



<http://dx.doi.org/10.11646/zootaxa.3990.2.7>

<http://zoobank.org/urn:lsid:zoobank.org:pub:844F6130-B2DE-402D-B94A-B89557170896>

A new blind snake (Serpentes: Typhlopidae) from an endangered habitat in south-eastern Queensland, Australia

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Abstract

A new species of blind snake is described from south-eastern Queensland, eastern Australia. *Anilios insperatus* **sp. nov.** differs from all of its congeners in having: 16 scales around the body; 442 paravertebral scales; snout slightly trilobed from above and bluntly angular in profile; small, inconspicuous eyes, located within the ocular scale at its junction with the preocular and the supraocular scales; and uniform light colouration. The unique specimen was collected from pasture that was formally Queensland regional ecosystem 12.8.24, a eucalypt dominated ecosystem currently listed as endangered. The site is less than 100 km from Queensland's capital, Brisbane. Given the locality, habitat and absence of additional specimens, the species is probably of conservation concern.

Key words: *Anilios insperatus*, new species, Scolecophidia, Fassifern Valley, Regional Ecosystem

Introduction

There is an increasing trend of combining molecular genetics with traditional morphological analysis to identify cryptic reptile species across Australia (e.g. Pepper *et al.* 2011; Melville *et al.* 2014). Against this backdrop, and in the absence of available genetic material, it is surprising that a new species of snake, discovered within 100 km of a major capital city, has been clearly identified solely on morphological characters. While new species continue to be described in most families of Australian squamates, Typhlopidae remain an exception, with the most recent descriptions dating back to the late 1990s (Shea & Horner 1997; Aplin 1998; Couper *et al.* 1998). Typhlopoid snakes are difficult to locate in the field and problematic to identify due to their conservative morphology and limited set of external characters. This may explain the lack of comprehensive studies at a national level since that of Waite (1918), while the latest state-based revision (Storr 1981) was limited to Western Australian material.

The use of molecular genetics has helped to answer some questions regarding typhlopoid taxonomy (Rabosky *et al.* 2004) and to better explain the biogeography and phylogeny of Australian blind snakes (Vidal *et al.* 2010; Marin *et al.* 2013a, 2013b). Pyron & Wallach (2014) recognize 44 species of *Anilios*, although Marin *et al.* (2013b) infer that the number of currently recognized species greatly underestimates the true diversity of this group.

During a 1992 fauna survey, one of us (A.B.) collected a small blind snake (Typhlopidae) under a small rock in pasture on a largely cleared hill-slope in the Fassifern Valley. This rural locality is less than 100 km from Brisbane, south-eastern Queensland, Australia. We herein describe a new species from this single specimen, which is preserved in the herpetological collection of the Queensland Museum, Brisbane.

Material and methods

All measurements were taken with Mitutoyo electronic callipers and rounded to the nearest 0.1 mm, or have been obtained from macrophotos taken at an enlargement ratio of 5:1 using the Visionary Digital Photographic System