

Scientific note

Tail wriggling and tail autotomy give a chance to survive: Skink (*Trachylepis sechellensis*) preying on gecko (*Urocotyledon norzilensis*) on La Digue Island, Seychelles

(Sauria, Scincidae and Sauria, Gekkonidae)

Frank Glaw & Kathrin Glaw



Fig. 1. *Trachylepis sechellensis* preying on *Urocotyledon norzilensis* on La Digue Island. The photo (taken from the video) shows the moment before the tail fell off and the gecko escaped shortly, before being recaptured by the skink.

The endemic diurnal skink *Trachylepis sechellensis* (Duméril & Bibron, 1839) is widespread across the granitic (and some coralline) islands of the Seychelles and very common in various habitats (Rocha et al. 2009), whereas the recently described small nocturnal gecko *Urocotyledon norzilensis* Lobón-Rovira, Rocha, Gower, Perera & Harris, 2022 is a rock-dwelling species typically associated with granitic formations and restricted to the northern Seychelles islands (Rocha et al. 2011, Lobón-Rovira et al. 2022). Due to their different activity patterns (diurnal versus nocturnal), close encounters of both species might be relatively rare and nothing seems to be known about their interactions.

On 23 December 2021, 11:00 am we noticed a cracked granitic boulder in a dry rainforest stream valley near Grande Anse in the south of La Digue Island (04.37034°S, 55.83850°E, ca. 56 m a.s.l.) with two individuals of *U. norzilensis*. After removing the upper piece of the stone, we took photos and videos of one of the exposed geckos when at 11:01 an adult *Trachylepis sechellensis* approached very quickly, apparently oblivious of the human observers, and grabbed the gecko in the pelvic region (Fig. 1). The grabbed gecko fell in a state of rigidity and the tail did not wriggle. Two minutes later (at 11:03) the skink shifted its hold towards the tail now triggering the tail to wriggle violently. When the tail fell off three

Frank Glaw (corresponding author), Zoologische Staatssammlung München (ZSM-SNSB), Münchhausenstr. 21, 81247 München, Germany; e-mail: glaw@snsb.de
Kathrin Glaw, Museum Mensch und Natur, Schloss Nymphenburg, 80638 München, Germany

seconds later, the skink lost both the tail and the body from its mouth (Supplementary Video 1, this scene shown in slow motion) and pursued the quickly fleeing gecko. Both the skink and the gecko disappeared from the camera view, but reappeared a few seconds later when the nimble skink had re-captured the slower gecko in the throat and neck region. At 11:06 the *Trachylepis*, using head movements, had pushed the gecko into a position that enabled the skink to swallow it head first. At 11:07 it completed the swallowing process by S-shaped movements of the anterior body, apparently in order to move the prey into the stomach. Afterwards we found the fallen gecko tail in the leaf litter and put it on the stone next to the skink, but at first the lizard did not recognize the only weakly moving tail. However, at 11:11 the skink recognized and grabbed the tail and swallowed it within about 30 seconds.

Although there are numerous papers on different aspects of caudal autotomy in lizards (e.g., Bateman & Fleming 2009), concrete evidence that this anti-predator behaviour can lead to the loss of the prey from the predator's mouth seems to be rarely documented. Our observations and the supplementary video demonstrate that violent tail wriggling and subsequent tail autotomy of a grabbed gecko can actually lead to a chance to escape, which in this case, however, was ultimately not successful. Furthermore, we show that *T. sechellensis* can be an efficient predator of *U. norzilensis*. To avoid being eaten by these very common and nimble skinks, the small geckos might be forced to retreat in crevices and other narrow hiding places during the day that

the larger skinks cannot reach. To further reduce the risk of predation, *Urocotyledon* might become active only after dusk, when *Trachylepis sechellensis* are no longer active.

Supplementary Video 1: Youtube video taken by F. Glaw and edited by T. Glaw, available at: <https://www.youtube.com/watch?v=ABGdO0fj2C4>

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