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Feeding record of a South African Helmeted Terrapin, *Pelomedusa galeata* (Schoepff, 1792), on African Clawed Frogs, *Xenopus laevis* (Daudin, 1802)

Maj Kastelic[1,*], Nicole Jade Koekemoer[2], Jens Reissig[2,3], and Melita Vamberger[3]

Helmeted terrapins of the genus *Pelomedusa* are one of the most speciose chelonian genera of the world (Fritz et al., 2011, 2014, 2015; Petzold et al., 2014; Vamberger et al., 2018), with surprising adaptation capabilities to various climates and even extreme arid habitats (Vamberger et al., 2018, 2019). Apart from genetic studies, which currently identify at least ten species and five yet unnamed candidate species (Petzold et al., 2014), only limited literature is available on ecology (Vamberger et al., 2019; Luiselli et al., 2020, 2021; Gbewaa et al., 2021; Price et al., 2021, 2022; Wasserman et al., 2023; Lankoande et al., 2024; Umulisa et al., 2025), and specific feeding habits of *Pelomedusa* spp. from different parts of Africa (Deane, 1962; Erasmus, 1962; Rochat, 1962; Rödel, 1999; Luiselli et al., 2004, 2011; Jones and Jones, 2015; Kerley, 2020). Luiselli et al. (2011) analysed the diet of helmeted terrapins, from two different locations in Nigeria using faecal samples and stomach flushing. *Pelomedusa* are predominantly carnivorous and the diet of both sexes consists mainly of fish, tadpoles, and invertebrates, but they also regularly consume small terrestrial vertebrates such as mice, birds, and frogs (Luiselli et al., 2011). It has also been confirmed experimentally that *Pelomedusa* sp. may play an important predatory role in ephemeral pools, by seriously affecting tadpole communities that live in them (Rödel, 1999). Interestingly, Rödel (1999) also confirmed that helmeted terrapins are not limited by the size of their mouths. In addition, no preference towards different tadpole species could be confirmed. Success of the hunt was mostly dependent on mobility of the tadpoles (Rödel, 1999). It has also been observed that helmeted terrapins eat ticks from large mammals that drink or wallow in various water bodies in Africa. Mammals observed in such interactions with helmeted terrapins include the Hook-lipped Rhinoceros *Diceros bicornis* and Square-lipped Rhinoceros *Ceratotherium simum* (Deane, 1962; Rochat 1962), Common Warthog *Phacochoerus africanus* (Jones and Jones, 2015), and African Buffalo *Syncerus caffer* (Kerley, 2020).

In November 2025, we were conducting a broader study on population structure of helmeted terrapins at Zebra Nature Reserve in Gauteng Province, South Africa (-25.5095, 28.4859; Fig. 1). We caught helmeted terrapins using baited floating funnel traps positioned in various types of water bodies throughout the reserve. In addition to helmeted terrapins, we frequently captured African Clawed Frogs, *Xenopus laevis* (Daudin, 1802), (in small ponds and small streams), catfish *Clarias* sp. (only in streams) and African freshwater crabs *Potamonautes sp.* (in all water bodies). On the 16th of November we found an adult female helmeted terrapin together with two adult *X. laevis* in one of our traps, set in a small tributary stream (Fig. 1). One of the *X. laevis* was almost completely eaten (Fig. 1B, D), while the other one had a big missing portion of flesh on the hind left leg (Fig. 1C). The trap was undamaged, so external causes of the injuries to the frogs can be excluded. The feeding marks on the frogs could be linked to the helmeted terrapin's beak (Fig. 1D). Although it is known that *Pelomedusa* species are carnivorous and feed on frogs (Luiselli et al., 2011), almost none of the available data on the diet of helmeted terrapins can be attributed to a specific species. The only two exceptions of this being *P. subrufa* (Bonnaterre, 1789) diet from Nigeria (Luiselli et al., 2011), and feeding observation on ticks of *P. galeata* (Schoepff, 1792) from South

[1] University of Ljubljana, Biotechnical Faculty, Jamnikarjeva 101, 1000 Ljubljana, Slovenia.

[2] Ultimate Creatures, 29 Coneway, Kelvin, 2090 Sandton, South Africa.

[3] Senckenberg – Leibniz Institution for Biodiversity and Earth System Research, Königsbrücker Landstraße 159, 01109 Dresden, Germany.

[*] Corresponding author: E-mail: maj.smajli@gmail.com

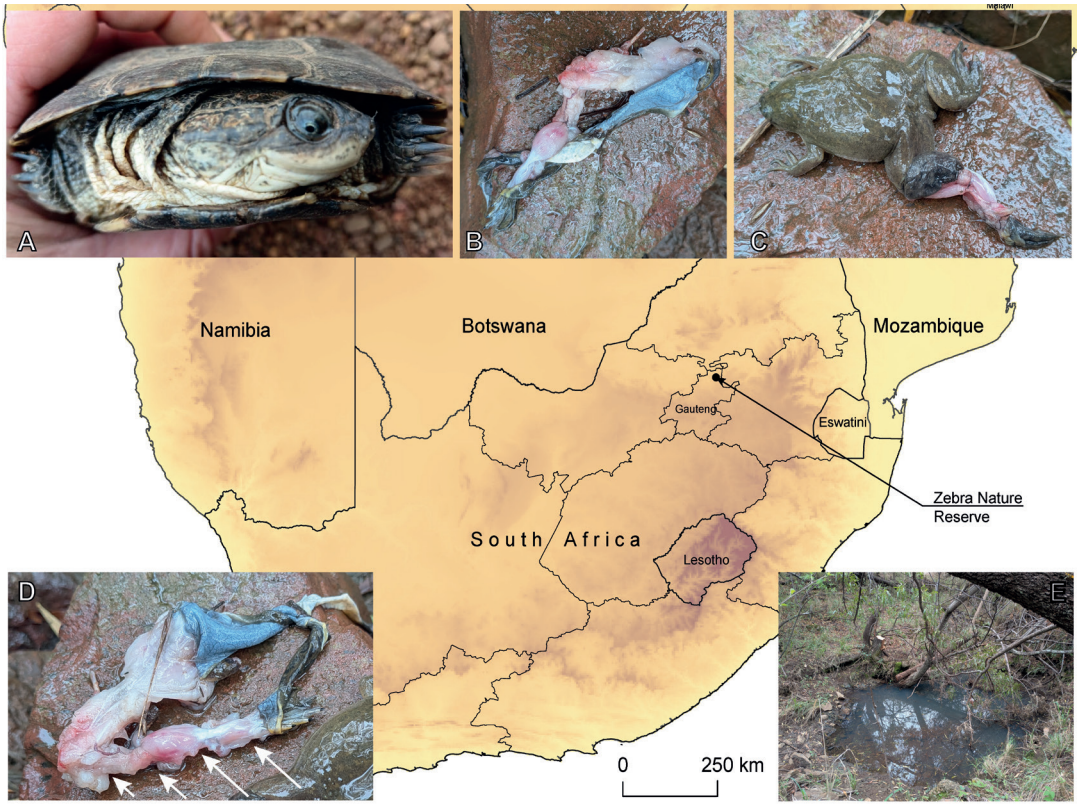

Figure 1. Location of the study site in Gauteng, South Africa. (A) Adult female *Pelomedusa galeata* (straight carapace length of 13.4 cm); (B and C) the two adult *Xenopus laevis* (B: snout-vent length of 6.4 cm; C: snout-vent length of 6.7 cm) showing bite marks (D) by *P. galeata* (A); (E) locality of trap and habitat of the *P. galeata* and *X. laevis* mentioned in this note. Photos by Nicole Jade Koekemoer.

Africa (Jones and Jones, 2015). Based on the work of Petzold et al. (2014), the species of helmeted terrapins studied in Luiselli et al. (2011) can be assigned to *P. olivacea* (Schweigger, 1812).

In South Africa two species of *Pelomedusa* occur (Vamberger et al., 2018). *P. galeata* inhabits most of South Africa, while *P. subrufa* is recorded from north-eastern South Africa, stretching up to Kenya (Petzold et al., 2014; Vamberger et al., 2018). To identify the species, present at Zebra Nature Reserve, we genetically analysed a blood sample of the helmeted terrapin by amplifying and sequencing the *12S* gene. We compared our sequence (ENA accession OZ479194) with sequences from Vamberger et al. (2018) using accession numbers obtained from their Supplementary Table S1. Our sequence showed a 100% match with a representative sequence of the mitochondrial lineage Ia of *P. galeata* (ENA accession number HG934040), confirming the presence of this lineage at Zebra Nature Reserve. Our observation is therefore the first evidence of *P. galeata* feeding on adult *X. laevis*.

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