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Predation of the Madagascar Dwarf Leaf-toed Gecko, *Paroedura vazimba* Nussbaum & Raxworthy, 2000, by the Madagascar Bullfrog, *Laliostoma labrosum* (Cope, 1868), in Ankarafantsika, northwestern Madagascar

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Madagascar exhibits exceptionally high levels of endemism in its herpetofauna, with all native amphibian species and 92% of non-marine reptile species endemic to the island (Glaw and Vences, 2007). Since amphibians are highly dependent on water and humidity, most amphibian species in Madagascar are found in the eastern rainforests, where moist environments are available throughout the year. In contrast, relatively few amphibian species are present in the western part of the island, where the vegetation consists of seasonally arid deciduous forests. Therefore, most of the studies on amphibians have been conducted in eastern Madagascar, and the ecological information on amphibians from the western side is limited.

Laliostominae is a subfamily within Mantellidae, comprising seven species across two genera, *Laliostoma* and *Aglyptodactylus*. *Laliostoma* is a monotypic genus primarily restricted to the western dry regions. Only one study has examined feeding habits of *Laliostoma labrosum* (Cope, 1868) (Vences et al., 1999), in which stomach contents of five specimens were analysed. This study identified a total of nine prey items, consisting of eight insects and one frog. Here, I report on a predation of *L. labrosum* on a gecko, *Paroedura vazimba* Nussbaum & Raxworthy, 2000 in Ankarafantsika National Park, which comprises 135,000 ha of seasonally dry deciduous forests, located in northwestern Madagascar.

On 16 February 2024, at 20:48 h, along the trail of Ampijoroa, within the Ankarafantsika National Park (16.3184°S, 46.8099°E; elevation ca. 150 m), I observed the predation of a juvenile *L. labrosum* on *P. vazimba*. The event took place in the open area of the sandy trail between bushes, more than 800 m from the nearest water body. When I initially found them, the frog remained motionless with the gecko's tail and hindlegs protruding from its mouth (Fig. 1A). I recovered the gecko from the mouth of the frog and found it already dead with no visible external wound (Fig. 1B). Snout-vent length and body mass of the *L. labrosum* were 34.0 mm and 5.0 g, respectively, and those of *P. vazimba* were 42.2 mm and 1.9 g, respectively. Based on its body size (Glaw and Vences, 2007), the frog was identified as a juvenile. To the best of my knowledge, this is the first record of saurophagy by a mantellid frog.

In amphibians, prey availability is largely determined by the relationship between body size of prey and gape size of predators (e.g., Burton, 1976; Labanick, 1976; MacNamara, 1977; Toft, 1980). Reports of frogs predating on other vertebrates are uncommon and generally considered exceptional cases (Duellman and Trueb, 1994), presumably because vertebrates are usually too large for frogs to handle and swallow. *Laliostoma labrosum* is terrestrial and *P. vazimba* dwells on low vegetation and forest floor (Glaw and Vences, 2007). These species would encounter regularly because both were frequently observed on the forest floor at night in the rainy season (from November to March). In addition, the relatively large gape size of *L. labrosum* (Glaw et al., 1998) may allow it to swallow large prey, such as *P. vazimba*, which can attain a larger snout-vent length than that of the frog. Until now only a few cases of predation on geckos by frogs have been reported (e.g., Campbell, 2007; Hesed, 2009; Zanchi-Silva and Borges-Nojosa, 2017, Pedroso-Santos et al., 2019; Rosa, 2024). Combining my observation with the data of Vences et al. (1999) leads indicates that one-third of diet-assessed *L. labrosum* had vertebrates as prey items. Although sample size is small, predation on vertebrates by *L. labrosum* may not be uncommon.

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Figure 1. *Laliostoma labrosum* preying on *Paroedura vazimba* in Ankarafantsika National Park. (A) The tail shown by a yellow arrow and hindlegs of *P. vazimba* protruding from the mouth of *L. labrosum*. (B) *Paroedura vazimba* recovered from the mouth of *L. labrosum*. Photos by Ayane Inoue.

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