Big lizard eats little lizard: a case of saurophagy from Ikaria Island, Aegean Sea, Greece

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The study of feeding ecology remains central in the research of saurian natural history and ecology (Pérez-Mellado et al. 2011). Food preferences are shaped by the requirements of each species and local population and are strongly related to prey availability and habitat diversity (Carretero & Llorente 2001). Lacertid lizards' diet is well studied, particularly in Europe, but still new findings come to enhance our understanding on deviating trophic habits (e.g. Castilla et al. 2008, Vervust et al. 2010, Brock et al. 2014, Mačát et al. 2015). Though invertebrate consumption represents the main feeding strategy among European lacertids (Arnold 1987), some incidences of saurophagy (Greek: σαύρα, savra, "lizard" and φαγία, phagia, "to eat what the first part denotes") have been recorded (e.g. Andriopoulos & Pafilis 2019, Vacher & Wendling 2019, Christopoulos et al. 2020, Vacheva & Naumov 2022). At this point, we must stress that cannibalism, as a consequence of harsh intraspecific competition, is not rare among lacertids (e.g., Adamopoulou et al. 1999, Pafilis et al. 2009, Žagar & Carretero 2012). Here, we report a case of saurophagy by a medium-sized lacertid (*Anatololacerta anatolica*) on a small skink lizard (*Ablepharus kitaibelii*).

The genus *Anatololacerta* Arnold, Arribas & Carranza, 2007 (Squamata: Lacertidae) includes five species (Karakasi et al. 2021). Three of them range in Greece, exclusively on east Aegean Islands: *A. anatolica* (Werner, 1900) on Samos, Thymaina, and Ikaria, *A. pelasgiana* (Mertens, 1959) on Kastelorizo, Kasos, Rhodes, Symi and the surrounding islets and *A. finikensis* (Eiselt & Schmidtler, 1987) on Psomi islet (off Kastelorizo) (Lymberakis et al. 2018). The only mainland population was reported from the Athens metropolitan area, probably a recent anthropogenic introduction (Christopoulos et al. 2022). The Anatolian rock lizard (*A. anatolica*) is a small-bodied (snout-vent length [SVL] up to 70 mm) diurnal species that feeds on small invertebrates, mainly insects and spiders (Valakos et al. 2008). It prefers rocky and stony habitats with dense vegetation, and it is commonly close to streams and rivers with riparian vegetation, while it also occurs in human settlements (Pafilis & Maragou 2020).

The snake-eyed skink (*A. kitaibelii*) Bibron & Bory De Saint-Vincent, 1833 (Squamata: Scincidae) is the smallest of the five skink species occurring in Greece (SVL up to 55 mm) and extends throughout the mainland and on several islands (Valakos et al. 2008, Pafilis & Maragou 2020). This tiny lizard occurs in many habitat types and prefers thick leaf litter and dense grass vegetation, where it hides (Herczeg et al. 2007, Christopoulos & Pafilis 2021).

On 5 May 2024, on a sunny day, with a temperature around 22 °C, at approximately 13:30 we observed an adult *A. anatolica* foraging within a well-planted house-yard at Agios Kirikos, Ikaria Island, Greece (37°36′49″ N, 26°17′15″ E, 70 m above sea level). Suddenly, the Anatolian rock lizard ran and attacked an adult *A. kitaibelii*, cut off its tail and consumed it. Fifteen minutes later, the same *A. anatolica* attacked another snake-eyed skink. This time, the Anatolian rock lizard grabbed the skink torso with its jaws and moved it a few meters away, to kill it and then started to eat it (Figure 1).

To the best of our knowledge, eating a tail by an *Anatololacerta* species has only been reported once (Oğuz 2022) while the consumption of whole lizards has never been reported before. Interestingly, even the previous observation concerns an *A. kitaibelii* (Oğuz 2022). The latter represents a common target for other lizards, such as *Lacerta viridis* (Herczeg et al. 2007, Vacheva & Naumov 2024), cats and dogs (Herczeg et al. 2004) and even frogs (Pafilis et al. 2019). Due to its small size, the snake-eyed skink opens the appetite of many predators, a fact reflected in the wide range of its defensive strategies (Vergilov 2017). The fact that the lacertid effectively preyed on and consumed two skinks in only a few minutes suggests that this was not an accidental, extraordinary event but a repetitive feeding habit. On the other hand, the observed repeated saurophagy could also adapt to the particularities of island life (e.g. Cooper et al. 2015, Sagonas et al. 2015). Further research on the feeding ecology of *A. anatolica* will shed light on the actual occurrence and frequency of saurophagy in this species.

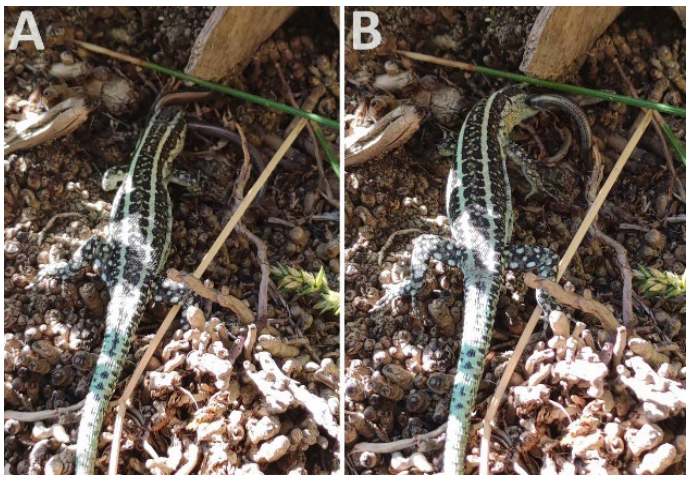

Figure 1. (A-B) Two snapshots of the moment when the adult *Anatololacerta anatolica* grabbed the trunk of *Ablepharus kitaibelii* with its jaws.

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Ioannis VROTSOS [1], Apostolos CHRISTOPOULOS [1, *], Panayiotis PAFILIS [1, 2]

1. Section of Zoology and Marine Biology, Department of Biology, National and Kapodistrian University of Athens, Athens, Greece
2. Museum of Zoology, National and Kapodistrian University of Athens, Athens, Greece
* Corresponding author: A. Christopoulos, E-mail: laniusapo@yahoo.gr