



BUTTERFLY CONSERVATION SA INC.

NEWSLETTER

No. 70: December 2019

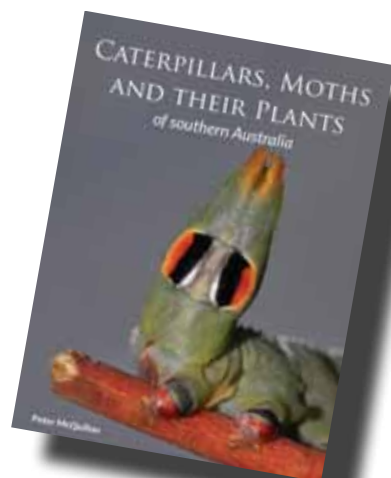
BOOK LAUNCH

'Caterpillars, moths and their plants of southern Australia'
at the South Australian Museum, 5th December, 2019.



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Photos: top and below left, SA Museum foyer, over 120 people attended, top right keynote speaker Peter McQuillan.

Below right: Peter McQuillan lead author and below Jan Forrest OAM co-author.

Bottom left: Chairman BCSA Gerry Butler thanks SA Museum Director Brian Oldman for his hospitality and presents him with a complimentary book.

Right: BCSCA Chairman Gerry Butler, lead author Dr. Peter McQuillan, co-authors Roger Grund and Jan Forrest OAM, SA Museum Director Brian Oldman. Photos: Jenni Thurmer, Brett Oakes and Trina Cord-Udy.

BUTTERFLY CONSERVATION SA. INC. Membership enquiries: membership@butterflyconservationsa.net.au or online: www.butterflyconservationsa.net.au/product/become-a-member/ Membership payments (\$20pa - less \$10 for email newsletters): to Treasurer: PO Box 4, DAW PARK 5041. Cheques to be made out to: Butterfly Conservation SA Inc. EFT details: BSB 633-000 Account No:152785838 Bank: Bendigo Bank. Account Name: Butterfly Conservation SA Inc. Please email Treasurer if paying by direct debit: treasurer@butterflyconservationsa.net.au with name, amount and item.

BCSA FINANCIAL STATEMENT 2019 as at 30th June, 2019**PROFIT AND LOSS STATEMENT**

INCOME	\$
Membership Fees	4,646.00
Grant	2,500.00
Donations	2,211.00
Public Talks	1,035.50
Postage	302.00
Butterfly Books	5,081.59
Moth Poster	40.00
Spider Poster	20.00
Butterfly Gardens DVD	15.00
Butterfly Site Sign	150.00
Plant Tags	156.00
Monarch Book	480.00
TOTAL INCOME	\$16,637.09
EXPENDITURE	\$
Accounting/Bookkeeping Fees	396.00
Merchant Fees	53.10
Sundry	124.00
Parking	35.22
General Repairs and Maintenance	286.00
Public Meetings/Site Hire	471.48
Website Development	2,500.00
Website Ongoing	58.90
Telephone	26.45
Postage/Stationery	308.66
Discounts given	15.00
TOTAL GENERAL EXPENSES	\$1,715.91
Cash Over or short	40.00
Grant Expenditure Chequered Copper	2,083.45
TOTAL EXPENSES	\$6,398.26
PROFIT AND LOSS SUMMARY	
Total Income	16,637.09
Total Cost of Sales	5,495.58
Gross Profit	11,141.51
Total Expenses	6,398.26
Operating Profit	4,743.25
Other Income - Interest	579.51
NET PROFIT	\$5,322.76

CURRENT ASSETS

BALANCE SHEET	\$
Bank Accounts 5838 Trading	979.58
Petty Cash / Cash On Hand	240.00
Beyond Sav 712	38,959.13
Beyond 994	20.98
Total Bank Accounts	40,199.69
Undeposited Funds Account	74.35
Total Current Assets	40,274.04
Butterfly Book Inventory	18,942.80
Total Assets	59,216.84
Liabilities	nil
CURRENT YEAR SURPLUS	5,322.76

SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

This financial report is a special purpose financial report prepared in order to satisfy the financial reporting requirements of the Associations Incorporations Act of South Australia. The committee has determined that the Association is not a reporting entity.

The financial report has been prepared on an accruals basis and is based on historical costs and does not take into account changing money values or, except where specifically stated, current valuations of non-current assets.

In common with organisations of this type, it was not practical to establish adequate records or control over case receipts prior to their receipt and entry into the accounting records. Accordingly, the audit of cash receipts was limited to the amount recorded in the initial books of entry of the organisation.

REPORT ON THE AUDIT OF THE FINANCIAL REPORT OPINION

We have audited the financial report of Butterfly Conservation SA Inc. (the association), which comprises the Statement by Members of the committee, Income and Expenditure Statement, Balance Sheet as at 30 June, 2019, a summary of significant accounting policies and the certification by members of the committee on the annual statements giving a true and fair view of the financial position and performance of the Association.

In our opinion, the accompanying financial report presents fairly, in all material respects, the financial position of the association as at 30 June 2019 and (of) its financial performance for the year then ended in accordance with the accounting policies described in Note 1 to the financial statements and the requirements of the Associations Incorporation Act 1985.

Natale Rugari
Registered Company Auditor
Ascensio Accountants

Dianne Lynch
Treasurer BCSA

Articles for the next newsletter to:
'The Editor'
BCSA Newsletter
C/- editor@butterflyconservationsa.net.au
Please send images separately as a .jpg, not embedded in word documents.

2018 - 19 PRESIDENT'S ANNUAL REPORT

This the 20th year of the BCSA has been one with the highest highs and the lowest of lows.

The low point of the year was the death of one of our founders and first Chairperson, David Keane. David was a happy, positive person with an extensive knowledge of plants and revegetation. His dry and clever wit was a positive attribute to any situation and tension breaker if required. He was an intelligent man who with the help of his equally talented wife Beth, guided the organisation through its formative years. A particular feature of David was his ability to support his well-considered position with logical argument, which with his sunny personality and disposition made sure that we were always going forward in a coherent logical manner. He was twice Chairperson and always happy to lead an event or just to lend a hand. We are delighted that Beth has been able to continue her association with the BCSA and I offer this Associations' help if she or her family wishes it in the future.



The completion of and subsequent printing of our new, long awaited moth book is particularly exciting and will, we hope, make up part of every member's Christmas shopping.

Peter McQuillan has laboured long and hard on the text and planning for the book, and our own Jan Forrest has worked tirelessly in the typing, formatting and styling of the work as well as the accumulation of the images and the associated communications. Jan's dedication to these tasks and to this association has saved us a great deal of money in the production of this book. A wonderful effort Jan for which we thank you so very much.

The launch of our second website was another real high of the past year. Past Chairperson and initial creator of the Butterfly site, Roger Grund, granted us the rights to the website (sabutterflies.org.au) and we jumped at the opportunity to reformat and upgrade the non-functioning site because we could see continuing value in the amount of time and knowledge that had gone into its initial creation. This work was done by a Masters student from the Carnegie-Mellon University named Fan Feng. She laboured for many many hours on this task and the final result being both computer and phone friendly was an excellent outcome.

Turning 20 was also a milestone which was celebrated with a party, and a special cake created by Ann Winter, last December, not bad we think from a group of 10 people that got together in 1998. Another major highlight this year has been our change of venue; unfortunately, we outgrew our Clarence Park home. We are delighted with our move to this venue because it offers so much more for now and for the future.

During this our 20th year we were joined our quest to educate the population about the plight and importance of Lepidoptera by another organisation this year; the BBB. – "Bring Back the Butterflies." This dedicated group is particularly interested and involved in the planting of butterfly friendly gardens and giving people the skills to raise plants and to plant their own gardens. We have formed a close association and are working to our mutual benefits and aims.

Whilst not a BCSA initiative, members of our association have been particularly involved in the set-up of the Cleland Wildlife Park Butterfly House, providing their time, effort and experience to launch this popular attraction. Of particular personal important was my appearance on Gardening Australia earlier this year. There are many adjectives that could describe the whole enterprise with daunting, and trepidation high on the list but also satisfaction and excitement. Sophie Thompson was so enjoyable to see in action and to work with and the ABC team, supportive and experienced in their operations that made the whole enterprise go smoothly.

In 2019 we again demonstrated that we cannot, despite our best endeavours guarantee a successful butterfly excursion. Two excursions were run, the first at Karen and Chris Lane's Hindmarsh Island property and the second in March this year around St. Kilda. I could not attend the first but was present on the second trip. On that occasion though a highly pleasant and educative day we failed to find any life stages of the Bitterbush Blue butterfly even under the direction and tutelage of professional entomologist Richard Glatz. C'est la vie!

Amongst these high profile happenings we have continued our ongoing educative work, speaking to various groups and schools, setting up booths at high profile community events, and running our wonderfully successful Public Talks programme. Our Friends of the Chequered Copper (*Lucia limbaria*) group have had a successful year, detecting adults, eggs and larvae at the site on Victoria Park.

Continuing these events and other club activities requires volunteers, and whilst much of this volunteering is done by the Association's board, other members help out or completely oversee particular operations, too. To them I would like to say many thanks, your work is important and vital.

Thanks too to our sponsors, Konica Minolta and Andreas Alexandrou for your continuing support, it is very sincerely appreciated.

Finally, to the Board. Thank you for your continued support and hard work.

Our two new executive position holders, Brett – Secretary and Dianne – Treasurer have worked hard and successfully at fitting into their most important roles. It is never easy coming into and fitting into a successfully working methodology. Thank you for your hard work and endeavours.

Thanks all the other board members too for the jobs large and small that you have done for the benefit of this association. Your wisdom and guidance has been the reason for our success.

It is with real sadness that I mention that John Wilson will not be seeking re-election to the Board for 2019-2020. John's efforts over the many years have been hugely appreciated. Thank you so very much.

I will not be seeking the Chairpersonship of the group in the upcoming year though I would like to remain on the committee, if the membership sees fit to re-elect me. The club is strong and we look forward with confidence and enthusiasm. Signage for Monarto Zoo is a current project and a "What Caterpillar is that?" phone app is being considered.

We want to type up one of our founder members, Lindsay Hunt's, field and caterpillar raising notes and will be asking members to take on small pieces of this work so that it can be co-ordinated in one whole. We are looking to continue of our "Public Talks Programme" and will continue with our community talks and stalls.

Thank you all for making 2018-19 such a significant year.

Mike Moore

CAN YOU HELP?

a project to transcribe Lindsay Hunt's
life history notes

Lindsay Hunt was a founding member of this association, whom in the last ten years of his life devoted an enormous amount of time and effort into understanding the many mysteries of Australian Butterflies. Lindsay was an excellent observer and recorder, and during his studies recorded many trips and butterfly localities as well as notes on the rearing of his many butterflies.

Unfortunately for the modern world, he hand wrote his notes, some of which are in very poor script.

The Committee thinks that it would be a good idea if we could get these notes digitalised and made more available for future lepidopterists. So, we need your help. If you would not mind sitting down and typing out the hand written notes from page images that we can provide using Microsoft Word then we can over time convert Lindsay's notes into a much more useable, and available form.

Mike Moore will be coordinating this project what he hopes will be a BCSA wide event. If you feel that you have some time each week that you can devote to this task please contact Mike at mima@esc.net.au and he will send you some pages that you can convert into a Word document then return to him.

EDITORS NOTE:

Lindsay's notes example.

This is page one of nine on the Common Brown butterfly.

So far the only notes transcribed have been completed by BCSA member Mike Kokkinn for the Chequered Copper *Lucia limbaria*. He said "once you worked out Lindsay's handwriting it became easier".

These notes have proved to be a goldmine of information for the Chequered Copper monitoring team. See page 9.



The 'moth book team' gathered together at a pre-launch luncheon held in September, as follows: Back row. Howard Hamon (illustrator), Judith Lydeamore (editor), Jan Forrest OAM and Roger Grund (co-authors). Seated. Julie McPherson (Finsbury Green graphic designer), Peter McQuillan (lead author) and Peter Lang (botany editor). Missing. The late David Keane (co-author) and Penny Paton (editor).

FOR YOUR DIARY - BUTTERFLY APP WORKSHOP

This is an exciting citizen science project designed for **EVERYONE interested in identifying butterflies** and adding to our knowledge of local species. Developed by the Australian National University in conjunction with the Atlas of Living Australia the workshop Convener is Dr. Chris Sanderson.



At: Glenunga Hub, 70 Conyngham St, Glenunga SA
On: March 14th, 2020,
From: 9am – 12pm.

Please book at <https://www.eventbrite.com/e/butterflies-australia-adelaide-workshop-tickets-85959742905> and pass on this information to anyone you know who may be interested in learning how to use this app.

An add-on event from 12pm-1pm will also be held for local **community educators and other groups** looking to organise ongoing surveys and teach others how to use the app.

Painted Lady

Class: Insecta
Order: Lepidoptera
Family: Nymphalidae
Genus: *Vanessa*
Species: *kershawi*



This butterfly is Australia's representative of the Painted Lady group of butterflies, widespread in other parts of the world and notable for their long distance migrations. The Australian Painted Lady is capable of flying to New Zealand.

During a large migration in Victoria in 1889, it was abundant enough to darken the sky in some areas, and shop windows in Melbourne trapped many specimens. In the countryside, every foot-step disturbed butterflies, and trains could not proceed because butterflies resting on the rail tracks prevented locomotives from acquiring sufficient traction.

Description

Wingspan: male 43mm; female 47mm.

Upperside: Both sexes have distinctive black and pinkish-orange markings, with a row of four small hindwing upperside black spots, three of which have blue centres. Differs from the similar sized Meadow Argus *Junonia villida* in lacking large blue centred ocelli on the wing uppersides, and from the Australian Admiral *Vanessa itea* by lacking the large yellow patch in the forewing. The sexes are difficult to distinguish, but can sometimes be differentiated by the more rounded outer edges to the wings in the female.

Distribution

Throughout South Australia and Kangaroo Island, extending to all other sub-tropical and temperate parts of Australia and Tasmania, and also including the neighbouring islands of Cocos-Keeling, Flinders, Lord Howe, Norfolk and New Zealand.



Egg, 2nd instar larva, final instar larva, pupa and adult underside.

Photos: LFHunt.

Adult upperside. Photo: RHFisher.

**BUTTERFLY
CONSERVATION
SA. Inc.**

C/- SA Museum
North Terrace,
ADELAIDE 5000
Sth. AUSTRALIA

Larval Foodplants

Numerous native and introduced annual herbs and ornamental plants, mostly of the Compositae/Asteraceae including *Ammobium alatum* (paper daisy), *Arctotheca calendula* (cape weed), *Xerochrysum bracteata* (strawflower), *Calocephalus platycephalus* (billybuttons), *Chrysocephalum apiculatum* (common everlasting), *C. semipapposum* (yellow buttons), *Gamochaeta spicata* (spiked cudweed), *Gnaphalium* species (cudweeds), *Helichrysum scorpioides* (strawflower), *Leucochrysum* species (sunrays), *Rhodanthe chlorocephala rosea* (western sunray). The larvae usually eat the leaves of the foodplant, but will also eat the flowers and softer green stems if they are hungry enough.



Chrysocephalum apiculatum
Photo: RSandocock.
Helichrysum sp.
Photo: JAFforrest.
Rhodanthe sp.
Photo: IHolliday.
Xerochrysum bracteatum
Photo: RGrund.

Habitat and Ecology

A sedentary or migratory species. Due to its migratory tendencies the Australian Painted Lady can be found in most habitats. It is generally common wherever its larval foodplants grow. In South Australia, large numbers of the butterfly are produced in the warmer northern pastoral areas after rain when their foodplant grows prolifically. Small numbers of the butterfly regularly appear in urban Adelaide during early spring probably as a result of small migrations from the pastoral areas. Migrations are mainly in a southerly direction during spring, with a lesser northerly migration reported for autumn. One spring migration in the eastern states of Australia lasted for eight weeks on a 600 km front. The larvae construct webbed shelters to hide in. The pupae are a metallic copper or gold colour.

Flight Period



Threats

There are no major threats to the Australian Painted Lady at present. It is probable, however, that migratory numbers have decreased in recent times due to loss of breeding habitat as a result of overgrazing by domestic stock and feral rabbits, aerial spraying of locusts, and the use of vast inland areas for irrigation (particularly cotton).

Conservation

No action presently required, and it will thrive in urban gardens in well drained sandy loam soils.

ACKNOWLEDGEMENTS *Vanessa kershawi* fact sheet:

Majority of text, map and flight bar from: 'South Australian Butterflies and Moths' website (sabutterflies.org.au) by Roger Grund.
Other references and contributors include: Michael Moore; Fisher RH 1978 *Butterflies of South Australia*; Braby MF 2004 *The complete field guide to Butterflies of Australia*; Dashorst RM & Jessop JP 'Plants of the Adelaide Plains & Hills'.
Production: Jan Forrest OAM, August 2011, revised December 2019.

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For further information or to purchase merchandise from our ON-LINE shop including our books 'Attracting Butterflies to your Garden, what to grow and conserve in the Adelaide region' and 'Caterpillars, moths and their plants of southern Australia'; a 'Butterfly Garden' DVD; moth, spider and other posters or plant tags contact the Secretary, c/- PO Box 4, DAW PARK 5041.
or c/- the South Australian Museum, North Terrace, ADELAIDE 5000.
WEBSITE: www.butterflyconservationsa.net.au
EMAIL: info@butterflyconservationsa.net.au

Heath Ochre

also known as the *Phigalia Rush-skipper*

Class: Insecta
Order: Lepidoptera
Family: HesperIIDae
Genus: *Trapezites*
Species: *phigalia*

The Heath Ochre (or Phigalia Rush-skipper) once occurred extensively throughout the Southern Mt Lofty Ranges. Consideration should now be given to recolonising some of these areas from the remaining known colonies. As male skippers have strong preference for ridges and hilltops these locations should be carefully considered. It has only one brood a year and is usually seen flying around late September to early December.

Description

Wingspan: male 29mm; female 31mm.

Upperside: brown; fore wing with a dark brown-black central area containing three large yellow spots, a yellow spot in the middle near the bottom edge, and a band of three pale spots near the top of the wing; hind wing has a broad orange-yellow central band.

Underside: background colour is brownish-grey or pinkish-grey; hind wing with about ten dark irregular rings.

Female – generally larger than the male, with a wider abdomen and the outer edges of both wings more rounded.

Distribution

In South Australia it is presently confined to a small group of elevated areas about the summit of Mt Lofty.

Historically it has been recorded from Tintinara, where it is now presumed extinct. Interestingly, it has not been recorded from the Southeast Region even though its food plant occurs there. It is also found in the higher rainfall areas of Victoria, and New South Wales along the Great Dividing Range. Another form occurs in central and southern Queensland.



All photos this page:

Lindsay Hunt

Egg, larva, larva in shelter, shelter, pupa, upperside and underside of adult.



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Larval Foodplants

The larvae feed on a variety of *Lomandra* species including *Lomandra densiflora* (pointed mat-rush), *L. fibrata* (Mt Lofty mat-rush), *L. filiformis*, *L. multiflora* ssp. *dura* (stiff mat-rush), *L. nana*, *L. sororia* (small mat-rush). The eggs are usually laid singly on the upperside of the leaves but on the lower third of the leaf. Often *L. nana* plants are found with twenty or so eggs on them and some of the plants are so small it is difficult to imagine the even one caterpillar surviving solely on these smallish plants.



Photo: Lindsay Hunt *Lomandra* sp. shows egg on right hand side.

Habitat and Ecology

Its preferred habitat is the drier eucalypt woodlands and open forests, such as in the foothills and slopes of ranges like Mt Lofty, where its larval food plants grow. In coastal areas it tends to occur in the drier heathlands and woodlands. It is generally common throughout its range but in localised colonies. It has declined in the past few decades in South Australia because of habitat loss, and is now restricted to high quality remnant woodlands free from disturbance. Its larval food plants are various *Lomandra* sp., close relatives of the yaccas. The larvae feed on the leaves. It prefers its food plant to be in partial shade and uncongested by other plants. Males also prefer hilly areas and these may be a habitat requirement.

Flight Period

Late September to early December. In the Adelaide Hills they usually fly in November and December.



Threats

In South Australia the known colonies occur within the prime elevated bushland areas of the suburban Adelaide hills, and are subject to the continuous

effects of urbanisation. These colonies are now largely restricted to conservation parks. Such areas are generally small and subject to the vagaries of bushfires which are a regular feature of the Adelaide hills.

Conservation

In South Australia the Heath Ochre is rated as vulnerable. Any remaining native bushland habitat in the Adelaide Hills, particularly that occurring on hill-tops, needs to be conserved. As favourable habitat for the Ochre occurs elsewhere in the southern Mt Lofty Ranges, it is possible its range was more extensive than present records show. The possibility of a restoration into high rainfall, elevated conservation areas should be considered.



Top left: *Lomandra densiflora*. (bush) Photo: Ron Sandicock. Top right: *L. longifolia*. Middle row left: *L. densiflora* (close up), Right: *L. nana*. Bottom left: *L. multiflora dura*. Photos R.Grund.

ACKNOWLEDGEMENTS *Trapezites phigalia* fact sheet:

Majority of text, map and flight bar from: 'South Australian Butterflies and Moths' website (sabutterflies.org.au) by Roger Grund. Other references and contributors include: Michael Moore; Fisher RH 1978 *Butterflies of South Australia*; Braby MF 2004 *The complete field guide to Butterflies of Australia*; Dashorst RM & Jessop JP *Plants of the Adelaide Plains & Hills*. Production and design: Jan Forrest OAM, December 2019

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MONITORING THE CHEQUERED COPPER - Gerry Butler

The Friends of the Chequered Copper (*Lucia limbaria*) Butterfly have been monitoring the special butterfly in Pakapakanthi/Victoria Park/ Park 16 during December 2019.

Assisted by a grant from the City of Adelaide the group of Butterfly Conservation SA members have been on hands and knees monitoring the host plant *Oxalis perennans* and the obligate ant *Iridomyrmex rufoniger*. We have observed fresh eggs (0.78mm diameter) on the plants, being inspected by the common black ants and on other occasions watching these small ants (3mm) herding and defending the caterpillars (2-3mm) from the adjacent ant nest into the vegetative growth of the host plants.

Greg Coote has continued his ground-breaking photographic efforts with extraordinary images documenting this special butterfly.

If you wish to participate in this exciting citizen science project please contact Gerry Butler 0407972149 or chairman@butterflyconservationsa.net.au.



Photos Greg Coote. 1. Unhatched eggs near log. 3. Same eggs with attendant ant. 2 and 4. Hidden eggs north patch. 5. Caterpillar (2mm) grazing. 6 and 7. Green-headed ant graveyard. 8. Meat ant on Kangaroo grass.

WHERE ARE THE WANDERER BUTTERFLIES THIS YEAR?

Following a query from a member "Our milk week is flowering but I've noticed that there aren't any butterfly eggs on their leaves". What is going on?"

Member John Wilson who rears monarchs for show-and-tell to school children has made the following observations even though he professes to not know the reasons why they are late this year or indeed not present.

"All butterflies have been late this year. I suspect this is due in part to weather conditions: since July, Adelaide (West Terrace) has only had 164 mm of rain compared to the long-term average of 255 mm. That's about 90mm or 36% less than normal over those months. Less rain means less growth of plants, including the milkweed in nearby Hills bushland which is the source of Adelaide's Monarchs. Also, there have been much less flowers for nectar – less nectar food and less egg laying in the reservoir population.

Because of the low rainfall, what caterpillars there are have been feeding on tough old leaves – maybe that slows their development?

An associated effect of low rainfall is that some night temperatures may have been lower than normal due to clear skies. The mean minimum temperature was 12.3C in October (above long-term average) and 12.9C in November (below long-term average). In the Hills, the temperature would likely be a degree or two lower. I don't know how Monarch caterpillars and pupae respond to temperature, whether it's minimum, average or maximum that matters, but certainly when temperatures are lower, their development is slower."



Photo: Jan Forrest. Cotton Bush *Gomphocarpus fruticosus*.

John then went on to note that he released two butterflies during November from Monarchs that pupated in mid-October – that's about 40 days compared with the usual pupation period of 20-25 days.

Butterfly Conservation South Australia Inc.

presents the tenth

PUBLIC TALKS PROGRAM for 2020



www.butterflygarden.net.au

On the first Tuesday of the month March to November at 6.15pm for a prompt 6.30pm start.

At the Plympton Community Centre

34 Long Street, Plympton.

(200 metres E of Marion Rd, and 300 metres N of Anzac Highway).

Public transport options include:

Bus from the city via Anzac Highway.

Routes: 245, 248, 262, 263, 265, M44, N262.

Closest stop is Stop 9, then approximately 350 metre walk along Long Street.

Bus from the city via Marion Road.

Routes 100, 101, H20. Closest stop is Stop 10 (east side is approximately 100 metres south of Long street). Stop 10 (west side is on the other side of Moringie Ave.

approx. 100 metres north of Long Street). Then approx. 250 metre walk along Long Street.

Entry by donation (minimum of \$2).

Bookings not required

Please bring supper to share and your own cup, tea/coffee will be supplied.

Meetings should conclude by 8.30pm.

At the start of each meeting a ten minute presentation on a 'Butterfly of the Month' will be given by a BCSA committee member.

DON'T FORGET TO BYO CUP.

In the case of an advertised speaker not being available, a speaker of similar interest will replace that advertised.



Photo RHFisher: Painted Lady butterfly *Vanessa kershawi*

A NOTE FROM THE EDITOR

Dear Members,

Thank you for your patience. In particular, for the lateness of this 'end of year' newsletter. For family reasons I have been unable to spend as much time as usual on BCSA matters these last few months including the compilation and production of our newsletter.

Best wishes for 2020,

Jan Forrest OAM
NEWSLETTER EDITOR

CONDOLENCES

To immediate past Chairman Mike Moore on the death of his mother in November 2019 and to Chairman Gerry Butler on the death, also of his mother, in December 2019.

3rd March Natural enemies of butterflies. Presented by Emeritus Professor Dr. Michael Keller from the University of Adelaide. Butterflies die from attacks by a wide range of natural enemies, that include vertebrates, predators, parasitic insects and pathogens. This talk will describe the biology, behaviour and ecology of predatory and parasitic arthropods.

7th April Tales from the underground Principal Researcher at the South Australian Museum and an affiliate at the University of Adelaide Professor Steven Cooper will investigate the diversity, evolution and molecular ecology of the Australian fauna. In particular the subterranean and groundwater invertebrate stygofauna found in the arid zone of Australia.

5th May Brain evolution of fossil fish and the first tetrapods.

Presented by Dr Alice Clement from Flinders University. Fish gave rise to the first terrestrial vertebrates (tetrapods) some 400 million years ago. This greatest 'step' in evolution occurred during a period known as the Devonian. The changes that happened in their bodies over deep geological time can be studied via spectacular fossils, modern scanning techniques and comparison with living species. In doing so, we have uncovered some secrets of early brain evolution in fish and discovered what the brains of the first tetrapods, our ancestors, looked like.

2nd June: Weeds - how to identify and control them in your garden and native scrub.

Dr. Chris Preston is Professor of weed management at the University of Adelaide. He has a particular interest in understanding and managing herbicide resistant weeds and the ecology, biology and management of emerging weeds in agriculture.

7th July Water in the Murray Darling Basin – its relevance and lessons for water management and conservation in Adelaide.

University of Adelaide Adjunct Professor Wayne Meyer will set the context for considering water amounts, uses and variability, and discuss the changing governance and management in the Murray Darling Basin and what we should know about water in greater Adelaide in relation to its management and conservation.

4th August A day in the life of a zoo keeper. The Assistant Curator of natives and primates at Monarto Zoo Louise Stockbridge will provide a fascinating insight into behind the scenes of one Australia's most prestigious zoos.

1st Sept. 6.30pm BCSA AGM 7.00pm Public Talk Biological Surveys in Australia and their value to science.

Dr. Cath Kemper, Curator of Mammals at the South Australian Museum has undertaken vertebrate surveys in outback Australia for the best part of thirty years. She will talk about, and show images of some amazing outback locations and important vertebrate finds. She will also explain why Museums collect and how these collections not only provide us with important distribution data but are pivotal to future conservation efforts.

6th Oct. Maralinga and Emu, a dark chapter in Australia's history.

BCSA committee member Jan Forrest OAM will trace the history of the British atomic bomb tests at Emu Field and Maralinga in the 1950's including the clean-up phase and present day images of the flora and fauna found in this remarkable area of the South Australian landscape.

3rd Nov. 20 years of monitoring butterflies - BCSA committee member Bryan Haywood will provide an historic overview of the Pernambol Butterfly Walk including how to set one up and the findings after 20 years of monitoring at this site. He will also highlight some of the South East butterfly species not seen in other parts of the state and the conservation efforts presently being undertaken to conserve these species.

**HAPPY NEW YEAR TO ALL OUR MEMBERS
AND SUPPORTERS
FROM MEMBERS OF THE
BUTTERFLY CONSERVATION SA COMMITTEE**

PUBLIC TALKS PROGRAM - MARCH - MAY 2020

3rd March

Natural enemies of butterflies.

Presented by Emeritus Professor Dr. Michael Keller from the University of Adelaide.

Butterflies die from attacks by a wide range of natural enemies, that include vertebrates, predators, parasitic insects and pathogens. This talk will describe the biology, behaviour and ecology of predatory and parasitic arthropods.

Prof. Mike Keller is Dean of the Waite Campus, Head of the School of Agriculture, Food & Wine, and Director of the Waite Research Institute.

Mike is an entomologist who joined the University of Adelaide in 1987. His research largely focuses on insect natural enemies and their role in biological control of insect pests. His research on predators and parasitic wasps aims to provide ecological strategies for the enhancement of biological control in agricultural systems through a combination of experimental and theoretical advances. He also contributes to research on pollination biology. Mike also contributes to the Cooperative Research Centre for National Plant Biosecurity.



7th April

Tales from the underground

Professor Steven Cooper is Principal Researcher at the South Australian Museum and an affiliate at the University of Adelaide, where he is a member of the Australian Centre for Evolutionary Biology and Biodiversity, associated with the School of Biological Sciences.

Steve will investigate the diversity, evolution and molecular ecology of the Australian fauna. In particular stygofauna, the subterranean and groundwater invertebrate fauna found in the arid zone of Australia.



COMMITTEE PROFILE - ANNE FRODSHAM

The committee were delighted to welcome Anne Frodsham onto the committee at the last Annual General Meeting.

Anne has been a member of BCSA for several years. She originally graduated in Agricultural Science at Sydney University specializing in Horticulture, moved to Adelaide, and worked for many years as a Science Communicator for CSIRO in horticulture and then entomology in Canberra.



She married an American entomologist, Rick Roush, moved to the US and continued her interests in horticulture and entomology with stints with a commercial supplier of beneficial insects, as a science writer and research specialist at Cornell University in floricultural and vegetable IPM, and as a communications manager at Cornell Cooperative Extension.

Back in Australia, she became the first Industry Development Officer for the South Australian and Northern Territory nursery industries and worked with the national nursery industry technology transfer team, to develop resources in IPM and nursery production for the nursery and vegetable industries.

Following another stint in the US, in California, Anne returned to Adelaide with jobs in SARDI, working with citrus entomologists, and then most recently as a TAFESA Lecturer teaching pest and disease management and soil health units.

She has written several resources on IPM and biological control of horticultural pests and diseases and is now happily retired, working on weed removal and restoring the native grasses to her 10 acres of bushland in the Adelaide Hills, where the butterfly numbers are increasing. Other interest are trekking, travelling, gardening, and watching her two now adult children make their own marks in the world.

5th May

Brain evolution of fossil fish and the first tetrapods.

Presented by Dr Alice Clement from Flinders University.

Fish gave rise to the first terrestrial vertebrates (tetrapods) some 400 million years ago. This greatest 'step' in evolution occurred during a period known as the Devonian. The changes that happened in their bodies over deep geological time can be studied via spectacular fossils, modern scanning techniques and comparison with living species. In doing so, we have uncovered some secrets of early brain evolution in fish and discovered what the brains of the first tetrapods, our ancestors, looked like.



Dr. Alice Clement's research is multidisciplinary encompassing evolutionary biology, vertebrate palaeontology & ichthyology.

She mainly focuses on sarcopterygian fishes (known as "lobe-finned" fishes, such as coelacanths and lungfishes) and the earliest tetrapod-like fishes. Her current research topics include palaeoneurology (fossil brains), 3D anatomy, phylogeny & the evolution of terrestriality - such as the development of limbs from fins, and the appearance of air breathing.

In particular, she uses synchrotron & conventional tomography to create 3D models of fishes and tetrapods; ranging from early stem members of Devonian age to living animals.

CAN YOU HELP?

WHAT CATERPILLAR IS THAT? PHONE APP.

Now that our moth book is published the authors are now floating the idea of a *What caterpillar is that?* phone app. to be developed with students from Carnegie Mellon University.



If you are interested in joining a focus group to discuss content, presentation and format please contact Jan Forrest OAM janf@butterflyconservationsa.net.au, or jan_forrest@bigpond.com.

WHAT'S FOR SALE? - IN OUR ON-LINE SHOP

BOOKS *"Caterpillars, moths and their plants of southern Australia"* **NEW** Published BCSA September, 2019 Our price \$30, plus postage.

"Attracting butterflies to your garden, what to grow and conserve in the Adelaide Region" **NEW EDITION** Published by BCSA 2016 - Our price \$25 (financial members may purchase a book for \$20) plus postage.

"The Making of a Monarch" by Linda Shmith, has now been reprinted. Cost \$20 plus postage.

DVD *"Butterfly Garden"* produced by Tracy Baron and Carolyn Herbert - \$20 each (BCSA financial members price \$15) Plus postage.

POSTERS *"Spiders and their allies of the Adelaide Region"* Published by BCSA 2014. \$10 a set of two, plus postage.

"Moths of the Adelaide Region" \$10 Set of four A3 plus postage.

Single posters: *"Bats of SE South Australia"* and *"The Bilby - Endangered Species"* posters are available for \$5 each, plus postage.

FREE Orchid Posters. Plus postage. Posters are free to schools, but incur postage.

SITE SIGNS: to obtain an application form to register a butterfly site click on the site sign logo. Cost \$50 includes postage.

PLANT TAGS: See list and form available on website. \$2.00 per tag, includes plastic stake and postage

If you would like become a member, order any of our merchandise, including books, plant tags, site signs or posters check out the **ON-LINE STORE** at <https://butterflyconservationsa.net.au/shop/> For queries please email: info@butterflyconservationsa.net.au.

WELCOME TO NEW MEMBERS

AVJ Services

Sue Andrews

Toby Foerde

Ian & Lyn Johnson

Vivette Scherer

John & Libby Bartram

Margaret Hancock

Maureen Ryan

Aisling Murphy

Nancy Cunningham

Melissa Hellwig

Vivienne Owen

Helen Preston

Lola Bennett

Paquita McGrath

Liz Cousins

Pritrina Cord-Udy

Westbourne Park P.S.

Lynton Huxley

Jeannie Peace

Julienne Webb

Monica O'Wheel

Elizabeth King

Pauline Muir

Dean Sincok

Malinda Prowse

Daniel Curtis

William Tune



KONICA MINOLTA

Thanks to Chris Lane and Konica Minolta for their generosity in printing the BCSA newsletter.

Konica Minolta is a Landcare Australia National Partner



BUTTERFLY CONSERVATION SA Inc.

An affiliated organisation of the South Australian Museum and Friends of Parks.

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Membership: Gil Hollamby - membership@butterflyconservationsa.net.au

Newsletter Editor and Public Talks Convener: Jan Forrest OAM -

editor@butterflyconservationsa.net.au C/- South Australian Museum.

Committee: Andrew Lines, Beth Keane, Bernadette Johnson, Bryan Haywood (endangered species advocate), Anne Frodsham, Cristy Seymour (Social Media) also Gerry Butler (publications and merchandise) publications@butterflyconservationsa.net.au.

Consultants: Roger Grund and Dr. Peter McQuillan.

Public Officer: Beth Keane

DIARY DATES

COMMITTEE MEETINGS - Meetings are normally held bi-monthly (usually the second Monday of the month) at 6.00pm at a committee member's home. All members are welcome to attend. If you would like to attend please contact Chairman Gerry Butler on 0407972149.

PUBLIC TALKS PROGRAM 2019: first Tuesday March - November, Plympton Community Centre, 34 Long Street, Plympton. 6.15pm for a 6.30pm start to 8.30pm. Next talk: **3rd March 6.30pm Natural enemies of Butterflies.** Presented by Emeritus Professor Dr. Miachael Keller.

WEB SITES

BCSA official website - Butterfly Conservation SA - www.butterflyconservationsa.net.au
The former domain name **Butterfly Gardening** - www.butterflygardening.net.au is also still available and links directly to the new BCSA site.

South Australian Butterflies and Moths - <https://sabutterflies.org.au> (authored by Roger Grund).

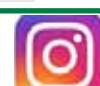
NRM Education - <http://www.naturalresources.sa.gov.au/adelaidemtloftyranges/home>
'Get involved' - 'Education' - for students, **school monitoring activities** / for educators.
See also other regional NRM Education sites



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