herpy

SKINKS

Blotched Blue-Tongued Lizard

Tiliqua nigrolutea

Tiliqua nigrolutea is a sturdy, heavily built skink from south-eastern Australia with a broad blue tongue and pale, irregular blotches on a dark back. It is diurnal and omnivorous, reaches 35-50 cm in length and can live for many years. The species comes from a cool temperate climate with a distinct winter dormancy and needs a large enclosure, UVB and a night-time temperature drop.

Family: Scincidae Former name: *Scincus nigroluteus; Cyclodus nigroluteus*

KEY FACTS

THE ANIMAL

Adult size	**35-55 cm** total length incl. tail
Lifespan	**15-30 years**
Active	**By day**
Lifestyle	**Terrestrial**
Habitat	**Montane forest and temperate woodland and meadow**
Difficulty	**Intermediate**

CARE

Min. enclosure	**180 × 60 × 60 cm** L × W × H for 1 adult
Temperature, day	**21-29 °C**
Basking spot	**37-40 °C**
Temperature, night	**18-24 °C**
Humidity	**40-50%**
Water	**Water dish**
UVB	**Recommended** Ferguson zone 3
Diet	**Insects, fruit, plants and worms/snails**
Kept	**Singly**

BREEDING

Reproduction	**Live-bearing**
Litter size	**5-11 young**
Gestation	**90-150 days**

PROTECTION AND PAPERWORK

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

About the species

Tiliqua nigrolutea is a large, sturdy skink with a heavy, tubular body, short legs and a triangular head. The tongue is broad and blue, and the animal displays it together with the open mouth when it feels threatened. The pattern varies with the habitat. The lowland form is grey or brown with paler, silvery to beige blotches on the back, which are surrounded by darker areas. The highland form is darker, often deep black, and the blotches are much paler: cream, pink, salmon or orange. The name comes from Latin and means "black" and "yellow", after the black and yellow pattern.

Adults are 35-50 cm long. Large animals can reach 55 cm and weigh over 1 kg. Females grow slightly larger than males, while males have a relatively larger head and a sturdier body. The species relies on camouflage and bluff. If cornered, it hisses and flattens its body, and as a last resort it bites. The bite can hurt, but the teeth are blunt and seldom break the skin, and the animal is not venomous. The tail can be shed, but the species does so less often than most other skinks.

The species is easily confused with the other blue-tongued skinks, especially *Tiliqua scincoides*, but is recognised by the pale, irregular blotches on the back and is adapted to a cooler climate.

Distribution and habitat

Tiliqua nigrolutea is endemic to south-eastern Australia and is found in New South Wales, the Australian Capital Territory, Victoria, Tasmania and South Australia. The lowland form lives in Tasmania and at lower altitudes in Victoria right down to the coast. Towards the north the species becomes more and more tied to the highlands, and the highland form is found only in higher-lying regions in New South Wales and in the mountains of Victoria. The type locality is the Blue Mountains in New South Wales.

> **Native range:** Australia.

HABITAT

The species lives in wet and dry sclerophyll forests, montane forests and coastal heath. It has adapted to both farmland and towns and is seen in gardens, where it is a beneficial animal because it eats snails and other pests. In the wild the diet is broad: insects, snails, carrion, wild flowers, berries and other greens and occasionally small vertebrates.

The climate is cool and temperate with cold winters. In the morning the animals bask before seeking food during the warmest hours of the day, and when they are active they keep the body at about 30-35 °C. In cold weather they lie inactive deep in cover, but emerge and bask on sunny days. The species usually emerges from hibernation early in spring, and that is the mating season. It is this seasonal rhythm, with a cool winter half-year and a warm summer half-year, that is imitated in the enclosure.

Read more: Brumation and the seasons

Care

THE ENCLOSURE

An adult animal needs an enclosure of at least 180 × 60 × 60 cm (length × width × height), corresponding to just over 1 m² of floor area. Larger is better. The floor is more important than the height, because the animal lives on the ground, but with lamps inside the enclosure the height must be at least 60 cm. The dimensions are borrowed from the genus. Young animals can live in an adult enclosure when there are many hides.

The animal must be kept alone. Both males and females are territorial, and two animals in the same enclosure can be seriously injured.

As substrate use 10-15 cm of loose soil that the animal can dig in, for example a mixture of unfertilised topsoil and sand. Avoid shavings of pine and cedar. Bark tubes, pieces of wood and boxes provide hides at both ends, and a slate or tile slab wears down the claws. Place a flat, pale stone under the heat lamp, but never use a heat rock with a built-in heating element, because it can burn the animal. The enclosure must be well ventilated, free of draughts and securely closed.

TEMPERATURE

The air temperature must be 21-29 °C from the cool to the warm end, and the surface of the basking spot must be 37-40 °C, so that the animal can keep its body at the 30-35 °C it prefers when active. The figures are borrowed from the genus. *T. nigrolutea* comes from cooler regions than *Tiliqua scincoides* and does not need basking spots warmer than 40 °C. Measure the surface temperature with an infrared thermometer and the air temperature with digital thermometers at both ends.

Use halogen spots or a heat lamp with broad radiation in a ceramic fitting above mesh, and put a thermostat on all heating equipment. At night 18-24 °C is suitable, and a night-time drop is healthy. If the room becomes colder, use a ceramic heater or a heating panel without light. Cold nights without sufficient warmth by day can trigger dormancy or illness.

Read more: Heat and temperature

HUMIDITY AND WATER

The humidity must be 40-50 %, measured at the cool end. A wet substrate is not necessary, but a hide with damp sphagnum, where the humidity approaches 100 %, helps with shedding. The hide must be in the cool half, and the moss changed often so it does not go mouldy. A large, shallow water dish must always be available. The water is changed every day, because the animal often uses the dish as a toilet. Clean the dish with an animal-safe disinfectant once a week.

Read more: Humidity, misting and ventilation Read more: Quarantine and hygiene

LIGHTING AND UVB

The species is diurnal and needs both UVB and strong light. Use a T5 tube with UVB, and position it so that the UV index at the basking spot is about 3-4 (Ferguson zone 3). There must be no glass or plastic between the lamp and the animal, and the animal must not be able to get closer to the lamp than about 25 cm. Replace the tubes every 12 months, because the UVB output declines even though the light looks unchanged.

Animals of the genus can live and breed for years without UVB if the food contains D3, but the vitamin D level in the blood is lower, so UVB is the best solution. The light is on for about 12 hours a day, preferably slightly shorter in winter. A couple of hours in direct sun is good when the animal is supervised in a closed enclosure with shade and hides.

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

FEEDING

Tiliqua nigrolutea is omnivorous. The staple is a mixture of greens, animal protein and a little fruit. Juveniles under 12 months need 70-80 % protein, adults about 50-60 %. Adults need 40-50 % vegetables and leaves, and fruit at most 10 %. Too much protein causes obesity in adults.

Protein can be crickets, locusts, cockroaches, black soldier fly larvae, snails, earthworms and silkworms as well as eggs and lean meat. Superworms, whole fish and thawed pinkie mice are given only as treats. Greens are, for example, dandelion leaves, kale, pak choi, courgette, pumpkin and carrot, finely grated. Avoid avocado, onion, aubergine, citrus fruits, rhubarb and poisonous flowers such as tulips and daffodils. The feeder insects must be fed well for 2-3 days before feeding and dusted with calcium.

Juveniles under three months are fed every day, subadults about 3 times a week and adults 1-2 times a week. A portion is about the size of the animal's head. Commercial reptile food already contains calcium and vitamins, and an extra multivitamin on top can cause overdose. Good-quality wet dog food can be included in small amounts, but not as the main food.

Read more: Feeder animals: keeping and breeding

BEHAVIOUR AND HANDLING

Tiliqua nigrolutea is calm, and captive-bred animals often become tame. When you lift the animal, the whole body including the tail must rest on your forearm, and one hand must be visible. Never grab the tail, and avoid touching the top of the head. Begin with 5 minutes of handling a day, and increase slowly. Wash your hands after handling.

The body language is clear. Hissing, a flat, inflated body and an open mouth with the tongue out are a warning, and the animal should then be left in peace. A relaxed animal walks calmly and flicks its tongue.

Each animal must live alone. The species comes from a cool climate and hibernates in the wild. When the temperature falls and the days become short, an animal in the enclosure can become inactive and stop eating for several weeks. Only healthy, fully grown animals may hibernate, and they should be examined by a vet first. Temperature and duration for a controlled hibernation are not documented for the species.

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

Breeding

SEXUAL MATURITY AND SEXING

The animals probably become adult at around three years of age, when they are about 40 cm long. Females should be fully grown and in good condition before they are used for breeding. The sexes are hard to tell apart externally: males have a relatively larger head and a sturdier body, but there is a lot of overlap. Probing can injure the animal, and the most reliable method is X-ray or examination at the vet.

MATING

The species mates in spring, in the wild from September to November, when the animals emerge from hibernation. The males pursue the females and may fight each other. Males are sexually active every year, while females seldom breed every year, and a female can have several years between litters. Mating is rough, and the female may get bite marks. The animals are therefore kept apart all year and brought together only in the mating season under supervision. The female must be healthy and in good condition. Separate the animals if the male bites persistently.

EGG-LAYING AND CLUTCHES

The species is live-bearing. The female gives birth three to five months after mating, in the wild between December and April, most often late in summer or in autumn. The embryos develop in the oviduct with a well-developed placenta. The highland form has fewer and larger young (about five) than the lowland form (about 11), and the litter can weigh more than a third of the female's weight. A pregnant female is heavy and slow late in gestation.

The female needs plenty of food and calcium and a warm basking spot while she is pregnant. If she becomes lethargic, stops eating or strains without result, contact the vet.

INCUBATION

There are no eggs to incubate. Gestation lasts three to five months, about 90-150 days, counted from mating. The female must have the same temperatures as usual, and the basking spot must not be removed, because the warmth drives embryonic development. Keep her alone in the enclosure. After birth the young eat the foetal membranes, and that is normal.

REARING THE YOUNG

The young are independent immediately after birth, shed for the first time within a few days and disperse quickly in the wild. They must live separately with a basking spot, UVB, a humid hide and the same furnishings as the adults. Feed them every day with 70-80 % protein: small crickets, earthworms, eggs and finely grated greens, and dust with calcium. The size at birth is not documented for the species.

Health and common mistakes

Most problems are caused by husbandry. The typical ones are:

- Metabolic bone disease from a lack of calcium, vitamin D or UVB. It causes soft jaws and crooked legs.
- Shedding difficulties, where shed remains stay on the toes and tail. Provide a humid hide and a lukewarm bath.
- Skin infections and respiratory infections if the substrate is constantly wet or the temperature is too low.
- Obesity from too much protein and too little movement. Weigh the animal regularly; sudden weight loss is a warning sign.
- Ticks in the ears and under the scales and internal parasites, which can be seen in the faeces. New animals should be quarantined and have a faecal sample examined.
- Poisoning from snails that have eaten slug pellets.
- Problems during hibernation if the animal is not healthy or becomes too cold.

Seek a vet with experience in reptiles if the animal loses weight, stops eating, breathes with its mouth open or seems listless.

Read more: Common diseases and signs of illness

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.