MOTH MEALS

Caterpillars, Moths and Their Plants of southern Australia

By Peter McQuillan, Jan Forrest, David Keane and Roger Grund

In 2012, APS Victoria conducted an FJC Rogers Seminar and the subject was Garden Design. During this event, there were many topics covered and one really sparked my interest. Brian Bainbridge presented his 'Lizard Lounges and Butterfly Bars' talk and my first thought was – somebody should write a book encompassing his demonstration of ideas about what to plant for our gardens fauna.

In 2019, one such book has been published. I had thought to title my review based on Brian's presentation name but found it difficult to find an inspiring word beginning with the letter 'm'. What I came up with was Moth Meals. Not nearly as thought provoking as lounge or bar but it will have to do.

I start this off by stating upfront that I was given a copy of this book by the authors because some of my moth images are used. I didn't get paid for that contribution nor do I reap any financial benefit for the sale of copies.

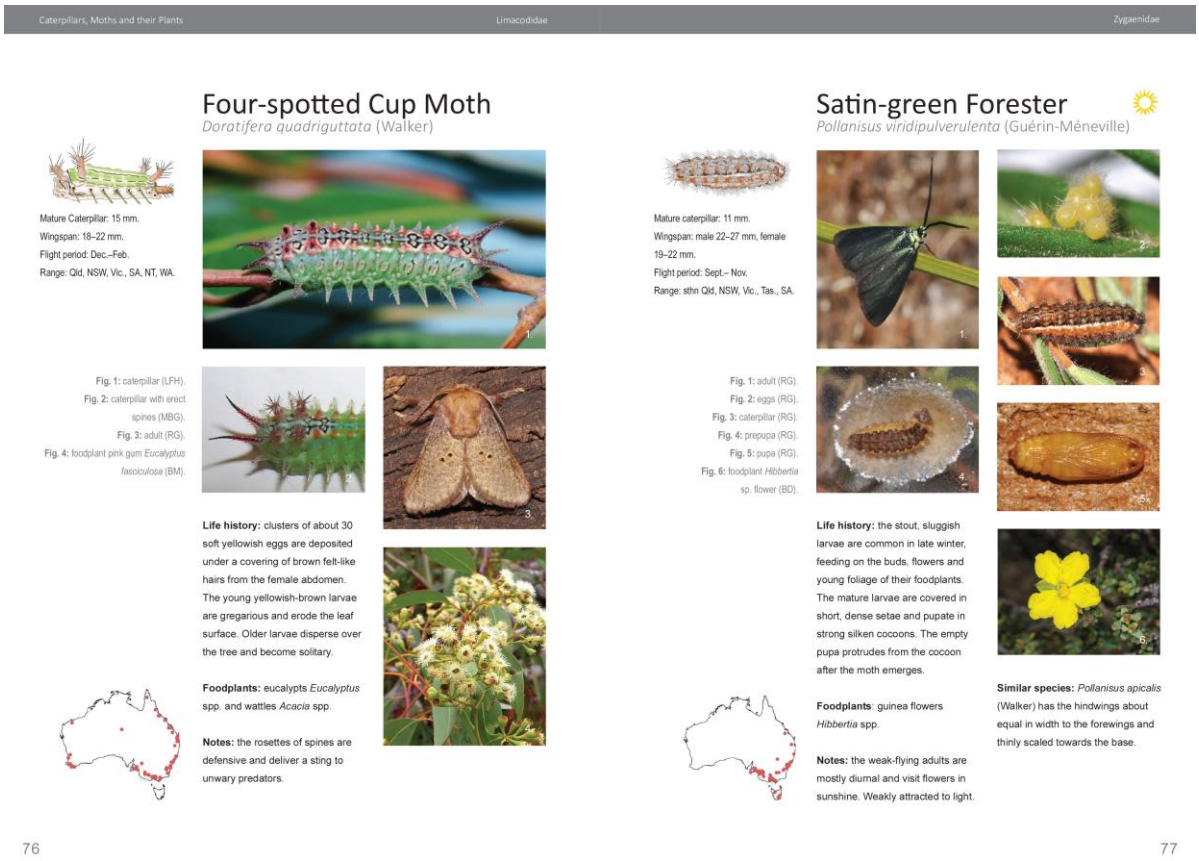
Now on to the good stuff. This book is such a wonderful publication for gardeners or anyone interested in Lepidoptera (especially moths), Australian native flora and/or nature. It spans interest levels for all ages by including relevant images and drawings.

In the introduction, an overview of moth fauna is imperative reading and it steers your understanding of the what's, why's, when's and how's. To detail this in a review would work like a spoiler alert for a movie or TV program. The information is not presented in an overly scientific way but instead lets the reader gain basic information with the seed planted to search more deeply in publications found in the further reading list.

'The Moths' is the meat of the book. Beginning with the description of what is contained in the major part, the authors then go on to give a general highlight of each of the 47 family groups including a description of each group, a drawing of a caterpillar stage and an image of a typical moth from the family. The section on food plants relates to how dependant the moth larvae are on access to appropriate flora and puts to rest the fear that Lepidoptera can only survive with the presence of Australian native flora. Fauna, in general, is adaptable and moths are no different. Many species have adapted to using flora, native or introduced, if it fulfills the food requirements for both the adult and larval stages of life but not necessarily from the same plant. It is worth keeping in mind, however, that not all moths eat in the adult stage, but every larval stage does (most voraciously).

Following this sub-chapter comes the informative section which has each family detailed in a page or two of its own. Images of at least one adult moth, sometimes eggs, at least one larval stage, a pupa, a distribution map and (of course) an example of the food plant make an impact. In the following example, the caterpillar of the *Doratifera quadriguttata* (left) is colourful but not the best one to handle. It has

spikes that are exposed when under threat. The *Pollanisus viridipulverulenta* right) is a day-flying moth and can be seen acquiring nectar from various herbaceous native plant flowers when you stroll through the bushland.



Four-spotted Cup Moth

Doratifera quadriguttata (Walker)

Mature Caterpillar: 15 mm.
Wingspan: 18–22 mm.
Flight period: Dec.–Feb.
Range: Qld, NSW, Vic., SA, NT, WA.

Fig. 1: caterpillar (LFH).
Fig. 2: caterpillar with erect spines (MBG).
Fig. 3: adult (RG).
Fig. 4: foodplant pink gum *Eucalyptus fasciculosa* (BM).

Life history: clusters of about 30 soft yellowish eggs are deposited under a covering of brown felt-like hairs from the female abdomen. The young yellowish-brown larvae are gregarious and erode the leaf surface. Older larvae disperse over the tree and become solitary.

Foodplants: eucalypts *Eucalyptus* spp. and wattles *Acacia* spp.

Notes: the rosettes of spines are defensive and deliver a sting to unwary predators.

Satin-green Forester

Pollanisus viridipulverulenta (Guérin-Méneville)

Mature caterpillar: 11 mm.
Wingspan: male 22–27 mm, female 19–22 mm.
Flight period: Sept.– Nov.
Range: sthn Qld, NSW, Vic., Tas., SA.

Fig. 1: adult (RG).
Fig. 2: eggs (RG).
Fig. 3: caterpillar (RG).
Fig. 4: prepupa (RG).
Fig. 5: pupa (RG).
Fig. 6: foodplant *Hibbertia* sp. flower (BD).

Life history: the stout, sluggish larvae are common in late winter, feeding on the buds, flowers and young foliage of their foodplants. The mature larvae are covered in short, dense setae and pupate in strong silken cocoons. The empty pupa protrudes from the cocoon after the moth emerges.

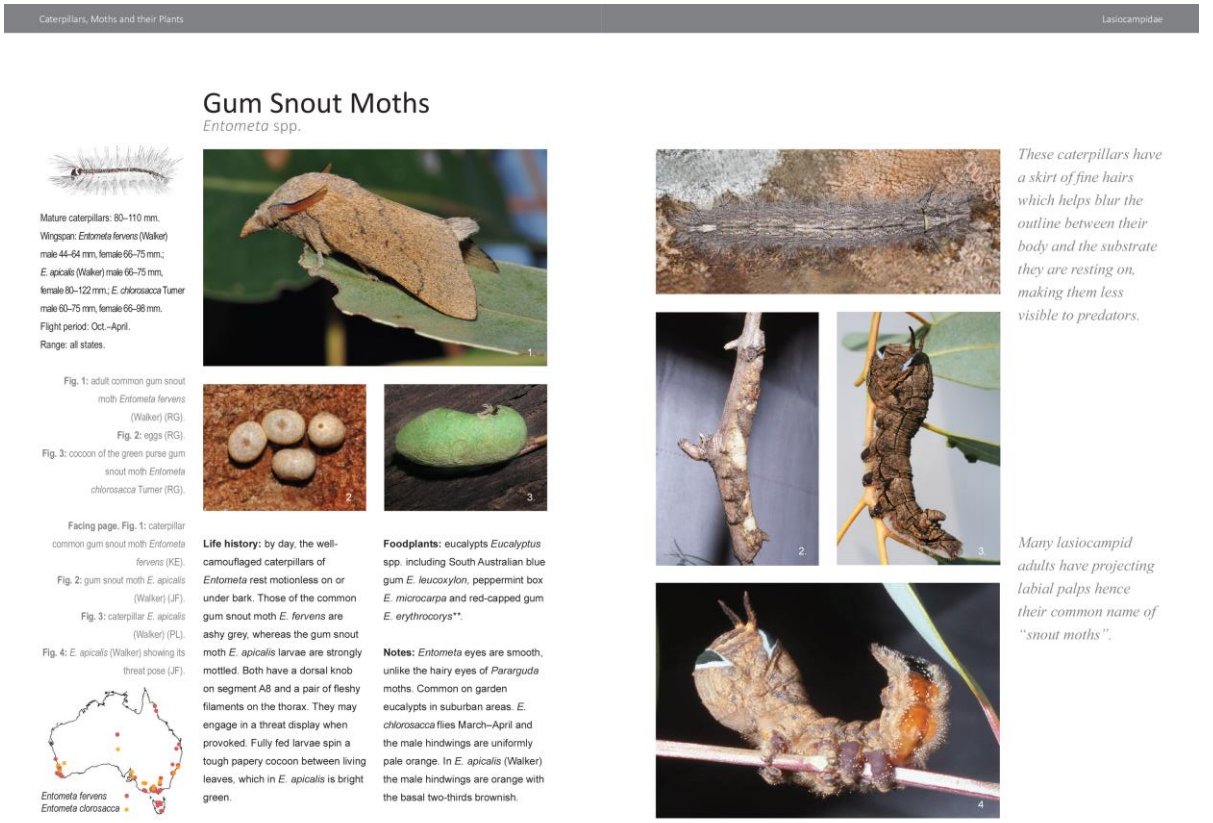
Foodplants: guinea flowers *Hibbertia* spp.

Notes: the weak-flying adults are mostly diurnal and visit flowers in sunshine. Weakly attracted to light.

Similar species: *Pollanisus apicalis* (Walker) has the hindwings about equal in width to the forewings and thinly scaled towards the base.

There is so much more. I sound like I am selling a product with ‘wait, there is more’ and in fact there is. The more I use this book, the more I discover. There are sizes of caterpillars, adults, flight periods, ranges listed and a common name if there is one.

I urge you to use the glossary and indexes as each contains information valuable in understanding Lepidoptera in general but moths specifically. There are many side-notations available throughout the publication, worthy of reading as you work your way through the pages or picking them out first before getting into the specifics. The following example shows the side-notations and the beautiful larval stages of the group known as Gum Snout Moths.



Here is where I put a stop to my dissertation – well almost. My interest in moths is well-known, at least amongst my acquaintances. I can use up an entire conversation on the subject. To say that I have found this publication useful would be an understatement, but you don't have to have a passion for moths to gain knowledge and understanding of one of the most important elements in the natural food chain. Birds, bats, possums, lizards – just to name a few of our native fauna, use either the adult or larva of moths for nutrition.

I recommend this book to everyone and it would be a great introduction of an element in nature that children find fascinating. This has been proven by the public events I have been involved in where children take advantage of seeing moths up close and then the adults move the children away from the microscopes so they, too, can enjoy the experience.

Thanks to Jan Forrest, one of the authors, for supplying me images of the pages to present in this review. Thank you to APS Victoria for the opportunity to review this publication and for making it available through the Book Store. Get your copy now – you will really enjoy the information and then you can put into practice some of the suggestions contained within.

Cathy Powers