Victorian Entomologist



of Victoria

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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 Activity Room 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 \$35

Overseas Member with printed bulletin \$65

Country Member \$31 (Over 100 km from GPO Melbourne)

Student Member \$23 Electronic (only) \$20

Associate Member \$ 7 (No News Bulletin)

Institution \$40(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, I. Endersby, R. Field, T. New, K. Walker.

Cover and logo design by Ray Besserdin 2017

Cover photo: This handmade drawer from the Holmes' collection contains species from the Papua New Guinea islands to the north east of the country but bordering the Bismarck Sea. The brilliant *Papilio* species share the drawer with pierid species, mostly set upside down to show the beautiful undersides. David built the drawers to have a cavity across the front for naphthalene and stained the outside of the cabinet black. Photo by Peter Marriott

Notes from the Entomological Society of Victoria excursion "Behind the Scenes at Melbourne Museum" Tuesday 21 August 2018

Attendance members: Peter Marriott, Linda Rogan, Stuart Lay, Sharon Mason, Trevor Kennedy, Angus Norman, Malcolm Brown, Jonathon Fiske, Alison Fiske, Joshua Grubb, Glenise Moors, Denise Deerson, Steve Williams, Maik Fiedel, Julia McCoey, Martin Lagerwey, Rachel Lee, Peter Carwardine

Guests: Sebastian Steel, Emily Grubb, Esther Grubb, Catriona Woods,

Museum Staff: Nicole Kearney, Simon Hinkley

Apologies: Carol Page, Robin and Gordon Sharp, Ray Besserdin

All were welcomed to this behind the scenes visit to the museum by President Peter Marriott. He explained we would divide into three groups and each would visit three sections of the museum.

The sections visited were the Biodiversity Heritage Library, the wet specimen area and the collection of the late David Holmes in the dry specimen area. David was a former life member of the Entomological Society of Victoria and his extensive collection was donated to the museum upon his death in December 2017.

Biodiversity Heritage Library

Nicole Kearney manager of BHL Australia used a PowerPoint presentation to introduce us to this very exciting, discoverable and accessible digital library. BHL is the world's largest online repository for biodiversity heritage & archival materials.



Nicole introduces the Biodiversity Heritage Library to a fascinated audience. Photo Julia McCoey

BHL Au operates in association with the Smithsonian Institute in America and began its work with the Melbourne Museum in 2010. By 2014 the South Australian, Queensland and Australian Museums also were contributors.

In 2018 it has grown to 22 contributors, one of the newest of which is the Entomological Society of Victoria.

Wings and Stings is now online on the BHL website:

https://www.biodiversitylibrary.org/ bibliography/151975#/summary

Scanned and available material has grown to 1382 volumes and 251,510 pages as shown on the slide below.



BHL Australia

1382 volumes

251,510 pages



Images above are all from various volumes of *The Naturalist's Miscellany* by George Shaw, 1789-1813. The exception being the butterfly, which is from An epitome of the natural history of the insects of New Holland, New Zealand, New Guinea, Otaheite, and other islands in the Indian, Southern, and Pacific oceans by Edward Donovan (1805)



Older scanner: ATIZ BookDrive Pro.

One of the exciting features of the BHL is that when an article is scanned, a very sophisticated OCR reader is used to recognise and index all scientific names which then become searchable. Even more exciting, full text search is now available.

The older "digitisation rig" is an ATIZ BookDrive Pro. With a fixed book cradle, a frame supporting two cameras simultaneously photograph each side of the page. This is still used occasionally when items are very stiffly bound. The quality of the images is excellent, but everything must be done manually which takes time. The glass platen is heavy and unwieldy and the frame is not as stable as it used to be, causing issues with shaking and thus focusing. The new scanner, a Zeutschel OS 16000, has a completely adjustable book platform where each side moves vertically and horizontally. The glass platen comes down at the touch of the button and has automatic pressure detection. The scanner has automatic focussing, straightening and cropping, saving a great deal of time.



Newer time saving scanner: Zeutschel OS 16000.

BHL national funders are the Atlas of Living Australia and the project is hosted in Australia by Museums Victoria, who provide in-kind support.

Nicole says, "The scanning, processing and metadata work is done by our team of fantastic volunteers."

Many thanks to Nicole for introducing us to this exciting digitising library.

The wet specimen section

Simon Hinkley led us into the wet section where we were aware of a loud extraction fan operating to prevent any dangerous build-up of fumes from the thousands of specimens immersed in 70% alcohol or other volatile substances. As we looked around us at the rows of caged glass bottles of various sizes Simon explained one of the disadvantages of storage in alcohol is that many specimens fade with the older ones bleached to white. Simon pointed out that for most taxonomists the structure is much more important than colour.



Overview of the wet specimen collection area



A question was asked about DNA studies for items in alcohol. Simon stated that ideally material stored in 96% alcohol is better for DNA work, but that when the alcohol percentage is this high it can make specimens brittle. He also noted that there are increasing requests from researchers to take samples from specimens for things like DNA or chemical testing. These requests for destructive testing may need only a small part of the specimen, such as a leg, but pose obvious issues in collection management.

Over time the alcohol solution may discolour and it becomes necessary to carefully drain and replace it.

Amongst many fascinating items pointed out was a selection of jars containing marine and terrestrial specimens that form part of the collection of Gerard van Lidth de Jeude (1788-1863). Parts of this important collection ended up in the British Museum. Professor McCoy purchased Museums Victoria's

Simon points out items from the Gerard van Lidth de Jeude (1788-1863) collection



Simon showing Jonathon a very large stick insect from northern Australia

specimens back in the 1860's for a considerable sum of money. Some of these jars are covered with what is probably a pig's bladder and the contents are in remarkably good condition for their age.

One jar, displayed, holds an example of the iconic Sydney Funnelweb, *Atrax robustus*. This species has been responsible for 13 recorded fatalities but happily there have been no deaths since an antivenom was found in 1981.

One of the fascinating arachnids that Simon spoke about was a species of solifugid, an order not known from Australia (commonly called Camel Spiders or Sun Spiders). During the Gulf War of the early 2000's false stories spread online like wildfire about these



Specimen of the iconic Sydney Funnel-web
Atrax robustus

amazing looking animals. They were reported as being highly venomous, huge in size, able to make a screaming sound and to be able to run very fast and chase people with all sorts of bloodthirsty intentions.

The real animal is quite small, maybe the length of an adult finger and doesn't scream. While they are voracious predators, their diet does not include people. It is quite likely that they may seek out the shadows that people cast as protection from the sun. It may also be that as we move and by association our shadow, that they move accordingly. This could lead to the impression of them chasing people.

Many thanks to Simon for sharing just a few of the many stories from the wet collections area.



Closer look at items from the Gerard van Lidth de Jeude marine collection.

David Holmes dry collection introduced by Peter Marriott



Peter Marriott introducing EntSocVic members and guests to the outstanding collection that was donated to the museum by the late David Holmes.



Some of the cabinets made by David Holmes for his butterfly collection Photo Peter Marriott

Many of the wooden cabinets which stored David Holmes' collection, he had made himself. These contained well over a hundred and sixty drawers. These mostly contain his butterfly collection which came from contacts and dealers all over the world. Several of the drawers were displayed showing the number and diversity that he had accumulated including very valuable material, one of which was worth between \$8,000 and \$12,000.



One of the 140 drawers containing David's Australian moths.

We then looked at the collection of Australian moths which David had made over a period of about 70 years. These arrived at the museum in store boxes but have now been sorted taxonomically into about 140 drawers. Many are from Red Hill where he lived and ran an orchard or Dromana where he moved after he retired.

They are most valuable as a record of moth fauna over the years enabling us to gather information on flight times, an appreciation of the diversity of the fauna, appearances of vagrants and migrations.

David's collection was one of the inspirations for starting the Moths of Victoria series and we are still sorting and using this collection as we work through the Victorian fauna.



Some of David's sorted Entometa.



Arctiid moths from David's huge Australian moth collection.

There were over 40 drawers of Indonesian moths and a couple of these drawers were displayed. Many were from the collection of Dr. Jan van Groenendael. Some of these had been set aside by a Japanese officer when the doctor and his wife were interned during the war. Their house was burnt down but the collection was safe in a local museum. David and Dr van Groenendale corresponded and exchanged material for about 30 years. There are specimens dated from the 1930s which were among those that survived the war. Some of David's moths can also be seen in the van Groenedael collection in the Netherlands.



DH collection storage box as it arrived at the museum, waiting to be sorted.

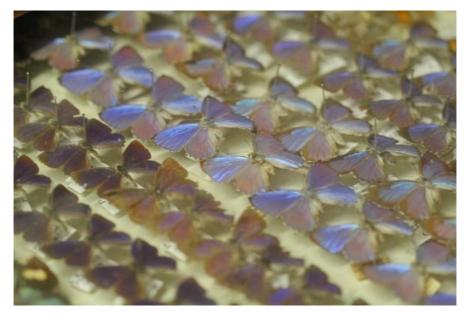
Finally one of a large number of unsorted boxes had been unpacked for display. In his latter years David, who was 99 when he passed away last year, set specimens that he had accumulated in paper envelopes over his collecting years. These are packed and sealed in many of the boxes he got from his local fruit supplier (and fish shop) and they await someone to sort them and place them in cabinets. There are butterflies and moths from many parts of the world, from every continent (well maybe not Antarctica).



Close up of some of the unsorted material showing labels (above and below).



Just looking at the tens of thousands of specimens is mind-boggling and a testament to David's persistence and passion. They are an incredible asset for our state and country.



Close ups of some of the butterflies from David Holmes butterfly collection (above and below).



See also VicEnt V. 48 No. 1 p.17 for information about David Holmes.



One drawer from the David Holmes butterfly collection.

All photos from the excursion not otherwise attributed are by Julia McCoey.

Many thanks to Julia.

All gathered back in the activity room where Peter handed out copies of the new publication *Lepidoptera and Neuroptera of Morwell State Park* (shown right).

This book was compiled by Ken Harris and Peter Marriott and was financed by the local Friends of Morwell National Park and Latrobe Valley Field Naturalists Club.

Morwell National Park Lepidontera & Neuroptera

Meeting closed.

End of Year excursion for EntSocVic Saturday 1 December 2018







Entomological Society of Victoria

This year we will meet with the Friends of Organ Pipes, a group that dates back to 1972 when the park was proclaimed, solely due to its unique geological features of basalt columns formed by the cooling and jointing of molten lava. In the intervening years they have supported Parks Vic with rubbish removal, research and propagation and planting of indigenous flora. They have played a very important part in revegetation and habitat restoration in this national park.

We will explore the area searching for invertebrates, introducing participants to the local insects and helping FOOPS to compile a list of invertebrate species to add to their website. This will include a daytime insect search with members of the public and evening light trapping with Friends group members.

Arrive at 2:00 pm to assist with the invertebrate search involving the general public and members of FOOPS. The search will start at the car park at 2:30 pm and last until about 4 pm.

Alternatively arrive between 6 pm to 7pm for BYO evening meal and twilight talks by FOOPS and EntSocVic.

Light sheets will be operated from dark (about 9pm) until late.

Coffee and tea available, light supper will be provided.

Bring:

Torch and collecting equipment.

Organ Pipes National Park is just off the Calder Freeway about 20km northwest of Melbourne. Melways map 3 C4.

RSVP to let us know of your arrival time: secretary@entsocvic.org.au or phone Linda on 0491 112 692



Excerpts from The Wasp and the Orchid By Danielle Clode



For me, this new book, which is a biography of Edith Coleman, was full of surprises.

I had not intended to write a book review but I found some particular things of interest that I want to share with members of the Victorian Entomological Society. What caught my eye was the information below about the *Acripeza reticulata* the taxon that features in our new logo.

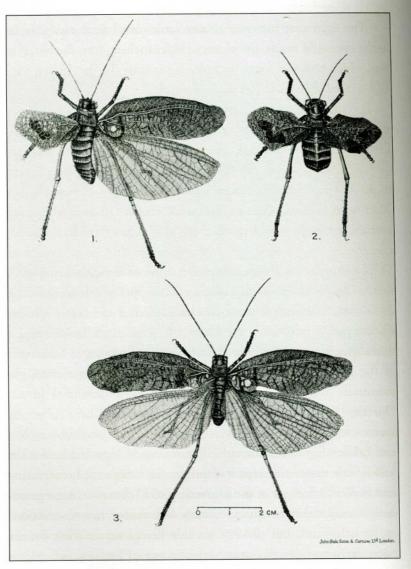
The excerpt below was taken from Chapter 13 "Come back in wattle time". This was describing a discovery she had made while staying at a cottage in Blairgowrie near Sorrento in the 1930s. This appears to be a time when *Acripeza reticulata* was common in that area. I hope you find it of interest as well.

Linda Rogan

colour.

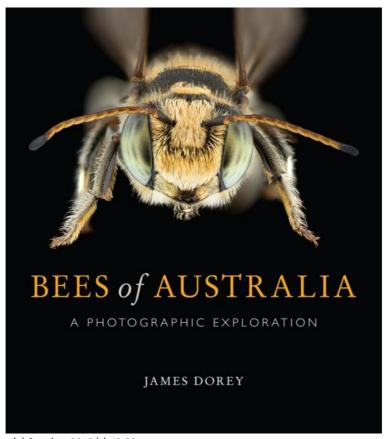
It was here that Edith completed some of her pioneering work on the 'Sorrento flea' or mountain grasshopper (Acridopeza reticulata – now Acripeza), a beetle-like katydid, dull and inconspicuous until threatened, when wing shields lifted to reveal 'hidden bands of shimmering crimson and electric blue'. As voracious herbivores of the invasive and toxic fireweed Senecio madagascariensis, the mountain grasshopper is generally seen as a beneficial insect. Dorothy, Edith, Peter and John spent happy days here collecting specimens in the sand dunes: a highlight being the discovery of a rare bilateral gynandromorph. The strangely lopsided half-male, half-female insect was kept in captivity for some time before being sent to William Agar at the University of Melbourne. Agar generously thanked her for the specimen and quoted her observations on its behaviour, but did not include her as a co-author on the paper he wrote describing it, nor cite any of her detailed papers from the previous years - even though they were the only papers published on the species.

It seems innocuous enough, but from a fellow scientist it is a pointed omission. Given Agar's known objections to the 'feminisation



A gynandromorph mountain grasshopper found by Edith, with male traits on the left and female on the right

BEES OF AUSTRALIA A Photographic Exploration James Dorey



Paperback | October 2018 | \$ 49.99

ISBN: 9781486308491 | 224 pages | 255 x 225 mm

Publisher: CSIRO Publishing Colour photographs, Illustration

What a joy for one who is an amateur native bee enthusiast to review this book.

In his new book, Bees of Australia A Photographic Exploration, James Dorey has presented a unique experience for Australian bee lovers and potential bee lovers.

According to his introduction his goal was to instil and encourage, in the reader, a fascination for Australian native bees. His own fascination began with a new macro lens and an assignment to collect insects some years ago. In pursuing this assignment James "found and photographed 34 different species of native bee on a single tree in suburban Brisbane."

He adds, "..this book is intended to be opened at any page and enjoyed at whatever depth of detail that you, the reader, wants."

I was keen to examine this book to see how successful he has been.

The full face cover photo of *Megachile apicata* from Queensland is more than impressive and encourages a quick look to see what is inside. Every photo page is stunning in its own way. Most show ultra-close-up looks at individual bee species with the ideal sharpness that modern technology and an artistic touch can deliver. These are made even more dramatic with a black background. I found it impossible to read without first flipping through many pages just to enjoy the beauty with which these bees are presented. For those of us, who don't habitually examine bees under the microscope, this will be the most detailed look we've had of each species.

Eventually settling down to see what else this book contained, I found much useful and fascinating information.

In the foreword Tim New commented on the variety and biological diversity of Australian bees, most of which are found nowhere else in the world. He cautioned that the species beautifully presented in this book are only a small sampling of Australian species and there is much yet to be learned about our bees and more species to be found. He stated, "Readers of this welcome book can easily become contributors to this endeavour."



Leioproctus (Leioproctus) amabilis collected and photographed by James in Tasmania

The introduction puts bees in context amongst Hymenoptera and includes bee photos with basic body segments and features of the head clearly labelled. Where mentioned in the book, other body parts and technical terms are listed in a three page glossary.

The bulk of the book is a journey around Australia. Each state is introduced by a 2 page photo spread and a description of some of the bee habitats and something that is special about each state. Each specimen collected and chosen for this book has:

stunning detailed photos accentuated by black background and marked as male or female.

brief comments or a story about the taxon,

and importantly, each specimen has a to-scale silhouette in the bottom right hand corner.

Having seen these large photos, it is necessary to be reminded how small many of the bees are.

Each state and territory section is followed by an article of interest as listed below:

- ♦ Why are bees important by James Dorey
- ♦ Australian native bees as crop pollinators by Tobias Smith
- ♦ Threats to our bees by Matt Elmer
- Social behaviour of bees by Tim Heard
- ♦ How to find native bees by James Dorey
- ♦ How to attract native bees to your garden by Megan Halcroft.

These are backed by James' full colour photo illustrations. Image captions for the above illustrations p.xiv include further information of interest.

At the end is an entire section on Museums. Here are more exquisite photos of bee specimens from Australian museums, this time with contrasting colour backgrounds and also an article by Michael Batley called "The importance of museums".



Xylocopa (Lestis) aerates, male (SA) Photo by James Dorey

This stunning male golden-green carpenter bee from South Australia can now only be found on Kangaroo Island. This is likely due to habitat destruction on the mainland as these bees require certain nesting-materials which can be hard to come by elsewhere.

(Continued on page 108)

Minutes of the Entomological Society of Victoria Council Meeting Tuesday 18 September 2018 Melbourne Museum

Attendance: Ray Besserdin, Julia McCoey, Sharon Mason, Peter Carwardine, Linda Rogan, Peter Marriott.

Apologies: Joshua Grubb.

Previous Minutes: Minutes of EntSocVic Council 17 July 2018 as printed in VE 48 no.4 p. 81: M: Julia McCoey S: Peter Marriott

Treasurer's Report: None

New members

Student member Evan McCluskey, from Warragul, with interests in 'learning about insects, spiders and other fun arthropods'

M: Ray Besserdin S: Linda Rogan

Editor's Report:

EBSCO: Linda was asked to set in train the process for EBSCO as minuted in V.46 No3 p. p.67and no.4 p.76.

Linda commented on the attractive colour photo Peter Marriott provided for August 2018. Peter M offered to assist with the October cover as well with something from the Holmes collection.

More material needed for the Bulletin. Julia M and Peter M will each follow up a potential contributor.

General Business:

Biodiversity Heritage Library *Wings and Stings* has been digitized and is available on the following link

https://archive.org/details/wingsstings1ento

Council wishes to have BHL continue with digitising the Victorian Entomologist beginning with the first 5 volumes moving forward up to 5 years prior to current issue. The current volume is v. 48. This was discussed at the June general meeting and will be put to a vote of the membership at the October general meeting.

Bioscan Bioscans are held every alternate year by Museum Victoria. This year one will be held in the Otways. The moth collection will be carried out by members of the Entomology Society of Victoria. Three aims are as follows:

- Produce a book called Lepidoptera of the Otways that will be similar to the one for Morwell National Park,
- 2. Compare species found in burnt area with those in unburnt areas,
- 3. Compare current species collected with those collected by George Lyell in 1907, 1908. This collection will be carried out in February 2019 as his collection was also in February.

Numbers of participants are limited so members wishing to contribute should contact Peter Marriott.

Memorandum of understanding with Museum Victoria: In process

Council members: Council encourages members who would like to contribute further to the Society by becoming a member of council. In particular it would be desirable to have one or two student members participate in this way. If you are interested, speak to any current council members as listed on the back cover of the Bulletin.

Future meetings listed on back cover:

Other possible future topics include ants, butterflies and pollinators. Further suggestions from members for topics and speakers are encouraged.

Meeting Closed.

(Continued from page 106)

I find myself returning to James' excellent photos and comments for bees I have never seen, and then turning to other sources such as Terry Houston's new A Guide to Native Bees of Australia for more information. I am also making a mental list of bees to look out for in my future travels.

Further inclusions in the book are the appendix of species by family, a page of further reading and an index.

This work is the result of a 2.5 month's road trip by the author, opportunistically collecting bees along the way. He travelled in a modified van that was both his bed and his photo studio.

James finishes the introduction with an invitation to check out his website at www.jamesdoreyphotography.com.au and for more information about his road trip see www.beeloblog.wordpress.com

I found both of interest.

While this book does not have the detailed information of a comprehensive scientific guide book, it has certainly succeeded in James' goal of introducing the subject of native bees in a manner that can be enjoyed at many levels and the stunning photographs alone make the book worthwhile.

Thank you James for sharing your passion for Australian bees.

Accompanying photos are from the book.

Reviewed by Linda Rogan Editor Victorian Entomologist



Lasioglossum (Chilalictus) hemichalceum, male (multiple regions) Photo by James Dorey

Found across much of Australia, particularly in the south, these relatively common bees are unusual in that they have different male castes – this is in comparison to most bees, ants and wasps that have female castes (workers and queens). These bees have largeheaded and small-winged males that will defend a nest and fight one another to the death for mating rights with the resident females.

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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.

Items printed must not be reproduced without the consent of the author and acknowledgement of the Entomological Society of Victoria Inc.

Contributions may preferably be E-mailed to Internet address: editor (no 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 Speaker: Dr. Martin Steinbauer Insect Herbivory of Eucalypts 16 October 2018 Note 7:45 pm start At Melbourne Museum

General Meetings:

MonthDatePlanned eventDecemberSaturday 1stEnd of year excursion Organ Pipes Natrional Parks
See p. 101 Further details to follow.FebruaryTuesday 19Post graduates presentations.

Council Meetings are held at the Museum Victoria at 5:00 pm on the following Tuesdays 21 November 2018 15 January 2019



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.