



Feeding on *Pteropus scapulatus* (Chiroptera: Pteropodidae) by *Varanus varius* (Squamata: Varanidae) in Australia

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The Lace Monitor, *Varanus varius* (Shaw 1790), is one of the largest terrestrial predators in eastern Australia, growing to 14 kg and reaching 2 m in length (Weavers 1988; Auliya and Koch 2020). *Varanus varius* is a diurnally active, opportunistic predator that feeds on a range of animal prey, including mammals, birds, fish, amphibians, eggs, and insects (Losos and Greene 1988; Weavers 1989), with a high proportion of carrion in its diet (Guarino 2001; Pascoe et al. 2019).

The Little Red Flying-Fox, *Pteropus scapulatus* Peters 1862, is a megachiropteran native to northern and eastern Australia and is the smallest species of *Pteropus* on mainland Australia (Van Dyck and Strahan 2008; Bradford et al. 2022). The primary source of food for this species is obtained from *Eucalyptus*, *Melaleuca*, and *Corymbia* blossoms (Bradford et al. 2022). *Pteropus scapulatus* camps may become large groups of tens of thousands of individuals, with records of some colonies of over one hundred thousand individuals (Vardon et al. 2001).

At approximately 1330 h on 10 March 2023 while in search of a bat colony, we filmed and photographed an adult *V. varius* (~80–90 cm total length) feeding on an adult *P. scapulatus* (~20–25 cm total length) at Eungella National Park, Queensland, Australia (-21.133694, 148.492167) (Fig. 1). Weather conditions at the time were partly cloudy with little wind; it had rained that day, but not at the time of observation.

At the beginning of a muddy and overgrown trail in a small clearing near a bridge over a dried-up riverbed with sparser vegetation, we observed a dead *P. scapulatus* lying on the forest floor with a Lace Monitor standing over and tearing it apart (Fig. 2). The monitor left the bat for a moment, perhaps because of our presence; when it returned, it grabbed the bat by the leg, which it tried to tear off. We observed the scene for about 5 min. Many bat colonies were low in the trees and shrubs, as well as in the treetops. Some bats were on parts of the vegetation as low as 1.5 m above the forest floor.

Bats have not often been documented in the diets of varanids. Documented cases include *Varanus albigularis albigularis* (Zdunek 2023), *V. bengalensis* (Karunaratna et al. 2012; 2017), *V. cumingi* (Tanalogo et al. 2020), *V. komodoensis* (Losos and Greene 1988), *V. niloticus* (Bennett and Akonnor



Figure 1. Representative vegetation and habitat in Eungella National Park, Queensland, Australia, where a Lace Monitor (*Varanus varius*) was observed feeding on a Little Red Flying-Fox (*Pteropus scapulatus*). Photograph by Bryn Armstrong.



Figure 2. An adult Lace Monitor (*Varanus varius*) feeding on a Little Red Flying-Fox (*Pteropus scapulatus*) in Eungella National Park, Queensland, Australia. Photographs by Bryn Armstrong.

in Bennett 1998), and *V. salvator bivittatus* (Clarkson and Massyn 2020). Mansergh and Huxley (1985) described a case of a trapped *V. varius* with a semi-digested Gould's Wattle Bat (*Chalinolobus gouldii*) also found in the trap. Another case from Australia involved stomach contents of a monitor lizard (*Varanus* sp.) with a bat (*Pteropus* sp.) but without additional details (Nelson 1965). To the best of our knowledge, the observation recorded herein is the first documented instance of *V. varius* feeding (probably scavenging) on a *P. scapulatus*. Observations such as these, even as single events, can broaden the scope of information about the natural history and ecology of monitor lizards and their chiropteran diet.

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