

Keeping of Gidgee spiny-tailed skink (*Egernia stokesii* (Gray, 1845)) at BION Terrarium Center

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Egernia stokesii (Gray, 1845) is skink species from Scincidae family that demonstrates certain type of social behavior – forming stable social groups (Duffield, Bull, 2002). It is also known as Gidgee skink, spiny-tailed skink, Stokes's skink and Stokes's egernia. These skinks are widely distributed in Australia, though having disrupted natural area (Chapple, 2003). They occur in the southern Northern Territory, eastern Southern Australia, south-west and central Queensland and Western Australia. At present, four subspecies are generally recognized: *E. stokesii stokesii*, *E.s. aethiops*, *E. s. badia* (all reported from Western Australia) and *E. s. zellingi* that refers to central and eastern Australian populations (Fig. 1).

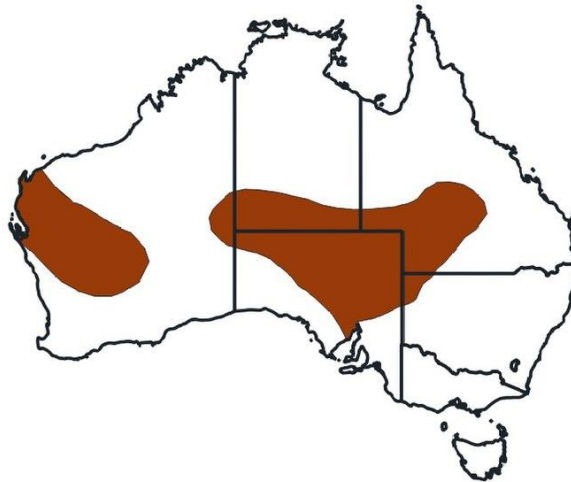


Figure 1. Natural distribution of *E. stokesii*
(https://en.wikipedia.org/wiki/Stokes%27s_skink)

E. stokesii is mostly often found inhabiting rocky outcrops, semi-arboreal areas, grasslands, woodland or shrubland habitats. They are diurnal and non-burrowing, instead sheltering in rock crevices, under logs, or in tree hollows (Chapples, 2003).

Coloration is from olive to reddish brown, with lighter ventral scales that range from white to yellow with scatterings of lighter colored dorsal scales (Cogger, 2014). The dorsal scales are keeled from the back of the neck to the tail and spiny tail scales are a prominent feature of the species (Fig. 2). The legs are short, requiring the lizard to slide on its belly when moving. Tail is flattened and shorter than the head and body, at approximately 35% of the snout to vent length, lacking the ability to autotomize. SVL of adult animals is 15-19 cm (5.9-7.48 in) so this is a medium-sized skink. These skinks become sexually mature at the age of 5-6 years. Average lifespan is 10-25 years and even more in captivity. These lizards are pretty fast and can escape from the terrarium or hide under the nearest shelter within just one second.



Figure 2. General physical appearance of *E. stokesii*.

The species displays complex social organisation, forming social aggregations of up to 17 closely related individuals (Duffield, Bull, 2002). These aggregations remain stable over time, with evidence of adult individuals remaining in the same social group for over five years. Juveniles typically remaining within the natal group until maturity (Pearson et al., 2016; Pearson et al., 2020). The groups typically consist of a breeding pair, immature juvenile and sub-adult offspring from successive litters, and other closely related individuals. Each group has a defined home range, with several core, preferred rock or log crevices shared by group members within the home range. Each group shares a common scat pile outside these refuge crevices, and are able to distinguish group members from

non-group members using olfactory chemical cues (Duffield, Bull, 2002; Johnston et al., 2020). Individuals of the same group show close contact to each other while basking or having a rest.

The species is omnivorous. The species uses two key mechanisms to reduce predation; the spiny tail morphology and defensive behaviors such as seldom straying far from rock crevice refuges.

The breeding season in the wild differs based on location; females in South Australia have been recorded giving birth between mid-summer and early autumn, however, a wild-caught female from Western Australia gave birth in mid-winter (<https://australian.museum/learn/animals/reptiles/gidgee-skink/>).

This species is highly monogamous with most males fathering only one litter. Females are sexually mature at a snout-vent length of 17 cm (6.69 in) and have only one litter per season. Not all mature females produce every season. In one study, 26 percent of the females did not reproduce in one year. Litter size ranges from 1-8. Gravid females experience contractions of the body and tail for up to 40 minutes prior to the beginning of birth. The young are born head first and each young takes from 26 to 73 seconds to be born. As little as 6 seconds may separate the birth of two skinks in the same litter and a single female can take 1-12 days to give birth to all her young (Fyfe, 2008; <https://australian.museum/learn/animals/reptiles/gidgee-skink/>).

Egernia stokesii is listed in IUCN Red List as a species with “LC” (Least Concern) status and “Decreasing” population trend. This is a non-CITES species (<https://www.iucnredlist.org/species/62246/101743684>).

Keeping and breeding requirements

Terrarium. For adults terrarium size is 180*60*50 cm (71*24*20 in). Babies are kept in groups and placed into plastic boxes of 60*60*50 cm (24*24*20 in) on paper or wipes (instead of a substrate) immediately after their birth. Decoration includes a water bowl, logs and wood for climbing, hiding places made of bamboo tubes, pieces of bark, stones. Clay or loam is used as substrate.

Lighting. We use a 18 W lamp SALVINIA REPTISTAR. Lighting period is up to 14 hours in summer and about 9-10 hours in winter. UVB 10.0 light is needed; exposure is up to 14 hours in summer and about 9-10 hours in winter. A100 W spot lamp is used for heating for about 5 hours a day in winter and during the whole day in summer.

Temperature. At daytime temperature is +26 - +32 °C (78.8-89.6 °F), at night - +25 - +26 °C (77.0-78.8 °F), at basking point it is about +45 °C (113 °F).

Humidity. Humidity is 50-60% for adults. During the breeding season, humidity should be increased to 80% by spraying in the morning. Humidity for babies is 60-70%. It is achieved by constant moisture of wipes (instead of substrate).



Figure 3. *E. stokesii* baby spotted inside the terrarium.

Diet. We feed adults every other day. Crickets – 1-2 times a week, 5-7 pieces per animal; Turkestan roaches – 1-2 times a week, 5-7 pieces per animal; zophobas – once a week, 3 pieces per animal, salad – 3-4 times a week. We feed babies daily with crickets, Turkestan roaches, and small zophobas, 5-7 insects per animal. Salad should be offered daily. Salad ingredients vary according to the season: summer mix includes leaves of dandelion, nettles, clover, knotweed, coltsfoot while winter mix consists of Chinese cabbage, carrot, arugula, parsley, dill, celery, dried alfalfa. Mineral supplements such as Calcium with D3 are mandatory.

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