

# An observation of Burton's Legless Lizard (*Lialis burtonis*) in a tropical mangrove forest

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## Abstract

A Burton's Legless Lizard (*Lialis burtonis*) was observed within the *Rhizophora* zone of a tropical mangrove forest in the Top End of northern Australia in November 2018. To the author's knowledge, this is the first record of *L. burtonis* within a tidal forest. Although this lizard occurs in virtually all habitat types and is capable of comparatively long-distance movements, its presence in mangrove forests is presumably a rare occurrence.

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Burton's Legless Lizard (*Lialis burtonis*) is a distinctive, snake-like, functionally limbless squamate of the family Pygopodidae. The species is a sedentary ambush predator (Patchell & Shine 1986; Murray *et al.* 1991) that feeds on lizards, primarily skinks (Wall & Shine 2013), but it also takes geckos, agamids, other pygopodids and small snakes (McKay 2017; Wilson & Swan 2017). *Lialis burtonis* is Australia's most widespread lizard, inhabiting virtually all terrestrial environments from desert interiors to the margins of wet rainforests (Cogger 2000; Wilson & Swan 2017). Based on the available literature and anecdotal evidence, there are no accounts of *L. burtonis* utilising mangroves. Herein I report, what is to my knowledge, the first observation of *L. burtonis* within a tropical mangrove forest.

During a vegetation ground-truthing survey on 21 November 2018, an adult *L. burtonis* (334 mm snout-tail length) was observed actively crawling on the mud surface in a closed, *Rhizophora stylosa*-dominated mangrove forest (Figures 1, 2). The site was adjacent to a river bank along a tidal section of the lower Blackmore River, Northern Territory (location: 12° 43.309'S, 130° 56.646'E). The lizard was observed at 13.54 hr and was located approximately 27 m from the river bank, 22 m seaward of the mean high-water neap tide line (at the interface between the *Rhizophora* and *Ceriops* mangrove zones), and 98 m from the nearest landward margin with terrestrial vegetation. The body colouration of the lizard consisted of a pale cream background colour, dark pigment along the face and fore-body, and a bold white lower lateral stripe running from the snout (Figure 3).

Despite being a sedentary ('sit-and-wait') ambush predator, *L. burtonis* periodically makes comparatively long-distance movements. In the Top End of the Northern Territory, Wall & Shine (2013) showed that although *L. burtonis* moves on average 4.9 m per day, but usually much less, some individuals can travel up to 40 m in a single foray. These longer moves are typically conducted at night and are likely instigated by the need to

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**Figures 1–3.** Burton's Legless Lizard (*Lialis burtonis*) recorded from the Blackmore River mangrove site. **1.** Individual actively crawling on the mangrove forest floor **2.** Observation site comprised of a tall-closed *Rhizophora stylosa* mangrove forest. **3.** Individual displaying the distinctive patterning and colouration on the head and fore-body. (Adam Bourke)

find a new foraging site (Wall & Shine 2013). Perhaps it was an errant, long-distance movement into the mangroves from the adjacent terrestrial habitat that explains the observation presented here.

Mangrove forests are undoubtedly marginal habitats for *L. burtonis* as tidal flooding is problematic, if not lethal. The climbing of mangrove roots and trunks would be testing for pygopodid lizards, as the body of *L. burtonis* is far less supple than those of snakes (M. Wall pers. comm.). Additionally, suitable prey items required by *L. burtonis* are scarce in mangrove forests; the only small lizards inhabiting local mangals are *Cryptoblepharus* skinks and an indeterminate species of gecko (pers. obs.). As such, mangrove forests are likely to be unsuitable habitat for *L. burtonis*. Thus, the presence of the species within mangrove forests is presumably a rare occurrence, one resulting from misadventure rather than an intentional and deliberate relocation.

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## References

- Cogger H.G. (2000) *Reptiles and Amphibians of Australia, 6th edition*. Reed New Holland, Sydney.
- McKay L. (2017) *A Guide to Wildlife and Protected Areas of the Top End*. The Environment Centre Northern Territory, Darwin.
- Murray B.A., Bradshaw S.D. and Edward D.H. (1991) Feeding behavior and the occurrence of caudal luring in Burton's pygopodid *Lialis burtonis* (Sauria: Pygopodidae). *Copeia* 1991(2), 509–516.
- Patchell F.C. and Shine R. (1986) Food habits and reproductive biology of the Australian legless lizards (Pygopodidae). *Copeia* 1986(1), 30–39.
- Wall M. and Shine R. (2013) Ecology and behaviour of Burton's Legless Lizard (*Lialis burtonis*, Pygopodidae) in tropical Australia. *Asian Herpetological Research*, 4(1): 9–21.
- Wilson S.K. and Swan G. (2017) *A Complete Guide to Reptiles of Australia*. Reed New Holland, Sydney.
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