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GECKOS

Turkmenistan eyelid gecko

Eublepharis turcmenicus

A terrestrial gecko with movable eyelids from the rocky foothills of the Kopet Dag in Turkmenistan and northern Iran. *Eublepharis turcmenicus* is a rare visitor in terrariums, and much of its care is based on the close relative *Eublepharis macularius*: dry and warm by day, cooler at night, live insects and a long, cool winter rest if the animals are to breed.

Family: Eublepharidae Former name: *Eublepharis turkmenicus*

KEY FACTS

THE ANIMAL

Adult size	**17-25 cm** total length incl. tail
Lifespan	**15-20 years**
Active	**At dusk and at night**
Lifestyle	**Rock-dwelling and terrestrial**
Habitat	**Semi-desert and rocky terrain**
Difficulty	**Intermediate**

CARE

Min. enclosure	**90 × 45 × 45 cm** L × W × H for 1 adult
Temperature, day	**25-26 °C**
Basking spot	**35-37 °C**
Temperature, night	**20-23 °C**
Humidity	**30-40%**
Water	**Water dish**
UVB	**Recommended** Ferguson zone 1
Winter rest	**13-14 °C** 12-13 weeks
Diet	**Insects**
Kept	**Singly**

BREEDING

Reproduction	**Egg-laying**
Sexually mature	**18 months**
Clutch size	**2 eggs**
Incubation	**57 days** at 27 °C

PROTECTION AND PAPERWORK

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

About the species

Eublepharis turcmenicus is a terrestrial gecko in the family Eublepharidae, which are geckos with movable eyelids. This distinguishes them from most other geckos, whose eyes are covered by a transparent scale. The species also lacks the adhesive lamellae under the toes that make many other geckos climbers. Instead it uses its toes for running and digging on rock and soil.

The species was proposed in 1977 by Ilya Darevsky and fully described in 1978. The scientific name refers to Turkmenistan, where it was found. The species is close to *Eublepharis macularius*, and in the older literature it was from time to time counted as part of that species. The spelling *E. turkmenicus* is also seen, but is an invalid alteration of the name.

Like all geckos in the genus, it can shed its tail (autotomy) if it is grabbed or frightened. The tail also serves as a fat store. The size is uncertain, and the 17-25 cm including tail in the fact box is borrowed from *E. macularius*.

The species is rare in captivity, and only a few animals are caught and sold as terrarium animals. It was first bred in captivity in 1994, and the methods used for *E. macularius* do not work without a long, cool winter rest. Bear this in mind before acquiring one.

Distribution and habitat

Eublepharis turcmenicus occurs in southern Turkmenistan and northern Iran. In Turkmenistan it lives in the Kopet Dag mountain range. The type locality is given both as near Ashgabat and at Baharly (formerly Bäherden) in the Kopet Dag. In Iran it is found east of the Caspian Sea and south to Razavi Khorasan province.

Kyrgyzstan is also mentioned in some overviews of the range, but this is uncertain and is not included on the map.

> **Native range:** Turkmenistan and Iran.

HABITAT

The gecko lives on rocky foothills and slopes up to about 1,000 metres elevation, in rocky terrain with scattered shrubs, trees and herbs. It is typically found between 500 and 1,000 metres above sea level. By day it hides in crevices, under stones and in underground burrows dug by other animals, and in the evening and at night it forages on the ground.

The climate in the Kopet Dag is dry with a distinct cold season. From October to mid-April the animals often stay hidden, and activity is greatest in the warmer months. The species is an insectivore, but can also take small vertebrates. The population is considered large, and the species is not threatened.

Care

THE ENCLOSURE

The setup is based on *Eublepharis macularius*, which lives in similar conditions. An adult needs an enclosure of at least 90 × 45 × 45 cm (length × width × height), corresponding to a floor area of about 0.4 m². Floor area is the most important thing, because the gecko lives on the ground. Larger is better, as long as the layout provides both a warm and a cool area.

Furnish with at least two hides, one at the warm end and one at the cool end. In addition there should be a humid hide where the animal can shed. Provide flat stones and roots to climb on and to hide under.

A loose, natural mix of garden soil, sand and clay works as substrate, packed at least 10 cm thick so that the animal can dig. The substrate must be completely dry before the animal goes in. Avoid bark chips, wood shavings, coconut fibre on its own and calcium sand, which can cause constipation if the animal swallows them. If the animal is ill or weak, kitchen roll or stone tiles can be used for a period. The enclosure needs a mesh lid or other good ventilation.

Two animals should not be kept together unless the enclosure is large and you can separate them immediately. Disputes between animals often end in bites, shed tails and, in the worst case, broken bones. It is therefore best to keep the animal alone.

Read more: Calcium, vitamins and supplements

TEMPERATURE

Eublepharis turcmenicus needs a clear temperature gradient. By day the air should be 25-26 °C and the surface under the heat source 35-37 °C, and at night the temperature drops to 20-23 °C.

A cooling-off at night is healthier than constant warmth. If extra heat is needed at night, use a ceramic heat emitter without light. Coloured night bulbs disturb the animal's daily rhythm and should be avoided.

Best is a halogen or incandescent bulb above the enclosure, because it provides heat in the way the sun does. Start with about 50 W and adjust according to distance and room temperature. Always measure the surface temperature with an infrared thermometer and the air temperature with a digital thermometer. Heat rocks often become too hot and can cause burns.

In the wild the species stays hidden from October to mid-April. If the animals are to breed, a winter rest of about three months at 13-14 °C is necessary. Only healthy, well-fed adults should be cooled down, and the temperature is lowered and raised gradually.

Read more: Heat and temperature

HUMIDITY AND WATER

The species comes from dry surroundings and needs dry air of 30-40 %, which corresponds to the humidity in most homes. A mesh lid or other good ventilation keeps the air dry. Short rises are harmless, as long as ventilation is good.

On the other hand, the animal needs a humid hide for shedding. Fill it with damp soil or vermiculite and place it at the cool end. The humidity in the hide should be 70-80 %. Avoid damp sphagnum and shredded paper, which the animal may swallow. Shedding problems are among the most common husbandry errors.

Provide a stable, shallow dish of fresh water, changed regularly. It must not be so deep that the animal can drown, and the animal must be able to climb out of it easily. Do not add vitamin drops to the water.

Read more: Humidity, misting and ventilation Read more: Common diseases and signs of illness

LIGHTING AND UVB

The species is most active at dusk and at night and can live without UVB when the food contains vitamin D3. Nocturnal geckos do, however, make use of UVB and benefit from it when given the chance. As for *E. macularius*, a weak UVB light for shade dwellers (Ferguson zone 1) is therefore recommended.

The aim is a UV index of 0.5-1.5 at the spot where the animal lies warmest, and zero at the other end, so that the animal can choose. Pale, uniformly coloured animals are more sensitive and should have less. If the lamp is mounted above a mesh lid, the mesh absorbs part of the UV light, so the distance must be measured with a UV meter. UVB tubes lose strength over time and must be replaced every year.

Keep the light on for about 12 hours a day. At night it must be dark.

Read more: Lighting and UVB

FEEDING

The gecko lives on insects and should not be given vegetables or fruit. In the wild it also takes small vertebrates, but this is not necessary in captivity. Give a mixture of at least three kinds of insects, for example crickets, mealworms, dubia roaches, silkworms and black soldier fly larvae. Waxworms and large mealworms are fatty and are given no more than once a week.

Give as many suitably sized insects as the animal eats in 15 minutes. Juveniles are fed daily, young adults every second or third day. Adults with a tail thicker than the neck can be fed every fifth day. Do not let insects remain in the enclosure, because crickets can eat the animal while it sleeps. Never catch insects in the garden.

The insects should be fed well for at least a day before they are passed on. Dust them with calcium without D3 if the enclosure has UVB, otherwise with calcium with D3. Give a multivitamin with vitamin A (not beta-carotene) once a week to juveniles and every other week to adults. The animal may stop eating for weeks or months during the breeding season or in a cold period. This is normal if its weight stays roughly stable.

Read more: Feeder animals: keeping and breeding

BEHAVIOUR AND HANDLING

Eublepharis turcmenicus is a calm gecko, and handling follows *E. macularius*: the animal can be handled once it has had two weeks to settle in and has eaten normally. Start with short sessions of five minutes, and build up slowly. Sit low to the floor, support the legs, body and tail, and let the animal walk freely from hand to hand. Never grab the tail.

Before mating, the male and female make low, chirping sounds. In *E. macularius* the animal can also click, squeak, bark or scream. Squeaking sounds during handling mean it is unhappy. Rapid tail waving is seen during hunting and mating. Slow tail waving with a raised back is a clear sign that the animal wants to be left alone.

In the wild the animals readily share hides by day, but go about separately at night. In captivity it is safest to keep them singly.

Breeding

SEXUAL MATURITY AND SEXING

Males have a row of pores in front of the vent and two oval bulges behind it, where the hemipenes lie. Females lack both pores and bulges. In *E. macularius* sexing is most reliable when the animal is 13-15 cm long. In *E. turcmenicus*, a captive-bred female can be paired at 18 months old after her first winter rest; the figure is based on few animals. Females should be fully

grown and in good condition before they are used for breeding.

Read more: Buying animals: captive-bred, wild-caught and transport

MATING

Without a winter rest, the methods used for *E. macularius* give no fertilised matings in *Eublepharis turcmenicus*. Give the animals a winter rest of three months at 13-14 °C, so that they come out of the rest in March. Then keep them apart for a month, and put one male at a time in with the female. Mating takes place at night. In the wild the animals are hidden from October to mid-April, and mating probably takes place afterwards.

The female must be healthy and in good condition. Watch for bites and scratches at the introduction, and separate the animals immediately if it goes wrong.

EGG-LAYING AND CLUTCHES

A clutch typically consists of two eggs, occasionally three. The eggs are laid in early June and buried about 8 cm deep in a sandy substrate. In *E. macularius* a female can lay up to six clutches a year, but for *E. turcmenicus* the number is not known. Therefore place a laying box with damp soil or vermiculite in the enclosure, for example in a hide at the cool end.

The female uses a lot of calcium on the eggs. Give her calcium powder without D3 in a small dish, and let her take what she needs. Give plenty of insects, and watch her weight.

INCUBATION

The eggs are carefully moved to a small box with damp perlite or vermiculite without being turned. At 27 °C the eggs hatch after about 57 days; the figure is based on few eggs. By comparison, eggs of *E. macularius* hatch after 45-53 days at 28 °C. In *E. macularius* the incubation temperature determines the sex; whether this also applies to this species has not been investigated.

The box should have a few small ventilation holes and stand somewhere with a stable temperature. Use an incubator if the room temperature fluctuates. Eggs that collapse and turn mouldy are usually dead.

Read more: Incubating eggs

REARING THE YOUNG

The young measure about 8 cm including tail at hatching. They should be kept singly in a small box with kitchen roll or a lightly damp substrate, a small hide and a humid hide, and they need a small water dish with a low rim. For the first few days they live off the yolk, and after that they need small crickets and wax moth larvae, dusted with calcium and vitamins, every day.

Keep them singly or only with animals of the same size, and weigh them regularly.

Health and common mistakes

The typical problems in *Eublepharis turcmenicus* are the same as in the close relative *E. macularius*:

- Shedding problems, where remains of skin stick to the toes and tail. Provide a humid hide and carefully loosen the remains with lukewarm water.
- Too little calcium and vitamin D3, which causes bone disease with a soft jaw, bent legs and an inability to lift the chest off the ground. Dust all insects, and provide UVB.
- Constipation (impaction) after swallowing fine sand, bark chips or other substrates. Use a suitable substrate and do not feed on the substrate.
- Lost tails after handling or fights. It grows back, but looks different.
- Respiratory infection if the enclosure is too damp and poorly ventilated.

Animals hide illness well. Weigh the animal every week and note down weight, appetite and shedding. Weight loss is often the first sign. Seek a vet experienced in reptiles if the animal loses weight, does not eat for several weeks outside a cool period 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.

The full guide with map and updates: herpy.org/en/geckos/eublepharis-turcmenicus