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Satpura Leopard Gecko

Eublepharis satpuraensis

A medium-sized, ground-dwelling gecko from deciduous forests in central India, with movable eyelids, velvety skin and pale crossbands over the back and tail. It is nocturnal and lives on insects. The species was first described in 2014, and husbandry is based on the closely related *Eublepharis macularius*.

Family: Eublepharidae English name: Satpura leopard gecko

KEY FACTS

THE ANIMAL

Adult size	**12-13 cm** snout-vent length
Lifespan	**10-20 years**
Active	**At dusk and at night**
Lifestyle	**Terrestrial**
Habitat	**Dry forest**
Difficulty	**Intermediate**

CARE

Min. enclosure	**90 × 45 × 45 cm** L × W × H for 1 adult
Temperature, day	**24-29 °C**
Basking spot	**32-35 °C**
Temperature, night	**18-22 °C**
Humidity	**40-60%**
UVB	**Recommended** Ferguson zone 1
Diet	**Insects**
Kept	**Singly or one male with several females**

BREEDING

Reproduction	**Egg-laying**
Clutch size	**1-2 eggs**
Clutches per year	**6-8**
Incubation	**35-89 days** at 27-32 °C

PROTECTION AND PAPERWORK

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

About the species

Eublepharis satpuraensis is a medium-sized gecko of the genus *Eublepharis*. Like the other species in the genus it has movable eyelids, velvety skin and no adhesive lamellae under the toes, so it cannot walk up smooth, vertical glass. The tail is relatively short and thick and is used as a fat store.

The species differs from the others in the genus in details of the scalation. The back has about 20 rows of domed tubercles without keels, and the distance between the tubercles is greater than the width of a tubercle. The middle lamellae under the toes are smooth, there are 13-14 preanal pores, and there are three pale bands between the nuchal band and the constriction of the tail. The length from snout to vent is 12-13 cm. Total length is not documented.

The species was described in 2014 and is named after the Satpura Range in central India. Previously the animals from the area were regarded as *Eublepharis hardwickii*. The species is rare in captivity.

Distribution and habitat

Eublepharis satpuraensis is endemic to central India. It has been recorded in the states of Madhya Pradesh, Maharashtra and Chhattisgarh. The type locality lies at Pachmarhi in Satpura Tiger Reserve in Madhya Pradesh, and other type specimens come from Amravati district in Maharashtra.

The species has been found at 390-1,350 metres. The range is known only from scattered records, and the map therefore shows only the approximate region.

> **Native range:** India.

HABITAT

Eublepharis satpuraensis lives in moist and dry mixed deciduous forest and in dry sal forest on hills and plateaus. The animal is ground-dwelling and nocturnal and hides by day in crevices, holes and under stones like the other species in the genus. Food is insects and other arthropods.

The climate in the area has three distinct seasons: a hot, dry early summer, a rainy season with monsoon from June to September and a cool, dry winter. The humidity and temperature at which the animals themselves live have not been measured.

Read more: Humidity, misting and ventilation

Care

THE ENCLOSURE

There is little knowledge about the husbandry of *Eublepharis satpuraensis*. The climate in the range is warm with a cool, dry winter, and the habitat is deciduous forest. The figures for husbandry and breeding are borrowed from *Eublepharis macularius*, which has the same way of life. The closely related *Eublepharis fuscus* also lives under similar conditions.

An adult needs a terrarium of at least 90 × 45 × 45 cm (length × width × height). Floor area is more important than height, because the species lives on the ground, and larger is better, as long as the temperature gradient is maintained. The lid must be of mesh or have ventilation and at the same time close tightly, so neither animals nor feeder insects escape.

Furnish with at least three hides: one at the warm end, one at the cold end and a humid hide with lightly dampened coconut fibre for shedding and egg-laying. Flat stones, cork and roots give variety. Lay stones directly on the floor, so the animal cannot dig in under them. A mixture of unfertilised soil, coconut fibre and a little sand in a layer of about 8-10 cm suits as substrate, so the animal can dig. Kitchen paper is a safe alternative for young, sick animals and in quarantine.

Keep the animals separately. Males must never be kept together, and several animals in the same terrarium can cause bites and lost tails. A male with one or two females can work if there is plenty of space and if the animals can be separated immediately.

Read more: Heat and temperature Read more: Quarantine and hygiene

TEMPERATURE

Under the heat source the surface must be 32-35 °C, and a warm hide should be at about 32 °C. The rest of the terrarium is kept at 24-29 °C, coolest at the opposite end. At night the temperature falls to 18-22 °C, and a night-time drop is healthier than constant warmth. In winter the day temperature is lowered by a few degrees, and the night temperature may go down to about 16 °C, so the seasons of central India are imitated.

Heat with a halogen or incandescent bulb above the terrarium, so the heat comes from above as from the sun. If heat is needed in a hide, a heat mat under the hide can be used, but only controlled by a thermostat and covered by 2-3 cm of substrate. Never use heat rocks. If it is too cold at night, a ceramic heat emitter in a protected fixture is better than a lamp. Measure with a digital or infrared thermometer, and check both the warm and the cold end.

HUMIDITY AND WATER

Humidity is kept at 40-60 %, and the terrarium must have good ventilation, so the air does not become stagnant. The forest in the range is more humid than the desert areas where *Eublepharis macularius* lives, and so slightly higher humidity than for it is suitable. Mist the substrate lightly in the evening, and let it dry partly before the next misting. In the months of the rainy season humidity can for a period lie at the high end.

Always provide a humid hide with lightly dampened substrate for shedding. Stuck skin remnants on the toes are a sign that humidity is too low. There must always be a stable, shallow bowl of fresh water that the animal cannot drown in. Change the water daily.

LIGHTING AND UVB

The species is active at dusk and at night, but light by day regulates the daily rhythm. Give about 12-14 hours of light in summer and reduce gradually to about 8-10 hours in winter, preferably controlled by a timer. The night must be dark.

A weak UVB light for shade-dwelling animals (Ferguson zone 1) is recommended all year. Use a T5 tube of 2.5-5 %, mounted over the terrarium, so the UV index at the resting place is about 0.5-1.5. Always provide shade in part of the terrarium, so the animal can choose for itself. UVB tubes lose output and must be replaced after about 12 months. If the animal gets no UVB, the food must be dusted with calcium with vitamin D3.

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

FEEDING

The animal eats only insects. Give crickets, mealworms and superworms, dubia cockroaches, silkworms and black soldier fly larvae in varying order, at least three kinds. Waxworm and butterworm larvae are fatty and are given only once a week. Choose insects no longer than the distance between the animal's eyes and no thicker than half the width of the head. Do not give insects caught in the garden.

Young are fed daily, young adults every second to third day and adults with a thick tail twice a week. Give as many insects as the animal eats in 15 minutes, and remove the rest. Do not leave live crickets in the terrarium, because they can bite a sleeping gecko.

Feed the insects a nutritious diet for at least 24 hours before they are passed on. Dust them with calcium without D3 when there is UVB, and with calcium with D3 when there is not. Once every two weeks dust with a multivitamin with vitamin A from retinol. Periods of loss of appetite in winter and during the mating season are normal, as long as weight is reasonably stable.

Read more: Feeder animals: keeping and breeding

BEHAVIOUR AND HANDLING

The species is shy by day and active from dusk. Let new animals settle in for two weeks before they are handled, and then accustom them to the hand with short sessions of about 5 minutes. Support body and tail, and sit close to the floor, so an animal that jumps does not fall far. Never grab the tail, which can be shed. Rapid tail twitching shows excitement, while slow tail waving together with an upright posture means the animal wants to be left in peace.

Males must not be kept together.

Breeding

SEXUAL MATURITY AND SEXING

Age and weight at sexual maturity are not documented for *Eublepharis satpuraensis*. In *Eublepharis macularius* females are sexually mature at about 45 g and 9-10 months of age. The male has a row of preanal pores in front of the vent and two bulges behind the vent, where the hemipenes lie; both are absent in the female. Put a female into breeding only when she is fully grown and in good condition.

MATING

Breeding of the species is not documented, so the advice below follows *E. macularius*. The breeding season lasts from January to September. Females over a year old are cooled for six to eight weeks at 23-26 °C with access to water; females in their first year are not cooled, because they are still growing. Stop feeding ten days before cooling.

The male is put in with the female. He vibrates his tail, grips her by the nape and mates for a few minutes. Mating seems violent but is normal. Take the female out again afterwards.

EGG-LAYING AND CLUTCHES

The female lays eggs 16-28 days after mating. A clutch is two eggs, the first clutch often only one. New clutches come at intervals of 15-22 days, typically six to eight clutches per season.

Place a laying box of at least 15 × 15 cm and 10 cm high with damp vermiculite or a damp peat mix in the terrarium, with a hole in the lid. The substrate must be damp like fresh soil but not wet. Give the female plenty of calcium and insects throughout the season, because poor nutrition is a common cause of infertile eggs.

INCUBATION

The eggs are placed in a small box with 2-5 cm of damp vermiculite or perlite, mixed with equal parts water by weight, and buried half-way with at least 1 cm between each egg. The lid must fit tight, with five to ten small air holes. If the eggs are dented, the substrate is too dry.

Incubation takes 35-89 days, shortest at high temperature. Use an incubator. In *E. macularius* temperature determines sex: about 27 °C gives almost only females, about 30 °C a roughly even distribution and 32 °C predominantly males. Whether the same applies to *E. satpuraensis* has not been studied.

Read more: Incubating eggs

REARING THE YOUNG

The young are raised singly in a small, simple box with paper on the bottom, a hide and a water bowl. Keep about 32 °C under the hide and 21-25 °C at the cold end. The young shed within the first day and eat after a few days. Give small insects daily, dusted with calcium, and weigh them regularly.

Health and common mistakes

Diseases in *Eublepharis satpuraensis* have not been described, but the species probably has the same weak points as *E. macularius*. The most common husbandry errors are:

- Too little calcium, D3 and UVB, which causes bone loss with soft jaws and crooked limbs.
- Stuck skin remnants on the toes, caused by too low humidity.
- Swallowed substrate, especially in young or weakened animals. Avoid fine sand for them.
- Respiratory infection in a cold terrarium with stagnant, humid air.
- Lost tail from handling or fighting. The tail grows back but looks different.

Weigh the animal once a week and note weight, feeding and sheds. A thick tail is a sign of a healthy animal. See a vet with reptile experience if the animal loses weight, does not eat for several weeks without being in winter rest 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.