

## SCIENTIFIC NOTE

### ***PERSOONIA* AS LARVAL HOST PLANTS OF *APHANOSPERMA ORIENTALIS* BRITTON (CERAMBYCIDAE: CERAMBYCINAE) IN NEW SOUTH WALES**

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#### Summary

The larval host plants for *Aphanosperma orientalis* Britton are recorded for the first time. Adults were reared from both *Persoonia levis* (Cav.) Domin and *Persoonia lanceolata* Andrews (Proteaceae) from several locations in southern Sydney.

#### INTRODUCTION

Britton (1969) described two species of a new genus *Aphanosperma* in the tribe Aphanasiini (Cerambycinae). *Aphanosperma occidentalis* Britton was reared from the woody fruits of several *Hakea* spp. in Western Australia but the larval host of *A. orientalis* was unknown.

Infested branches of two species of *Persoonia* from Sydney (New South Wales) were collected in the field during late 2019–early 2020 and maintained in plastic tubs under semi-controlled conditions within the garage of a suburban house.

#### RESULTS AND DISCUSSION

The emergence time relative to collection of the infested twigs cannot be viewed as development time given the artificial conditions under which the samples were maintained. It remains to be seen from future work whether this species has an annual or longer cycle.

Seven specimens of *A. orientalis* emerged from *P. levis* from two locations in southern Sydney while three specimens emerged from *P. lanceolata* from a single location, also in southern Sydney. All specimens in this study closely match Britton's holotype specimen in the Australian National Insect Collection in Canberra.

#### *Aphanosperma orientalis* records

1. NSW, Menai - from *Persoonia levis* collected on 1 November 2019, 5 specimens emerged between 5 December 2019 and 29 February 2020.
2. NSW, Woronora - from *Persoonia levis* collected on 15 August 2019, 1 specimen emerged on 11 December 2019.
3. NSW, Kurnell - from *Persoonia lanceolata* collected on 1 January 2020, 5 specimens

emerged during the period 15 February 2020 – 18 March 2020.

*Aphanosperma orientalis* damage in both *P. levis* and *P. lanceolata* was generally close to the bark layer (Figure 1 and 2) with larvae tunnelling to the extremity of the twig and then returning down the twig close to where the egg was originally (presumably) laid. *Persoonia levis* has loose, thin, flaking reddish to black bark overlaying thin layers tightly adhering to the cambial layer. Larvae tunnel directly beneath these thin inner layers and emerge through holes that are often obscured by the outer flaking bark. In contrast, *Persoonia lanceolata* has smooth grey bark without a flaking outer layer. Older larvae generally tunnel into the centre of *P. lanceolata* branches before emerging through distinct and visible emergence holes in the bark layer.

The larval host of *A. orientalis* was unknown and presumed to be, along with *A. occidentalis*, the fruits of *Hakea* spp. (Britton 1969). *Aphanosperma orientalis* may infest the woody fruits of *Hakea* spp. but at this point there is no evidence of this, to my knowledge. The closely related *Aphanasium* has been recorded from the roots and lower stems of *Hakea* spp. (Britton 1969, Froggatt 1895). Together, these records suggest that species of Proteaceae are common hosts for species of Aphanasiini.

#### REFERENCES

- Britton, E.B. (1969). *Aphanosperma*, a new genus of Cerambycidae (Coleoptera) from woody fruits of *Hakea* spp. in Australia. *Journal of the Australian Entomological Society* **8**: 33-36.
- Froggatt, W.W. (1895). Life-histories of Australian Coleoptera. *Proceedings of the Linnaean Society of New South Wales* **10**: 325.

**Figure 1: Adult in pupal chamber in a. *Persoonia levis* (Menai) (left) and *Persoonia lanceolata* (Kurnell) also showing emergence hole (right).**

