

## SCIENTIFIC NOTE

# BLUEBERRY ASH *ELAEOCARPUS RETICULATUS* SM. AS A LARVAL HOST OF *URACANTHUS ACUTUS* BLACKBURN (CERAMBYCIDAE, CERAMBYCINAE, URACANTHINI).

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### Summary

Blueberry Ash (*Elaeocarpus reticulatus* Sm.) is recorded as a larval host of *Uracanthus acutus* Blackburn for the first time. During 2019-20, *U. acutus* was reared from *E. reticulatus* from seven locations around Sydney. Previously, *U. acutus* was recorded from a range of native and cultivated plants but not previously from *E. reticulatus*. Larvae ringbark small branches on the main stem and then move through the centre of the branch towards the distal end of the trunk or main branch before returning close to the point of excision to pupate. *U. acutus* adults adopt an unusual stance that resembles a small twig, presumably as camouflage.

### INTRODUCTION

*Uracanthus acutus* Blackburn occurs in south-eastern Australia from Adelaide to Brisbane (Thongphak and Wang 2007). Its larval host plants are not well known but historically it has been recorded from various cultivated fruit trees (peach, plum, apricot) and native species of *Acacia*, *Pomaderris* and *Loranthus* (Dixon 1908, Froggatt 1898, Thongphak and Wang, 2007). *Uracanthus* spp. in general are known from a wide variety of plant species (Dixon 1908, Duffy 1963, Froggatt 1998, Hawkeswood 2002, Rondonuwu & Austin 1988, Thongphak and Wang, 2007). Thongphak and Wang (2007) reviewed the entire genus and it is unclear whether some of these earlier host records can be validated for *U. acutus*, or now belong to some other related species. Thongphak and Wang (2007) listed label data for specimens reared from *Acacia*, *Pomaderris* and *Loranthus* but only the wording for *Pomaderris* and *Loranthus* is unambiguous (“bred from *Pomaderris*” and “bred ex *Loranthus*”). Records for *Acacia* are listed as only “ex” which could also mean “found on”.

Blueberry Ash (*Elaeocarpus reticulatus* Sm.) is a common understory species in wet sclerophyll and rainforest gullies and sometimes in drier sandstone country around Sydney (New South Wales) (Brown 2002). Dead and dying branches and twigs of *E. reticulatus*, caused by *U. acutus* damage, are commonly observed during autumn, winter and spring around Sydney. Infested branches of *E. reticulatus* from seven locations around Sydney were collected during late 2019–early 2020 and maintained in plastic tubs under semi-controlled conditions within the garage of a suburban house awaiting emergence.

### RESULTS AND DISCUSSION

All specimens in this study were compared with those in the Australian National Insect Collection in Canberra, some of which were labelled as identified by Thongphak and Wang. All specimens are currently maintained in the authors private collection.

#### *U. acutus* records from *E. reticulatus*

##### Plant material collected 2019

1. NSW, Carss Park, collected on 14 October 2019, emerged on 15 November 2019 (1 specimen).
2. NSW, Kurnell, collected on 16 October 2019, emerged on 18 December 2019 (1 specimen).
3. NSW, Epping – cut live from twig on 29 October 2019 (1 specimen).
4. NSW, North Ryde, collected on 13 October 2019, emerged on 29 October 2019 (1 specimen).
5. NSW, North Ryde, collected on 29 October 2019, emerged on 30 October 2020 (1 specimen).
6. NSW, Kurnell, collected on 18 December 2019, emerged on 2, 5, 15, 17, 19 November 2020 (6 specimens).

##### Plant material collected 2020

1. NSW, Carss Park, collected on 2 February 2020, emerged on 8 November 2020 (1 specimens).
2. NSW, Carss Park, collected on 12 February 2020, emerged on 3, 12, 17 November 2020 (5 specimens).
3. NSW, Kurnell, collected on 16 January 2020, emerged on 25 November 2020 (1 specimen).
4. NSW, Kurnell, collected on 16 March 2020, emerged on 1 November 2020 (1 specimen).

5. NSW, Kurnell, collected on 23 March 2020, emerged on 12, 16, 26 October 2020 (3 specimens).
6. NSW, Kurnell, collected on 7 April 2020, emerged on 21 November 2020 (1 specimen).
7. NSW, GyMEA, collected on 22 May 2020, emerged on 16 October 2020 (1 specimen).
8. NSW, Kareela, collected on 2 March 2020, emerged on 28 October 2020 (1 specimen).
9. NSW, Woronora, collected on 3 January 2020, emerged on 15 November 2020 (3 specimens).

No other species of Cerambycidae was reared from this plant material nor was *U. acutus* reared from any other species of plant collected during this period. With the exception of one specimen (Kurnell, emerged 18 December 2019), all specimens emerged during October and November of either 2019 or 2020. All specimens emerged within the year the plant material was collected except for six specimens from Kurnell collected on 18 December 2019 which emerged in the following spring (2-19 November) of 2020 and a single specimen from North Ryde (collected 29 October 2019, emerged 30 October 2020).

Typically *U. acutus* damage is observed as a dead or dying branch of the main stem of *E. reticulatus* (Figure 1). Larvae (Figure 2) generally ringbark the branch around 10cm from the main trunk and excise the end of a smaller twig on that branch, hollow out the twig and plug it with thin filaments of timber in readiness for later emergence (Figures 3 and 4). The end of the twig is roughly V-shaped, as described for *Uracanthus triangularis* Hope (Duffy 1963). Larvae will tunnel further to the extremity and later return to the basal area of the branch, just above the ringbarked area, to pupate (Figures 3-6). The ringbarked branch will often snap off in the wind (Froggatt 1898), but in some cases where this has not occurred, larvae have been found working in the branch close to where the branch emerges from the trunk.

When observed on *E. reticulatus* twigs, *U. acutus* adults usually chooses a similar diameter twig,

clinging tightly. The similarity in colour between adult beetles and bark of *E. reticulatus* provides camouflage. *U. acutus* adults may also adopt an unusual stance which emulates a twig (Fig. 7). Camouflage and the unusual stance are both likely defence mechanisms against predators.

While *U. acutus*, and other species of *Uracanthus*, have been recorded utilising a range of larval host plants, so far, *U. acutus* has only been found in *E. reticulatus* despite extensive collecting by the author of infested plant material around Sydney. Of interest here is also the limited emergence period (October-November), albeit under artificial conditions, and the unusual adult stance.

#### ACKNOWLEDGEMENTS

This work was conducted partially under NSW Department of Planning, Industry and Environment scientific license no. SL102455. Peter Gillespie and Bernie Dominiak kindly provided constructive comments on the manuscript.

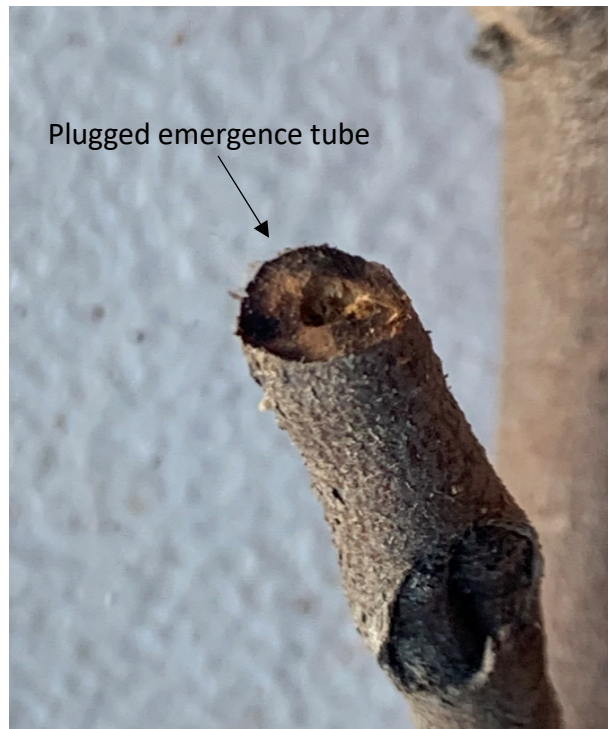
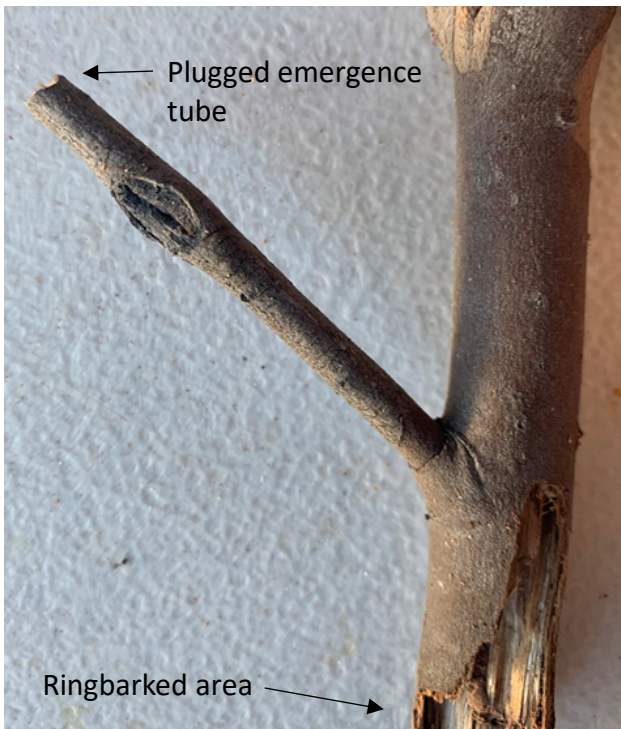
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Figure 1 & 2: Typical dead infested branch; Large larva close to pupation stage near the ringbarked area.



Figure 3 & 4: Infested twig showing ringbark area and emergence tube; Close-up of the cut end of the emergence tube.



**Figure 5 & 6: Adults in pupal chambers prior to emergence**



Figure 7: Camouflage stance of adult *U. acutus*.

