

# FABACEAE AS LARVAL HOSTS OF *URACANTHUS BIVITTA* NEWMAN (CERAMBYCIDAE, CERAMBYCINAE, URACANTHINI).

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## Summary

*Uracanthus bivitta* Newman is known from largely coastal areas from central Queensland through to South Australia and Western Australia. Aside from a few historical records, all larval host plants for this species appear to be from the family Fabaceae. In this study a range of Fabaceae species from southern Sydney were identified as larval host plants.

**Keywords** *Uracanthus bivitta*, Fabaceae, larval hosts

## INTRODUCTION

Historical records indicate that *U. bivitta* has been reared from a number of host plants (mostly Fabaceae) (Dixon 1908, Duffy 1963, French 1900, 1911, McKeown 1947). French (1911) did not specifically identify *U. bivitta* as infesting any nominated species but rather linked some of these larval host plants to a group of three *Uracanthus* spp. including *bivitta* and McKeown (1947) followed this notion. However, French (1900) did identify *Ulex* sp. as a larval host of *U. bivitta* and Duffy (1963) referenced an unpublished record for *Pultanaea stipularis* Sm.. Dixon (1908) was not explicit in nominating whether the listed food plants were larval or adult food plants but it is generally accepted that these were larval food plants. These were *Ulex europaeus* L., *Cytisus scoparius* (L.) Link, *Daviesia latifolia* R.Br. and *Viminaria juncea* (Schrad. & J.C.Wendl.) Hoffmanns (all Fabaceae).

Duangrat Thongphak (Thongphak 2007; Thongphak and Wang 2007) revised the genus *Uracanthus* and therefore there is some uncertainty about larval host associations listed in the literature prior to this review. They listed specimen label data for *U. bivitta* which indicated larval host associations with *C. scoparius*, *Pultanaea* spp., *Jacksonia sternbergiana* Benth. and *Jacksonia* sp. (all Fabaceae). With the exception of a few historical records all larval host plants appear to be from the family Fabaceae.

Infested stem material from various species of Fabaceae were collected from various locations in southern Sydney (New South Wales) during 2021 and maintained in plastic tubs under semi-controlled conditions. Progressively over time, adult specimens of *U. bivitta* emerged. All specimens of *U. bivitta* from this study were checked against specimens labelled by Duangrat Thongphak in the Australian National Insect Collection in Canberra.

## RESULTS AND DISCUSSION

### *U. bivitta* records from Fabaceae

(RNP = Royal National Park)

#### ***Bossiaea heterophylla* Vent.**

1. NSW, RNP, Bottle Forest Fire Trail, collected on 30 June 2021, cut live 30 June 2021 (2 specimens).
2. NSW, RNP, Bottle Forest Fire Trail, collected on 7 September 2021, emerged 2 July 2021 (1 specimen).

#### ***Daviesia alata* Sm.**

1. NSW, RNP, Curra Moors Fire Trail, collected on 2 September 2021, emerged on 18 December 2021 (1 specimen).

#### ***Daviesia ulicifolia* Andrews**

1. NSW, Menai, Heathcote Rd., collected on 6 September 2021, emerged on 17 December 2021 (1 specimen).

#### ***Dillwynia retorta* (J.C.Wendl.) Druce**

1. NSW, RNP, Winifred Falls Fire Trail, collected on 2 January 2021, emerged on 7 March 2021 (2 specimens).
2. NSW, Kurnell, Caltex boundary fence, collected on 26 July 2021, emerged on 24 December 2021 (1 specimen).

#### ***Dillwynia sericea* A. Cunn.**

1. NSW, RNP, Grays Point, collected on 4 January 2021, emerged on 16 March 2021 (1 specimen).

#### ***Gompholobium grandiflorum* Sm.**

1. NSW, RNP, Curra Moors Fire Trail, collected on 2 September 2021, emerged on 29 November, 14 and 24 December 2021, 2 and 8 January 2022 (5 specimens).

***Phyllota phyllicoides* (DC.) Benth.**

1. NSW, RNP, Curra Moors Fire Trail, collected on 28 January 2021, emerged on 7 November 2021 (1 specimen).
2. NSW, RNP, Loftus, collected on 3 May 2021, emerged on 23 November 2021 (1 specimen).
3. NSW, RNP, Curra Moors Fire Trail, collected on 26 August 2021, cut live on 26 August 2021 (1 specimen).
4. NSW, RNP, Curra Moors Fire Trail, collected on 26 August 2021, emerged on 12, 29 December 2021 (2 specimens).

***Pultenaea tuberculata* Pers.**

1. NSW, RNP, Anice Falls Fire Trail, collected on 28 April 2021, emerged on 10 October 2021 (1 specimen).

With the exception of the dubious records of *Ozothamnus ferrugineus* (Labill.) Sweet (Asteraceae) and *Acacia longifolia* (Andrews) Willd. (more recently considered to be Fabaceae) (French 1911, McKeown 1947), all other larval host records including those provided here were from species of Fabaceae. To my knowledge there are no other published records from other plant families for *U. bivitta*, although other species of *Uracanthus* are known to breed in plant species from a variety of other families (Dixon 1908, French 1900, 1908, Hawkeswood 2002, Thongphak and Wang 2007, Webb 2020 and others).

*Uracanthus bivitta* typically infests a single stem but may infest the root system of some host species where multiple larvae may reside. Larvae cut the typical V-shape slit in a stem above which the plant material snaps off. They then feed downwards to the base of the stem or root system to pupate and later emerge through the V-shape slit or close to. A pre-emergent adult, larvae and pupae are shown in Figures 1 and 2.

So far there is no evidence of *U. bivitta* utilizing any plant species other than members of the Fabaceae family.

**Figure 1:** Pre-emergent *U. bivitta* in hollowed out stem of *Phyllota phyllicoides*.



**Figure 2:** Larvae and pupae of *U. bivitta* in hollowed out stem of *Phyllota phyllicoides*.



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