# Antipredatory behavior of the lizard *Leposoma scincoides*

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Squamates exhibit diverse antipredatory tactics (Rocha, 1993; Pough et al., 2004), making this group an interesting model to evaluate evolutionary mechanisms of predatory avoidance (Greene, 1988). Many antipredatory behaviors have been reported for lizards: thanatosis (in gymnophthalmids; Humphreys & Ruxton, 2018), aposematism, mimicry (sphaerodactylids), cryptic coloration (*Enyalius, Leposoma*), color and ontogenetic polymorphism (*Enyalius*), tail autotomy (many families), tail luring (*Eumeces)*, skin shedding (gekkonids, skinks, and sphaerodactilids), cornification (*Phrynosoma*), antipredatory vocalizations (gekkonids), aggressive displays, emetic substances (*Phrynosoma*), locomotor escape or running (teiids and tropidurids), spanking, cloacal discharge, scratching, venom (*Heloderma* and *Varanus)*, and biting (see review in Miranda et al., 2022).

*Leposoma* lizards occur in Atlantic Forest refuges inland, in *brejos de altitude*, or on the coast in eastern Brazil (Goicoechea et al., 2016; Damasceno et al., 2021). *Leposoma scincoides* (Spix, 1825) is a gymnophthalmid with secretive habits occupying leaf litter habitat, restricted to the Atlantic Forest of eastern Brazil, from Teresópolis in the state of Rio de Janeiro to Salvador in the state of Bahia (Rodrigues, 1997; Damasceno et al., 2021). Its principal antipredatory mechanism is cryptic coloration blend-

ing with leaf litter (Teixeira & Fonseca, 2003); recently, thanatosis was reported for this species (Zocca et al., 2023). Other aspects of predator avoidance in the species remain unknown. In this note, we report a novel defensive behavior for *L. scincoides*.

On 9 December 2010, during a herpetological survey, a *L. scincoides* was found in the leaf litter of the Protected Area of "Mestre Álvaro", municipality of Serra, state of Espírito Santo, Brazil (20°08′32″ S, 40°07′42″ W; 20°11′28″ S, 40°19′44″ W). When first observed, the lizard tried to hide under a leaf, its body contorted, rigid, and motionless, reducing its size with the head hidden under the body (Fig. 1A-B). When captured by hand, the lizard remained immobile. After being released on the ground, it contorted the body into a circular or spiral shape (Fig. 1C-D), exposing the dorsum, then the venter, closing the eyelids, and maintaining this posture for almost 60 seconds. When we attempted to touch it again, the specimen changed posture and fled (Fig. 1E-F). We also observed that the lizard's tail was in the process of regeneration (Fig. 1F), indicating caudal autotomy, likely due to a predation attempt or an agonistic encounter.

We recorded a series of antipredatory behaviors for *L. scincoides*, including the twisting posture of the body or "coil body". This is a common defensive tactic exhibited by snakes (Johnson, 1975; Greene, 1988; Turner, 2022), and a similar behavior occurs in the armadillo lizard *Ouroborus cataphractus*, that bites the own tail while coiling (Mouton et al., 1999), and by *Varanus exanthematicus*, that bites its hind legs and remains immobile, exposing the venter (Greene, 1988). This body posture may make it difficult for a predator to swallow the prey, as in the snake *Prosymna* (Greene, 1988). The specific type of behavior (only the twisting posture) observed to *L. scincoides*, to our acknowledge, previously unreported for lizards. Our findings contribute to the knowledge of the behavior of *L. scincoides*, a species difficult to observe in nature.

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*Figure 1*. Antipredatory behaviors of *Leposoma scincoides*: **A-B**) immobility, cryptic coloration, and hiding under litter; **C-D**) body contorted laterally-ventrally, exposing the back and belly (coil body); **E-F**) unrolling the posture and fleeing through the substratum (note the tail in regeneration, after caudal autotomy).