory diseases if mixed with other tortoises, so it is kept alone and must never come into contact with other species. A new animal must be kept in strict quarantine. Handle the animal as little as possible.

Read more: Quarantine and hygiene

Breeding

SEXUAL MATURITY AND SEXING

Males have a concave plastron and a longer, thicker tail. Females are larger and have a flat plastron. The sexes can be told apart when the shell is about 8-10 cm long and the animals are about 8-10 years old. The age at sexual maturity is not documented. Lifespan in captivity is not documented either; in the wild the animals live to about 40 years or more, and the 40-50 years in the fact box is an estimate.

MATING

Mating has been recorded in October and November. Males make head movements that probably belong to courtship and that differ between the subspecies. Give the female plenty of hiding places and the chance to get away from the male.

EGG-LAYING AND CLUTCHES

Females lay eggs in September-January, and the clutch is 1 egg in *P. t. trimeni* and *P. t. verroxii* and 2-3 eggs in *P. t. tentorius*. Only one clutch is laid a year. The eggs are almost elliptical, 27-34 × 21-24 mm, and have a brittle shell. The nest is dug in sandy soil. Give the female a box with deep, dry to slightly moist sandy soil where she can dig.

INCUBATION

Incubation time is not documented for the species: the eggs are laid in September-January, and the young emerge in April-May. The fact box shows the incubation time of *Chersina angulata*, 94-198 days, and the same incubation temperature. Place the eggs in an incubator with slightly moist vermiculite, and do not turn them.

REARING THE YOUNG

The young are 25-30 mm long at hatching and emerge in April-May. Rearing has not been described for the species. The young need a low, dry enclosure in a raised box with the same temperatures and UVB as the adults, daily feeding with finely chopped herbs and flowers, and a short, lukewarm bath if they are dehydrated. Keep them dry, because damp is dangerous.

Health and common mistakes

The species is highly susceptible to shell disease and above all to respiratory disease if it is kept cold or damp. Damp is the most common cause of death in captivity, and the species rarely survives for long away from its habitat.

- Respiratory infection: runny nose and wheezing breathing in cold and damp.
- Shell disease: occurs on a damp substrate; keep the substrate dry and well drained.
- Infection: never mix the species with other tortoises.
- Parasites: have faecal samples checked by the vet, especially in newly acquired animals.

Contact a vet with reptile experience if the animal is not eating, is losing weight or has loose faeces.

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.