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THE ENTOMOLOGICAL SOCIETY OF VICTORIA (Inc)

MEMBERSHIP

Any person with an interest in entomology shall be eligible for Ordinary membership. Members of the Society include professional, amateur and student entomologists, all of whom receive the Society's News Bulletin, the Victorian Entomologist.

OBJECTIVES

The aims of the Society are:

- (a) to stimulate the scientific study and discussion of all aspects of entomology,
- (b) to gather, disseminate and record knowledge of all identifiable Australian insect species,
- (c) to compile a comprehensive list of all Victorian insect species,
- (d) to bring together in a congenial but scientific atmosphere all persons interested in entomology.

MEETINGS

The Society's meetings are held at the 'Discovery Centre', Lower Ground Floor, Museum Victoria, Carlton Gardens, Melway reference Map 43 K5 at 7:45 p.m. on the third Tuesday of even months, with the exception of the December meeting which is held earlier in the month. Lectures by guest speakers or members are a feature of many meetings at which there is ample opportunity for informal discussion between members with similar interests. Forums are also conducted by members on their own particular interest so that others may participate in discussions.

SUBSCRIPTIONS

Ordinary Member	\$30 (overseas members \$32)
Overseas Member with printed bulletin	\$65
Country Member	\$26 (Over 100 km from GPO Melbourne)
Student Member	\$18
Electronic (only)	\$20
Associate Member	\$ 7 (No News Bulletin)
Institution	\$35 (overseas Institutions \$80)

Associate Members, resident at the same address as, and being immediate relatives of an ordinary Member, do not automatically receive the Society's publications but in all other respects rank as ordinary Members.

LIFE MEMBERS: P. Carwardine, D. Dobrosak. R. Field, D. Holmes, T. New, K. Walker.

Cover and logo design by Ray Besserdin 2017

Cover photo: *Opodiphthera loranthi* in Croajingolong NP on 2nd December, 2017. Photo by Marilyn Hewish.

**Minutes of the Entomological Society of Victoria General Meeting,
Tuesday 20 June 2017 at Melbourne Museum**

Attendance: Marcelle Tiller (minutes), Garrad Flint, Linda Rogan, Peter Muller, Ken Harris, Sharon Mason, Martin Lagerwey, Julia McCoe, Josh Grubb, Steve Williams, Helen Tillotson, James Neave, Carol Page, Peter Carwardine, Maik Fiedel and Peter Marriott.

Apologies: Ray Besserdin, Marilyn Hewish.

Guests: Emily Grubb.

The general meeting was opened by Peter Marriott.

Previous Minutes of general meeting 18th April 2017 as reported in June 2017 Vic. Ent. 47 (3) pp 49-51. M: Josh Grubb S: Ken Harris

Correspondence: Austral Entomology magazine, 2 copies were brought to the meeting.

Peter Marriott spoke about the upcoming meetings of the Society for the duration of the year. The members were notified that the Discovery Centre will be changed to a road safety centre and will be running in conjunction with the museum. The Discovery Centre itself will be moving upstairs to the next level (ground level) to give the public better access. Therefore from the beginning of September the Discovery Centre will not be available for use. The new centre is to be opened at the end of April 2018.

We have two meetings this year and two meetings next year plus the end of year break up during this time. Some rescheduling has been done with the excursion (normally held in August) being moved to October and to be held at the Centre for AgriBioscience Latrobe University.

For the August meeting, Peter Muller and Simon Hinkley will be giving presentations on ants. Simon will be give us an overview of Victorian ants and Peter will tell us about the field surveys he has been doing over several years. This will be a wonderful opportunity for all of us who want to know more about these fascinating insects.

Treasurer's report

MAY Account Balances:

General: \$3998

Le Souëf: \$7835

Publishing: \$24684

Other notes: The treasurer has sent out one more reminder to the unpaid members.

Editor's report

As well as having the new logo and cover design, the main text of the Bulletin has been changed. I hope you find it easier to read and enjoy the new look Bulletin.

I urge all members to consider making a contribution to the Bulletin; in depth articles to short snippets and observations with photos are all welcomed. We are hoping to include more material on the ants of Victoria in the coming year. Consider whether your favourite insect group

could be featured in a series beginning in 2018. My ongoing goal is for the Bulletin to represent as well as possible, the breadth and variety of members' interests and expertise. Thanks to those who are currently contributing material to the Bulletin. Thanks also to proof-readers Ian Endersby and Carol Page and also Ray Besserdin for his design work and for organizing the mail-out of the Bulletins. Once again if there is any member who is interested in helping to produce the Bulletin and either works with or is willing to learn the use of MS Publisher, please let me know. It would be of great help to me to have someone who could produce at least one Bulletin per year at times when I am travelling.

Members' presentations:

June's presentations consisted of a lot of firsts.

Linda Rogan Bee discoveries in my garden last summer season

Linda commenced with a brief review of some bee firsts in her garden in the 2016/17 season. In her words:

This summer brought the first roosting *Ame-gilla* males within my garden although I have seen both males and females feeding over several years (Figure 1). There were as many as nine at one time. Thank you to Roch for helping with the species ID.

The same day, on nearby twigs, my first *Leio-proctus* males (Figure 2) were seen which match well to the Padil *Leioproctus launcesto-nensis*. I have other confirmed images of female *Leioproctus launcestonensis*.

About the same time I began seeing *Megachile ferox* males roosting in my garden close to the



Figure 1 *Ame-gilla asserta*



Figure 3 *Megachile ferox* males



Figure 2 *Leioproctus launcestonensis*?

bee posts where the females were nesting. 'The combination of 'red bum'/abdomen markings; modified forelegs; and flattened end of the antennae narrow it down to *M. Ferox* (Figure 3). Other megachilids can have some of these characteristics but not all', according to a note from Karen Retra on BowerBird.

Another first was a wasp mimic bee on 7 Dec. 2016. Photographed with caution and at a distance as I was in danger of falling off a ladder. The T5 cleft shows it to be a *Lasioglossum* female (Figure 4). Comparing it to the images on Padil I believe it to be *L. peraustrale*.



Figure 4 *Lasioglossum peraustrale* showing T5 cleft



Figure 5 *M. (Hackeriapsis) oblonga* 27 Feb 2017

The last shot was of the smallest Megachilidae I have ever noticed in my bee posts. I had been told they were subgenus *Hackeriapsis* and Roch gave me the species *oblonga* (Figure 5). He said, 'If you manage to open the mandible of the male, the basal tooth is

very prominent and the only species like this in the subgenus is *oblonga*'.

The next speaker turned our attention to moths.

Steve Williams Moths of the Dry Country

Steve began his 'picture show' with a series of moths trapped on a light sheet in whipstick country north of Eaglehawk on 12 March 2017 and from Steve's home near Eppalock Victoria. Although the distance is not great the habitat of each area is quite different.

It was interesting that most of the species attracted that night have not been found at Steve's home location only about 30 km away. Illustrations are from his presentation.

He started with a number of Geometridae in the genus *Dichromodes*. These were the dominant genus on his sheet. He finds the range of patterns on their wings interesting but stated his wife calls them 'those grey things'.



FAMILY
Geometridae

SUB-FAMILY
Oenochrominae

SPECIES
Dichromodes
sp. 4

♀

The dominant species was *Dichromodes anelictus* the Dry Country Heath Moth which varied from light grey to charcoal forms. He went on to show typical *Dichromodes* eggs and then the early instar larvae of *D. anelictus* which begin as a very slender twig that scarcely gives away their presence on the Eucalyptus species they feed upon. He had also observed them feeding on Drooping Cassinia *Cassinia arcuata*. His may be the first identified photos of these larvae.



FAMILY
Geometridae

SUB-FAMILY
Oenochrominae

SPECIES
Dichromodes anelictus

Dry Country Heath Moth



FAMILY
Geometridae

SUB-FAMILY
Oenochrominae

SPECIES
Dichromodes anelictus

Dry Country Heath Moth

14th May 2017

Steve then moved on to some species collected near his home in Eppalock. First mentioned was *Buciara bipartita*, a noctuid. Photos included eggs and larvae feeding on *Hibbertia*. He noted that the young larvae turn green once they begin feeding. This species was a cause of excitement to Peter Marriott as their life cycle was undocumented but shortly after emerging from their eggs, Steve thought they were gone. This is a sign of how well the first instars are camouflaged. Steve is not yet confident of raising these through but states he knows where the larvae feed in the bush and if necessary he can collect more advanced larvae.



FAMILY
Noctuidae
SUB-FAMILY
Noctuinae
SPECIES
*Buciara
bipartita*

14th May 2017



FAMILY
Noctuidae
SUB-FAMILY
Noctuinae
SPECIES
*Buciara
bipartita*

18th June 2017

Moths of Victoria Vol 9



FAMILY
Noctuidae
SUB-FAMILY
Noctuinae
SPECIES
*Buciara
bipartita*

8th April 2017

♀



FAMILY
Noctuidae

SUB-FAMILY
Amphipyrinae

SPECIES
*Proteuxoa
flexirena*

Amongst other noctuids shown were *Proteuxoa* sp. in their life stages. *P. flexirena* demonstrated the tough case the larvae wove with silk and substrate just prior to pupating. This led to discussion of the way the larvae burrow into the substrate for pupation. Steve used coconut fibre or coir taking care that no chemicals have been added to them. Peter Carwardine mentioned that he waits to add substrate until the larvae begin to wander thus avoiding collecting too much frass or faeces, then has used substances such as rice hulls. Both mentioned that maintaining sufficient humidity, especially if they were kept indoors, was important. Steve said the moths discussed so far appeared to have a single annual life cycle.

Steve concluded with a rather large Notodontidae *Hylaeora dilucida* known as the Ochre Rough-head. Steve has attempted to raise these with little success in the past. This year, so far, all is going very well as they feed on River Red Gum *Eucalyptus camaldulensis*. He showed eggs that took 15 days to hatch, first instar larvae, a 24 day old instar feeding on the edge of a gum leaf where the colour and the central red stripe blended-in well. The most recent photo was taken only 2 days ago of a 45 day old larvae, 24 mm long, that was a striking blue-green (Photo below).

Thanks to Steve for sharing his excitement in finding and rearing little known moths.

The theme of moth discoveries was continued by the next speaker.



FAMILY
Notodontidae

SUB-FAMILY
Notodontinae

SPECIES
*Hylaeora
dilucida*

Ochre
Rough-head

18th June 2017

Peter Marriott Bush Blitz 2017 Croajingolong

The Entomological Society of Victoria was invited to take part in the Croajingolong Bush Blitz which covered two separate two-week periods November/December 2016. Members Maik Fiedel, Ken Harris (KH), Marilyn Hewish (MH), Patrick Honan, Peter Lillywhite, Peter Marriott (PM) and David Mules (DM) took part. Initials on the photographs on these pages indicate those taken by members.

Peter began the presentation by showing some of the habitats in the areas surveyed. He noted that this corner of the state is unique in Victoria but shares aspects with neighbouring NSW; it is the southernmost extension of the eastern Australian coastal vegetation system. In 15 sites vegetation included rainforest to heathland. Some areas were sampled twice. An area on a rainforest verge was sampled twice, eight days apart and while both surveys were productive there was only about a 20% overlap of species recorded. A total of 657 moth species was recorded. Of these 50% were recorded at only one site and 22% at two. On the other hand, 20 species were recorded from eight or more sites; *Phrissogonus laticostata* was recorded at 14.



Habitats ranged from dry heathlands to warm temperate rainforest

Then followed images of a series of remarkable moths from the 2016 Bush Blitz. There were a significant number of rarely seen species, several representing first sightings for Victoria. Peter began with a series of *Anthela excellens* images (Figs 1 – 4). The species was not recorded in Victoria prior to 2004. Several remarkably different colour forms were shown. The males arrived at Peter's sheet early in the evening and the female (Fig 4) early in the morning.

Opodiphthera loranthi is even more spectacular (Cover). It is intermediate in size between the Emperor Gum Moth and the Helena Gum Moth. This was a first record for Victoria more commonly found north of the NSW border and up to the tropics. It was recorded at four different locations in the second fortnight.

The soft grey and subtle pattern of (*Boarmia driophila* (Fig. 5) is no less beautiful than the more colourful anhelids. Until this Bush Blitz its range in NSW extended almost down to Merimbula. It was found at three heathland locations providing good evidence that it is also well established in far eastern Victoria.

A particular Hawk Moth that increased the known Sphingidae for Victoria from 13 to 14 was *Acosmeryx anceus* (Fig. 6). This was a surprise as sphingids are large, conspicuous and very well known.

Photographs of Plume Moths are often partly out of focus upon because the very long legs raise the body well away from the sheet. This image of *Trichoptilus inclitus* (Fig. 7) shows another first for Victoria.

Several *Hypodoxa horridata* (Fig. 8) were recorded at four different heathland sites. Some lacked the red shading of the figured specimen.

Amblychia subrubida (Fig. 9) with its surprising colour patch on the underside was recorded close to two rainforest sites on three occasions.

The beautifully marked *Sauris lichenias* (Fig. 10) is one of an unusual group of Larentiinae, Geometridae with long legs and palpi and large eyes. This single moth was photographed at a forested site; another first record for the state.

Because of its unusual shaped wings *Macaduma picroptila* (Fig. 11) took some time to track down a name. It does not resemble any of the other arctiids we have in the state.

Figure 12 is a noctuid for which we cannot confidently apply a species name. There is a similar named species but the genus into which this was initially placed is no longer available. So the best we can come up with is Amphipyrinae species – and even that may need some tweaking before it goes into MoV 9! Axel Kallies also collected the species near Cann River early this year. Another noctuid in Amphipyrinae subfamily is *Callopietria rivularis* (Fig. 13). It has a quite complex pattern but its similarity to the previous specimen is clear.

We recorded almost a hundred specimens where the species were known to entomologists but had not been formally described. But there were also more than 70 where we could not even do that – the best we could do was narrow them down to a family or subfamily.

The moth shown in Figure 14 was quite difficult to place. Eventually it was sent to Ted Edwards in Canberra who identified it as another noctuoid, this time from the recently erected subfamily Erebinae in the family Erebidae (formerly in the Catocalinae). *Hypocala deflorata* is very variable and the hindwings, which do not show in the photograph, are strongly marked with yellow.

The large and bright yellow *Ophuissa tirhaca* (Fig. 15) is widespread worldwide: in Africa, Europe and across Asia. It may have a greenish hue; it is oddly, possibly ironically called the Green Drab in Britain. Recent DNA work may result in future separation into several species or subspecies. Marilyn photographed this moth beside Lake Barracoota – another first Victorian record.

Brunia replana (Fig. 16) is one of the narrow-winged group of arctiids. The streaks in the centre of the forewing are sometimes absent; the hind wings are bright yellow and quite broad.

Figure 18 shows another moth where the identification was difficult – our first try was *Cleora*. However, Ted Edwards again directed us to *Paradromulia ambigua* which is very variable in colour and patterns. It is found along the eastern side of Australia well into the tropics and possibly into PNG.

There were many very small species attracted to the light sheets including tortricids and oecophorids but Figures 17 and 19 are unusual. A close look at the heads show interesting features. The tineid species (Fig. 17) has a distinct fluffy topknot. *Tritymba dianipha* is in the family Plutellidae. They hold their antennae in a characteristic rigid fashion, pointing forward.





Lastly Julia McCoe presented an overview of 2 issues of Austral Entomology.

The meeting was closed.

Leaf Beetles *Calomela* and *Dicranosterna* CHRYSOMELIDAE
Subfamily Chrysomelinae

By Martin Lagerwey

Genus *Calomela*

Calomela is a genus of leaf beetles restricted to Australia and New Guinea. The type species is *Calomela curtisi* (Kirby, 1818). There are 45 species (Reid 2006). Generally the food plant is *Acacia* and some species are monophagous but other species feed only on *Banksia*, *Bursaria*, *Kunzea* or *Hakea* (Selman 1979). The beetles are elongate and cylindrical with a forwardly produced head. The pronotum is widest towards the middle or base and has trichobothria on each of the four corners. The antennae are distinctly thickened at the anterior end. The larvae are globose, the abdomen being twice the width of the thoracic segments in the final instar.



Calomela ioptera (Fig. 1) is common throughout Victoria on *Acacia pycnantha* (Golden Wattle). The elytral puncturations are bluish, aligned loosely in ten series somewhat double lined and confused in the middle of the elytron. This brown pattern and blue punctures is a desert form. This image clearly demonstrates the clavate antennae.

Fig. 1 *Calomela ioptera* (Brisbane Ranges NP)



Fig. 2 *Calomela maculicollis* (Licola)
Inset shows two trichobothria.

Calomela maculicollis (Fig. 2) is a scarce species found in the southern half of Australia. There are possibly two very close species using this name. The head and pronotum are red with variable dark blue marks. The fig. 2 inset shows the two trichobothria which occurs in every species of this genus.



Calomela parilis (Fig. 3) is the most common species on *Acacia dealbata* and other bipinnate species. The cell (middle) of each elytron has an elongate green patch where the puncturations are somewhat randomly placed rather than in the usual ten lines.

Fig. 3 *Calomela parilis*
photo by Geoff Walker



Calomela curtisi (Fig. 4) is a well-known red beetle with dark blue patches in the elytra and markings on the pronotum. It occurs from Tasmania to Brisbane.

Fig. 4 *Calomela curtisi*
Wonga Park photo by
Geoff Walker



Calomela satelles (Fig. 5) occurs in SA and WA although I have seen them in the drier parts of Victoria. They are found on Golden wattle, often in similar habitats as *C. ioptera*.

Fig. 5 *Calomela satelles*
Brisbane Ranges



Calomela eyrie (Fig. 6) is a scarce beetle associated with dry desert habitats in Western Victoria.

Fig. 6 *Calomela eyrie*
Hattah Vic.

Calomela pallida (Fig. 7) is known for the stunning aquamarine colour through the elytra. The inset of Fig. 7 is a globose larva which is the universal shape for all *Calomela*. It is a widespread species from Victoria to the northern tip of Queensland. It is described as having two pairs of legs green and the third pair orange but that does not seem to be the case for every specimen. Some specimens turn orange when they die.



Fig. 7 *Calomela pallida*
Comera, Queensland Inset: *Calomela pallida* globose larva Stratford Vic. (The southern end of its range).



Some tropical *Calomela* (eg. *C. testacea*) occur in orange, green or bicolored forms (Fig 8).

Fig. 8 *Calomela testacea* Kununurra WA.
Specimens supplied by Simon Ong



Some species are very particular about their food plant and are found only on one species.

The white striped *C. acaciae* (Fig. 9) is one such species and I have only seen it on *A. aspera* where it can be very prolific indeed.

Fig. 9 *Calomela acaciae*
Brisbane Ranges NP

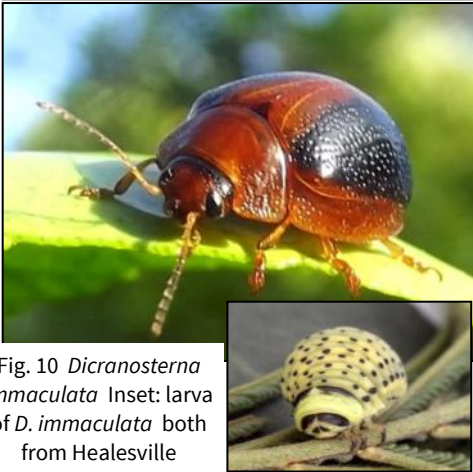


Fig. 10 *Dicranosterna immaculata* Inset: larva of *D. immaculata* both from Healesville



Fig 11 *Dicranosterna semipunctata* Mount Lofty Wonga Park Vic.

Genus *Dicranosterna*

Dicranosterna is a genus of 36 species which share an affinity for *Acacia* and also have globose larvae. The shape is hemispherical and all have strong and relatively sparse puncturations placed somewhat randomly over the elytra.

There are only two species in Victoria and I will include them in this section. *Dicranosterna immaculata* (Fig. 10) feed on *A. dealbata* and some other bipinnate wattles and can be quite common.

D. semipunctata (Fig. 11) is a honey colour and appears to feed only on the broad 'leafed' *A. melanoxylon*, Blackwood.

Acknowledgements:

I wish to acknowledge the help of Dr Chris Reid at the Australian Museum who has assisted with numerous ID's over each of the genera covered in this and previous articles in the series on Chrysomelinae, particularly for Paropsisterna. Considering my work is non professional his assistance has been very generous even including a tutorial on beetle dissection. Other workers who have assisted in this project are Gunter Maywald (Paropsis), David de Little (Tasmanian species) and Daniel Dobrosak (Peltoschema) and Ken Walker. I have been given generous access to ANIC and the museum collections at Melbourne, Adelaide and Brisbane.

Note: All images without credits are by the author.

References;

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- Selman BJ (1979) A Reappraisal of the Australian Species of the Genus *Calomela* Hope (Coleoptera: Chrysomelidae).. *Australian Journal of Zoology* 27, 561-584.

Further reading;

<https://sites.google.com/site/calomelagallery/calomela-gallery>

Arrival of the Tawny Coster butterfly in the Townsville region, Queensland

Kelvyn Dunn & Terry Woodger

Abstract

The Tawny Coster, *Acraea terpsicore* (Linnaeus, 1758) (Lepidoptera: Nymphalidae) is reported for the first time from the suburban region of Townsville, in northern Queensland. This expansion through the Townsville region is likely to have come from populations in the Wet Tropics to the north, or from the northwest through the inland, or via both directions.

Introduction

The nymphalid butterfly *Acraea terpsicore* has recently established in northern Australia where it has since spread rapidly through northern and northeastern Queensland. Braby *et al.* (2014: 288) reported that the Tawny Coster, which is of SE Asian origin, “occurs in highly modified open areas, including suburban roadsides, disturbed grassland (i.e. cleared woodland that is regularly slashed or graded) and degraded savannah woodland” in northwestern Australia, but Franklin *et al.* (2017) have since noted a wider amplitude of preference in Queensland. In northern Australia, it breeds mainly on *Hybanthus enneaspermus* (L.) F. Muell. (Violaceae), a native herb, and to a lesser extent on *Passiflora foetida* L. (Passifloraceae), an introduced vine, both of which are utilised as larval host plants beyond Australia (Braby *et al.* 2014, Braby 2016). This selection represents a narrower host range compared with that utilised in Asia, suggesting that the stock that invaded northern Australia has limited adaptability compared with its source populations (Braby *et al.* 2014).

The butterfly has expanded dramatically since its first appearance in the Northern Territory in 2012. Braby *et al.* (2014: 288) reported that, “Within 14 months of colonisation, *A. terpsicore* has occupied much of the western half of the ‘Top End’ of the Northern Territory and spread to the eastern Kimberley of Western Australia”. From the evidence they gathered, those authors calculated that “the average dispersal rate was 315 ± 56 (SE) km/year.” (p. 288). It has since expanded into northern Queensland, presumably via the Gulf Country, to the western coastal region of Cape York Peninsula, where it was detected in the Kowanyama area during the winter of 2016 (Wilson 2016). It then spread farther eastward through western Queensland, with records from Georgetown in October 2016 (J. Booij cited in Franklin *et al.* 2017) and from the Talaroo area east of Georgetown in February 2017 (Franklin *et al.* 2017). That expansion continued on to Cairns and its environs (Field 2017) in the Wet Tropics coastal region, where it arrived in late March 2017. In the broader area, it has also been reported upland at an elevation of over 900m a.s.l., on the Atherton Tableland (D.C. Franklin, pers. comm. 2017), where it presented during that same month as part of that movement to reach the eastern coast. Field (2017) has estimated its dispersal rate (from Darwin to Cairns) to be 334 km per year, with a “prevailing northwesterly to northeasterly wind” from a cyclone that had “likely acted as a transport vector” in northern Queensland (Field 2017: 28) speeding up its journey to the east coast.

Current findings of further expansion southward in Queensland

In South Townsville, Qld, on 11 May 2017, at 0830 h AEST, one of us (TW) encountered a female of *A. terpsicore* feeding at flowers of a small daisy (Asteraceae) at the Caltex recycling yard in Hubert St. (19°15.5'S 146°50.0'E). This location is about 4 m above sea level in industrial wasteland of weeds and low grasses. The adult, which was a singleton and in good condition, was smallish when compared with two females in the first author's collection (KLDC) from Knuckey

Lagoon, near Darwin, NT, and which were bred in captivity in 2013 by G. Walker. At South Townsville, the female butterfly was flying slowly and keeping low to the ground, in-between inspecting flowers, and because of that foraging intent, the second author easily secured it by hand for closer examination. The second author, being familiar with all the local species in the Townsville area, but not having seen anything like this adult in northern Queensland before, retained the specimen. TW, who was unaware of what species it might be, phoned the first author that same day for information on it and its potential food plants in the area so that he might seek breeding evidence of it and obtain some quality specimens. The specimen was also dispatched to the first author (to confirm that likely identification made over the phone), and in whose collection it is now preserved (KLDC).

The following day (12th May) three more adults were observed at this same site, two of which were captured for the record (both were females); these are in the possession of the second author (TWC). All of these were flying slowly and appeared in perfect or near perfect condition, presumably having bred somewhere in the broader region, if not a little farther afield. By the 14th of May (3 days after the first sighting) adults were seen throughout North Ward and West End, these suburbs lying three or four kilometres WNW and W by S of the site at South Townsville, respectively; ten adults were counted, one of which was taken (TWC), again a female. On the 15th May other adults were observed in Kirwan, Pimlico and Garbutt, each variably farther inland and WSW to SW by W of the South Townsville site. Additional sightings continued and, on the 16th May, several dozen Tawny Costers were seen between North Shore and Bushland Beach, some 15 km beeline W by N and 18 km beeline WNW of the site of the first encounter for the region.

Discussion

The sudden high level of activity of the Tawny Coster noticed, over a matter of days with no earlier sightings by the second author (TW), suggests that *A. terpsicore* is in the colonisation phase in the Townsville area. TW is a resident of West End, Townsville, and he believes that he would have seen the butterfly earlier in the month or in previous months if it had migrated through Townsville a few weeks earlier in numbers similar to the migration densities that Field (2017) reported at Cairns on its arrival there. Nonetheless, Field (2017) had mentioned a southerly report, provided by proxy, of its abundance on 30th March about 7 km SW of Bluewater along the Forestry Road, which is about 35 km beeline W by N of South Townsville. Thus, the species was very close to Townsville city about six weeks earlier than reported here, and may have been invading Townsville in low numbers at that time, perhaps swept into the city by wind currents linked to cyclone Debbie. Alternatively, the appearance of adults in the suburban and coastal regions of Townsville during May might have been a wave of immigration from the inland. We would imagine that the species will continue its southeastward expansion along the coastal and subcoastal regions into central Queensland as predicted by Braby *et al.* (2014a), and perhaps beyond, into southeastern Queensland, if that region of cooler climate is amenable to the species.

References

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Castor caterpillar moth in Tasmania

LIONEL HILL (Lionel.Hill@dipw.tas.gov.au)
and CATHY BYRNE (Catherine.byrne@tmag.tas.gov.au)



Achaea janata
Photo by Cathy Byrne

Rare occurrences of vagrant moths of beet webworm *Spoladea recurvalis* and the noctuid *Grammodes ocellaris* in Tasmania were reported in *Victorian Entomologist* 46 (4) pages 88-89.

A meteorological analysis illustrating an unusual airflow on 1 February 2016 connecting NSW directly to Tasmania via the Tasman Sea was provided as an explanation.

A third vagrant species is now linked to that airflow. Dr Cathy Byrne of Tasmanian Museum and Art Gallery collected one moth of castor caterpillar *Achaea janata* (Linnaeus 1758) in a bucket light trap at 865m elevation in montane

heathland on Mt Louisa on the night of 2 February 2016, on a Bush Blitz survey (Australian Biological Research Study, Department of the Environment) of southwest Tasmania. There are no Tasmanian records of this species in the Atlas of Living Australia or the Tasmanian Plant Pest Database. *A. janata* has been reported as a vagrant elsewhere but rarely if ever before in Tasmania.

Book Reviews



A Field Guide to Spiders of Australia

by Robert Whyte and Greg Anderson, CSIRO Publishing, 2017 Paperback 464pp \$49.95

A FIELD GUIDE TO SPIDERS OF AUSTRALIA

ROBERT WHYTE AND GREG ANDERSON



This book is a wonderful addition to CSIRO Publishing's series of Field Guides to Australian invertebrates. Robert Whyte and Greg Anderson have written an informative book full of fantastic photos that will impress scientists, naturalists, students, gardeners, farmers and the non-arachnophobic public.

Robert and Greg have produced a practical field guide with over 1300 photos of live spiders in natural settings, written in accessible, entertaining language underpinned by scientific knowledge. It has obviously been a labour of love and perseverance, having taken at least 10 years to come to fruition, and many people have been

acknowledged for their contributions whether it be photographic, taxonomic, websites, field work or support and encouragement.

The book begins with a Foreword by Tim Low, a long-time friend of Robert's, followed by a short Preface and comprehensive Acknowledgements section. The first 7 chapters of the book include an introduction, a short segment on arachnophobia, instructions on how to use the book, an explanation of how species are determined (a chat about spider naughty bits), a brief history of Australian Arachnologists, the parts of a spider (all the technical terms) and finally, a very useful section called "Shortcuts to Identification" which includes information on behaviour, eye patterns, spinnerets, location, webs, burrows, egg sacs and leaf curlers. All the chapters are accompanied by excellent photographs.

The bulk of the book is devoted to spider families listed from A to Z, beginning with the more common Modern Spiders (Araneomorphs), followed by the Primitive Spiders (Mygalomorphs – trapdoors, funnelwebs, mouse spiders etc) and then a section on little known Araneomorph families. The Contents pages list each family by its scientific name, followed by its common name and references to headings if extra information is provided. In addition, the families are grouped by 15 common names such as "Orb-weavers" and "House Spiders" and helpfully colour coded on the outer page edge to allow easy access. Each family is described, with information about appearance, behaviour, distribution and other salient facts and a number of excellent photos. The photos are named to genus and species (where possible) and include some information about the actual spider including its distribution and sizes for males and females. Occasionally there are extra dialogue boxes of added information about particular families, genera or species.

The final pages of the book contain a Glossary, the photo credits, further reading suggestions and two indices. The first is a comprehensive index for the book including family and scientific names, common names and other useful subjects from the "ability to run up glass" to "wasp mimics" and the second an index to family common names. Lastly, there is the Spider Family Tree for anyone interested in phylogeny and the evolution of spider families.

The undisputed highlight of this book is the amazing photographs sourced from 63 photographers including the authors. They have expertly photographed live spiders from tiny 3mm jumping spiders up to 90mm whistling spiders and I defy anybody (apart from possibly severe arachnophobes) to not be enchanted by Otto Jurgen's many photos of the utterly magical male peacock spiders in all their glory. My only quibble is that there are few photos of spiders from Victoria but this is most likely due to greater concentrations of Arachnologists and interested enthusiasts in other states.

To sum up, I highly recommend this book, whether used as a field guide, an aid to spider identification or just to flick through to enjoy the photos. I am sure this book will encourage more people to look more closely at the spiders around them and hopefully inspire them to take an interest in observing and studying spiders rather than squashing them.

Catriona McPhee
Collection Manager Entomology/Arachnology
Terrestrial Invertebrates
Museums Victoria



A GUIDE TO STAG BEETLES OF AUSTRALIA

GEORGE HANGAY AND ROGER DE KEYZER



A GUIDE TO STAG BEETLES OF AUSTRALIA
George Hangay and Roger de Keyzer
CSIRO Publishing 9781486302086 (paperback)

This is amongst the latest in the CSIRO series of books on Australian fauna. It covers one family of beetles, the Lucanidae, usually known as stag beetles, and is unique among beetle books in giving details of every known species in a family, in a guide book format.

The Lucanidae are beetles of great interest. They are related to the scarabs (Scarabeidae), having clubbed antennae, but their main distinguishing feature is the male's prominent, often branched, mandibles that resemble antlers and give rise to the name stag beetles. Most are black or dark brown, but a few are quite colourful. The Golden Stag Beetle – *Lamprima aurata*, commonly encountered in Victoria has golden males and generally green females. The most spectacular Australian species, the King Stag Beetle – *Phalacrognathus muelleri*, from N.E. Queensland (illustrated on the book cover) has multicoloured metallic elytra.

Most, if not all, lucanids have larvae that feed in rotting timber (often fallen tree trunks). Detail is not known for many Australian species, but it appears that many species are associated with particular wood-decaying fungi.

Some of the large spectacular lucanids are of tropical origin (I encountered one such in Sabah), but it is interesting to learn that the majority of Australian species are believed to have a Gondwanan origin. It is also believed that some of the tropical genera have reached Australia from Asia. Given the Gondwanan connection it is interesting to find that of 95 Australian species, 34 are found in Tasmania, many of them endemic to that state. Victoria has about 18 species, though I personally have only encountered two of them. The genus *Lissotes* contains 29 known species, 25 of which are endemic to Tasmania, the remaining four species being endemic to Victoria.

The bulk of the book is given to superbly illustrated descriptions of all the known Australian species. Photographs of live beetles are given for many species and specimen photos cover all the remainder.

The book concludes with valuable chapters on 'How to Find Stag Beetles', 'Keeping Live Stag Beetles' and 'Field Preservation and Collection Management'.

The authors are to be congratulated for producing a valuable addition to the literature of Australian beetles, which we will be of great use to entomologists throughout Australia.

Reviewed by Ken Harris
Entomological Society of Victoria Inc.

**Minutes of the Entomological Society of Victoria council Meeting,
Tuesday 17th July 2017 at Melbourne Museum**

Attendance: Marcelle Tiller (minutes), Peter Marriott, Peter Carwardine, Joshua Grubb

Apologies: Ray Besserdin, Maik Fiedel, Linda Rogan, Steve Curle, Julia McCoey

Previous Minutes of council meeting held 16th May 2017 [reported in June 2017 Vic. Ent. 47.3 (3) pp 55-56].

M: Peter Marriott S: Joshua Grubb

Treasurer's Report

June Accounts

General: \$ 3449

Le Souëf: \$ 7835

Publishing: \$ 24696

Membership

Total: 144

Unfinancial: 13

Institutions: 9

Publications Report:

Moths of Victoria will be due for publication in August, prices will remain the same as previous issues. The Neoptera book is still in preparation and is MOV 9 with an expected publication of the end of next year.

Other Business:

The Gippsland Bio scan book will be ready for publication in August.

The First two meetings for the beginning of next year were discussed among the council meetings with the proposals below:

February meeting to be a potential members evening, with members invited to speak.

April meeting, if he has returned a talk from Patrick on his travels.

June, another PHD presentation night due to its initial popularity.

An online forum was suggested by Julia McCoey and Peter Marriott will be following up Steve Curle on being a potential moderator.

Facebook invitations The council also discussed the possibility of sending out Facebook invitations as an addition to the email which goes to members

Good Will Wines the design for the Good Will Wines label, Ray is to follow up on this.

Subscription form for membership Marcelle is to update the subscription form and send to Steve to have posted online and to council.

Design logo for gifts Ray to design logo for mugs, to be given as gifts to guest speakers. Also to follow up the potential for Tshirts with the ESV logo, samples to be make for presentation at an upcoming meeting.

Peter Marriott closed the meeting.

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- COUNCILLORS:** Ray Besserdin, Steve Curle, Maik Fiedel, Julia McCoe.

Thanks to Ray Besserdin, Carol Page and Ian Endersby for assistance in producing the *Victorian Entomologist*.

CONTRIBUTIONS TO THE VICTORIAN ENTOMOLOGIST

The Society welcomes contributions of articles, papers or notes pertaining to any aspect of entomology for publication in this Bulletin. Contributions are not restricted to members but are invited from all who have an interest. Material submitted should be responsible and original. The Editor reserves the right to have articles refereed. Statements and opinions expressed are the responsibility of the respective authors and do not necessarily reflect the policies of the Society.

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Contributions may *preferably* be E-mailed to Internet address: editor@entsocvic.org.au or posted to the Hon. editor in *Microsoft Word for Windows* with an enclosed hard copy. Tables should fit an A5 page with 1 cm borders i.e. 12.5cm width x 18cm height as a maximum size and complex tables should be in .pdf format. Preference will be given to articles with 5 or fewer pages of solid text and articles longer than this will be returned to the author for reconsideration. The main text of the news bulletin is prepared in 9 pt font Source Sans Pro (please do not use fixed point paragraph spacing). The deadline for each issue is the third Friday of each odd month.

Notice to contributors to ESV Bulletin regarding the EBSCO database. All Bulletins backdated to 2010 will be listed in the EBSCO database. Also future Bulletins when they reach sufficient age. If for reasons unforeseen, in part or in full, any contribution does not meet an author's approval for inclusion, please notify council so we may block your work from appearing in the EBSCO database.

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DIARY OF COMING EVENTS

Next Meeting
An evening with the ants
Speakers Simon Hinkley and Peter Muller
Tuesday 15 August 2017
Note 7:45 pm start

General Meetings:

<i>Month</i>	<i>Date</i>	<i>Planned event</i>
October	Tuesday 17	Excursion to the Centre for AgriBioscience at Latrobe Uni
November	Saturday 25	End of year excursion Warrandyte State Park details to follow. Note this date is in late November.

Council Meetings are held at the Museum Victoria at 5:15 pm
on the following Tuesdays:
19 September and 21 November



The Society's Home Page on the World Wide Web is
located at:
www.entsocvic.org.au

Also find us on facebook.



Scientific names contained in this document are *not* intended for permanent scientific record, and are not published for the purposes of nomenclature within the meaning of the *International Code of Zoological Nomenclature*, Article 8(b). Contributions may be refereed, and authors alone are responsible for the views expressed.