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SKINKS

Spiny Skink

Tribolonotus novaeguineae

Tribolonotus novaeguineae is a small, shy skink from the lowland rainforest of New Guinea with rows of pointed, backward-curving scales down the back. It lives hidden in damp forest litter, is most active at dusk and lays only one egg at a time. Little is known about the care of this particular species, and it is best suited as a display animal.

Family: Scincidae Former name: *Zonurus novaeguineae*

KEY FACTS

THE ANIMAL

Adult size	**16-20 cm** total length incl. tail
Lifespan	**10 years**
Active	**At dusk and at night**
Lifestyle	**Terrestrial and burrowing**
Habitat	**Rainforest and wetland**
Difficulty	**Intermediate**

CARE

Min. enclosure	**60 × 45 × 45 cm** L × W × H for 1 adult
Temperature, day	**24-27 °C**
Basking spot	**27-28 °C**
Temperature, night	**22-24 °C**
Humidity	**70-90%**
Water	**Water dish**
UVB	**Recommended** Ferguson zone 1
Diet	**Insects and worms/snails**
Kept	**Singly or in pairs**

BREEDING

Reproduction	**Egg-laying**
Sexually mature	**36-48 months**
Clutch size	**1 eggs**
Clutches per year	**1-6**
Incubation	**65-85 days** at 23-27 °C

PROTECTION AND PAPERWORK

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

About the species

Tribolonotus novaeguineae is a compact, sturdily built skink with a short head, strong legs and four rows of keeled, sharply pointed scales down the back, giving it an armoured, almost dragon-like appearance. The colour is dark brown, and the underside is yellowish to cream. The flanks have small keeled scales, and in front of the eye there is only a small pale orange to yellow patch. The close relative *Tribolonotus gracilis* instead has knobs on the flanks and a broad, red-orange half-ring around the eye, and this is the most reliable distinguishing feature between the two species, which are often confused in the trade.

The species was described by Hermann Schlegel in 1834 and is the type species of the genus. The body is about 8-10 cm long from snout to vent, and the tail is about as long, so the total length is about 16-20 cm. The genus has two unusual features among skinks: glands on the belly and pores on the palms and soles, and the ability to make sounds. Several authors have held that *T. gracilis* and *T. novaeguineae* are one species, but more recent studies of relationships treat them as two species with different ecology, and this guide does the same.

The animal is shy and lies hidden for most of the day, so it is an animal to watch and not for handling.

Distribution and habitat

Tribolonotus novaeguineae lives in New Guinea, both in the Indonesian part (the provinces of Papua and West Papua) and in Papua New Guinea. Records are spread over most of the island: from the Bird's Head Peninsula at Manokwari and the south-west coast at Triton Bay and Timika, via the area around Jayapura and Vanimo, to the Torricelli Mountains, Wewak, Madang and Lae. Most records are from the lowlands and low hills. The type locality is the old fort Merkusoord at Triton Bay on the island's south-west coast.

> **Native range:** Indonesia and Papua New Guinea.

HABITAT

The genus lives in warm, humid rainforest, where the animals stay under fallen branches, leaves and other forest litter, often near water. They burrow in under the litter and have a nest between it and the soil. The ground is always damp, and the animals hunt small worms, larvae and insects at dusk. They do not bask, but warm themselves in the burrow or under dead wood warmed by the sun. The genus is also found in coconut plantations, where the animals live in piles of coconut shells.

The climate in the lowlands of New Guinea is warm and humid all year, with daytime temperatures of about 27 °C, nights of about 23 °C and a humidity above 70 %.

Read more: Humidity, misting and ventilation

Care

THE ENCLOSURE

Little is known about the care of *Tribolonotus novaeguineae*. The species lives in the same kind of rainforest floor as *Tribolonotus gracilis* from northern New Guinea, has the same size and largely the same requirements. The figures in this guide, including those for breeding, are borrowed from it.

A single adult needs a terrarium of at least 60 × 45 × 45 cm (length × width × height), and bigger is better. A pair needs at least 90 × 45 cm of floor space. A front-opening terrarium is calmer than one that is opened from above.

The substrate must retain moisture and imitate the rainforest soil, for example about 60 % topsoil and 40 % coconut fibre, 5-10 cm deep and deeper if planting directly in it. Place a thick layer of fallen leaves on top, and provide cork, pieces of bark and coconut shells as hides, so the animal can choose for itself. The terrarium must be ventilated enough that it dries out a little between mistings, but not so much that the humidity falls.

Once the animal is fully grown, it should preferably live alone. Animals of the same sex are aggressive towards each other, especially males. A pair can be kept together in a spacious terrarium with plenty of hides. Remove faeces daily, and replace the entire substrate every 3-4 months.

TEMPERATURE

The daytime temperature should be 24-27 °C, and a warm hide at 27-28 °C keeps the animal going, even though it does not bask. At night 22-24 °C is suitable.

Use a small heat lamp with a ceramic fitting above the hide, controlled by a thermostat. If the room is cold at night, use a ceramic heater without light. Measure the temperature inside the hide itself with a probe.

Read more: Heat and temperature

HUMIDITY AND WATER

The humidity should be 70-90 %, highest at night, and the substrate must always be damp. Mist the terrarium morning and evening with clean water (reverse osmosis or distilled), and raise the humidity to 85-90 % if the animals are to breed. The animal dries out easily, so a shallow water dish, partly sunk into the substrate, must always be available. The animal drinks and sits in the dish and can hold its breath for a long time under water if frightened. Change the water every day.

Dull eyes and a limp body are signs of dehydration.

LIGHTING AND UVB

The species is active at dusk and needs no strong basking spot, but 12 hours of daylight a day maintains its daily rhythm. Weak UVB is the best solution: a T5 tube for forest species that live in shade (Ferguson zone 1), with a UV index of 1-2 at the highest point under the lamp. The animal can manage without UVB if the food is dusted with calcium and vitamin D3, but UVB gives a more natural metabolism. The tube is replaced every 12 months, and there must be plenty of shade and cover.

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

FEEDING

Tribolonotus novaeguineae is insectivorous. The staple diet is crickets, cockroaches, earthworms, mealworms and silkworms, and waxworms and superworms are given in smaller amounts. A live earthworm placed at the hide usually brings the animal out. Prey must be no wider than half the animal's head, and for young no wider than the distance between the eyes.

Young animals are fed every day and adults every other day. Give as much as the animal can eat in about five minutes. Dust the food with calcium at every feeding and with calcium and vitamin D3 at every other one. The feeder insects must have been fed well for 1-3 days before they are passed on.

Read more: Feeder animals: keeping and breeding

BEHAVIOUR AND HANDLING

Tribolonotus novaeguineae is an animal to watch and not for handling. When seized, it may make sounds, play dead, try to flee or drop its tail, and this stresses it. Give a new animal at least two weeks in peace, and then train it to take insects from soft-tipped tweezers. The animal is mostly seen at dawn, at dusk and at feeding.

It spends most of the day in its hide. A pair often shares a hide and defends the nest loudly, especially when there is an egg. The species can be kept in a humid display terrarium together with small frogs and lizards with the same requirements, but eggs and young are vulnerable in shared terrariums, and it requires a large terrarium with plenty of hides.

Breeding

SEXUAL MATURITY AND SEXING

The animals become sexually mature at 3-4 years. The male is often larger and sturdier than the female, but size is not a reliable sign. In the genus the male has a rectangular patch of four to six enlarged ventral scales at the navel and grey to grey-blue, raised pores under the third and fourth toes of the hind foot. The underside can be seen by placing the animal in a small, empty glass container and photographing it through the base.

MATING

Breeding is sparsely described for the species. The genus breeds in the rainy season, and in the terrarium the breeding season is started with more frequent misting and higher humidity. Choose a healthy, adult pair, and give them time to settle in a terrarium with at least 90 × 45 cm of floor space and several hides, so they can choose for themselves. If the animals suit each other, they often share one hide.

Keep the humidity at about 70 % outside the breeding season, and raise it to 85-90 % by misting several times a day as the breeding season approaches. The temperature should stay between 23 and 27 °C. Feed every other day with crickets and earthworms as the staple.

EGG-LAYING AND CLUTCHES

The species lays eggs. The female lays only one leathery, oval egg at a time, about 2 cm long, at intervals of 5-6 weeks and up to six eggs in a breeding season. The egg is buried just below the surface inside the hide.

Make a hollow several centimetres deep in the substrate directly under the hide the pair has chosen, and fill it with a loosely packed, slightly damp mixture of peat moss and topsoil. Cover with cork bark. The animals defend the nest aggressively.

INCUBATION

The eggs hatch best in an incubator. Carefully remove the egg from the nest, and place it half-buried in damp peat moss in a lightly ventilated container without turning it. The moss should be damp enough that no water drips out when a handful is squeezed hard. As long as the egg is firm and plump, no more water is added. If it becomes necessary, water the moss, never the egg.

At 23-27 °C the egg hatches after 65-85 days. A dented egg is usually dehydrated or dead, and an egg that sweats is dying or already dead. A little denting and moisture on the shell just before hatching is normal, however.

Read more: Incubating eggs

REARING THE YOUNG

The young are 6-8 cm long and weigh 3-5 g at hatching, and within a few hours they seek food and cover. The young can be reared in a plastic box or a small terrarium with damp kitchen paper or moss, a coconut shell as a hide and a shallow water dish. Feed them every day with small crickets and other live prey, and dust the food with calcium and vitamin D3 at every other feeding.

A pair and their young can live together, but remove the young when there is not enough space, and no later than before they become sexually mature.

Health and common mistakes

Little is known about diseases and parasites in the genus, and wild-caught animals that look healthy can die suddenly, even after several years in captivity. The typical problems and their prevention are:

- Parasites in newly acquired, wild-caught animals. Quarantine new animals singly in a small, simply furnished box with damp kitchen paper, a shallow water dish and a coconut shell, and have a vet examine a faecal sample for worms and protozoa as soon as possible.
- Dehydration. Dull eyes and a limp body are signs of illness or too little moisture.
- Metabolic bone disease from too little calcium and vitamin D3. Dust the food with calcium and vitamins, and preferably use weak UVB.
- Lost tail from fright or handling.

A healthy animal is alert, has clear, shiny eyes and no wounds, parasites or deformities. It may stand perfectly still, but should react when touched. See a vet experienced with reptiles if the animal loses weight, does not eat or lies sluggishly.

Read more: Quarantine and hygiene Read more: Common diseases and signs of illness Read more: Buying animals: captive-bred, wild-caught and transport

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.