



BUTTERFLY CONSERVATION SA INC.

NEWSLETTER

No. 75: May 2021

Ogyris and ants - A PERSONAL ENCOUNTER

Many butterflies from the Lycaenidae family have an association with ants. In some cases this association is very close with the caterpillars actually living in the ant's nest. The Chequered Copper *Lucia limbaria* found in the Adelaide Parklands is one such species. These caterpillars feed during the day on *Oxalis perennans* (native sorrel or creeping yellow oxalis). The attendant ant is *Iridomyrmex rufoniger*.

Others belong to the *Ogyris* genus, in particular the Small Bronze Azure *Ogyris otares*, whose caterpillars feed at night on *Choretrum glomeratum* (berry broom-bush or common sour-bush), with an attendant ant *Camponotus terebrans*. This species has been recorded from Kangaroo Island and my video of ants herding their caterpillars into their nest after being disturbed, was shown last year at the National Science Week 'Herding Caterpillars' event.

Another species with a close symbiotic relationship with ants is Genoveva Azure *Ogyris genoveva*. The caterpillars of this species feed on mistletoe usually growing very high in Eucalypt trees. For this reason it is very difficult to locate this species feeding and as the ant is nocturnal the caterpillars also feed at night. Roger Grund in his website lists *Amyema pendulum* as the favoured host plant.

Over the years we have received very few reports of members recording the interaction between caterpillars and their ants so I was delighted to be contacted recently by a member with a bush block in the hills above Coromandel Valley. The observation of a string of ants heading to a *Amyema preissii* (wire leaf mistletoe) growing on a wattle led to the startling discovery of many caterpillars feeding on the mistletoe being tended by a myriad of large ants.

Roger Grund lists Amaryllis Azure *Ogyris amaryllis* caterpillars feeding on *Amyema preissii* as well as other mistletoes so it could be this species. Several different ants also tend this species during the day and *Camponotus* sp. at night.

As with *Lucia limbaria* the caterpillars extrude a mixture of protein and sugar from the dorsal nectary gland and the ants feed on this 'honey dew'. In return the ants protect the caterpillars from predators.

I was invited to visit the bush block several weeks after the first sighting and although it was a cooler evening and fewer caterpillars were present I was delighted to see a number of caterpillars surrounded by ants on the tree trunk.

The evenings are too cold now, however, we are keen to invite interested members to this site next year if the caterpillars and their ants are found to be present. Hopefully then we can gain a positive identification of the adults.

Photos: H and R Goldney

Jan Forrest OAM

IN THIS ISSUE

- *Ogyris* and ants - a personal encounter
- Member profiles
- The Parklands Project and World Premiere of 'Herding Caterpillars' theatrical event.
- What is Green Adelaide?
- Invertebrate biodiversity in the Green Adelaide initiative
- FACT SHEET Genoveva Azure *Ogyris genoveva*
- FACT SHEET Rain Moths *Abantiades atripalpis*
- Creating a wilder Adelaide
- Gil's Covid Project
- Public Talks Program 2021
- Public Talks Speakers June, July and August.
- What's for sale?
- New Members
- Diary Notes



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.

MEMBER PROFILES

Sarah Macdonald - BOOK SALES MANAGER

Born in England, we moved to Canada when I was four. I grew up, galivanting around the beautiful Ontarian countryside.

My rather alternative parents joined a Unitarian Church, for a little while in the early 70's. In "Sunday School" there, as a pre-teen, I got to do things like make shoebox cameras and tag Monarch Butterflies - little did I know about foreshadowing.



I'm so glad my parents encouraged the exploration of our natural world and instilled an appreciation of the world around us. Coincidentally, my high school also focused on preserving and conserving our environment, something I feel, is sadly missed from most curriculums.

As a young adult, any savings were spent on my next adventure, seeing more of this amazing planet. It was on a trip to Europe, that I ended up in a London squat, met an Aussie and here I am.

Everything about Australia is so alien and exotic to a foreigner; especially the flora and fauna. Since arriving, my hobbies have been exploring and learning about my new country. This happens to include going to events and talks which led me to one of the BCSA public talks where I became a member.

It was at another of these public talks in 2019, that I found myself volunteering to take on the book sales for BCSA. I also help administer the Facebook page and enjoy assisting on the stall at events with fellow BCSA members. Meeting people and learning.

And still so much more to explore - it's a big country.

Lionel Edwards - WEBSITE MANAGER

I do not have a lot of knowledge of entomology but I do like gardening and nature generally. I first became involved with BCSA activities about ten years ago, after encountering a BCSA stall tucked away in a quiet corner of an annual native plant sale at the Adelaide Showgrounds.



I have been involved with various community-based organisations over many years and found the BCSA to be less stressful and demanding of my time than most. In 2017, I volunteered to keep information up to date on the BCSA's current main website (up and running since 2016.) I am a baby boomer who is not afraid of computers – I just love them or hate them in equal amounts! I try to help make BCSA information as accessible as possible for website visitors.

I joined the BCSA committee a couple of years ago to keep in the loop for information although I limit the time I devote to BCSA work because I have a lot of other things I like to do with my time.

Dan Daneshi - TREASURER

First of all, I would like to thank you for your time.

I have been living in Adelaide for two and a half years having moved here with my wife and my son.

I have a Bachelor and Master's degree in accounting.

Before I moved to Australia, I worked for the National Iranian Oil Company for over 15 years as an accountant and reporting specialist. On arrival in Adelaide just before the pandemic, I initially worked as a volunteer in the Red Cross for a couple of months, then as an intern for Account NextGen for six months.

I have held the position of Treasurer for seven months with the friendly team at Butterfly Conservation SA and are currently undertaking further study to become a professional accountant (CPA).

**Sukhpreet Singh Bala - SECRETARY**

My name is Sukhpreet Singh Bala and I am a Secretary at Butterfly Conservation SA.

I graduated from Punjabi University, Patiala, India in the year 2012 with a Bachelor's Degree and moved to Australia in January 2020.

I have more than 13 plus years of experience in the Administrative and Customer service field with various multi-national companies. My most recent position was Office Superintendent and Personal Assistant to Dean Academic Affairs, Rayat Bahra University, Chandigarh, India.

I am a life member of the Indian Red Cross Society, Concessional Member of the Australian Red Cross and Member of Neighborhood Watch in South Australia.



BCSA display stall at the Australian Plants Society sale April, 2021

With thanks to those volunteers who helped out with setting up the stall especially Gerry Butler, Bob Allanson, Sarah McDonald, Lionel Edwards and Jan Forrest.

THE PARKLANDS PROJECT EVENT Sunday 16th May 2021

WORLD PREMIERE OF THE 'HERDING CATERpillars' THEATRICAL EVENT

Held in the Adelaide Parklands Tuthangga Carriageway Park (Park 17) on Sunday 16th May this was a one-day festival where art, music and citizen science met nature.

The program included nature walks, iNaturalist workshop, basket weaving, artworks, music and two butterfly walks showing visitors the amazing interaction between the Chequered Copper *Lucia limbaria* caterpillars and their obligate ants *Iridomyrmex rufoniger*.

Of particular interest to BCSA members the World Premiere of the theatrical event 'Herding Caterpillars' with our own Gerry Butler as the narrator ("I am an entomologist") and actors from the Open Space Contemporary Arts (OSCA).



Story line: Ants tend the egg until caterpillar emerges, help it to feed and drink from the sweet nectary glands. The caterpillar pupates and eventually the adult butterfly emerges to fly away.



Left column: artwork from Laura Wills and the Gilles Street Primary School depicting the story of the Chequered Copper butterfly. BCSA display stall with member Donald Barnes, basket weaving and Gerry Butler in conversation with Laura Wills about the chequered copper butterfly. Right column: theatrical event 'Herding Caterpillars'

What is Green Adelaide? A new approach to managing Adelaide's metro environment

Reprinted from Green Adelaide Newsletter 17 March 2021.

Adelaide is in a predicament. We need to balance city life conveniences with a healthy environment. Green Adelaide is here to lead Adelaide towards just that balance. Read on to learn why and how.



Adelaide Views

Green Adelaide is a new government supported statutory board (established in July 2020) with a vision to create a cooler, greener, wilder and climate-resilient metropolitan South Australia. Green Adelaide's region spans across SA's 17 metropolitan council areas, stretching from the Gawler River in the north to Sellicks Beach in the south, and about a third of Gulf St Vincent (a body of water off the coast of SA).

Like many cities, Adelaide is under pressure from the impacts of urban densification (aka compact suburbs and increasing urban infill), climate change and loss of natural habitat.

Why does Adelaide need to be greener?

Because Adelaide's growth and prosperity depend on it.

We need to change our ways, and live with wildlife, and connect more with nature. This is key to battling the challenges of a drying and warming climate, as well as safeguarding and promoting the health and wellbeing of everyone.

Green Adelaide will take the lead across Adelaide's 17 metropolitan council areas to become more climate-resilient by delivering:

- On-ground and practical environmental projects.
- Building and sharing knowledge about Adelaide's environment.
- Deepening Adelaidians love of and connection with nature.

Green Adelaide also wants to partner with you, with the Kaurna people, communities, businesses and organisations to deliver on our vision with funding, advice, research, information sharing and skills development.

What can you do to green Adelaide?

Think about your backyard or frontyard, roof, council/nature strip, verges, local park, school, or main road medium strip.

We want to explore and support cooler and greener ideas to make more nature-friendly areas across Adelaide. Everyone will reap the wellbeing and economic benefits. Life will be better. And that's not an exaggeration.

Green Adelaide has seven priorities to guide our work across metro Adelaide, they are:

1. Coastal management

We want everyone to help look after our beautiful coastline. Green Adelaide is working hard to protect the hooded plover, Australia's most threatened beach nesting bird. We're also training-up coastal ambassadors to help look after Adelaide's unique coastline and deliver coastal restoration projects.

2. Water resources and wetlands

We want everyone to play their part in looking after our rivers, wetlands and lakes – for nature and for all of us.

Green Adelaide is improving water resources by planting native plants and removing weeds to improve water quality. We've got great projects where we're creating or improving habitats like Breakout Creek to the west, and Lower Field River in the south.

3. Green streets and flourishing parklands

Tree lined streets are cooler in summer, and if we use the right mix of plants, our streets will be home to more diverse wildlife too.

Green Adelaide is providing grants (through three grant programs: Grassroots Grants, Greener Neighbourhood Grants and Water Sustainability Grants) to communities and councils to create more green streets.

4. Biodiversity and water sensitive urban design

Let's celebrate our nature-friendly streets and neighbourhoods, and make sure every neighbourhood gets a chance to be nature-friendly. The way we build our homes, schools, shops and offices needs to be in balance with nature.

This includes plantings to create special habitats that look after threatened species, as well as managing our water better, like with rain gardens, wetlands, and using recycled water.

5. Fauna, flora and ecosystem health in the urban environment

It's easy to forget that Adelaide has many interesting animals outside the Adelaide Zoo. Like the threatened grey-headed flying fox in Botanic Park.

We need more healthy habitats for plants, birds and animals to thrive in, and to provide people and nature a better quality of life.

Green Adelaide is helping by funding research to protect threatened species like flying-foxes, as well as supporting councils, volunteers and landholders with pest control and habitat restoration works.

6. Controlling pest plants and animals

We need to manage invasive fish, like the mosquito fish, which threaten our native fish (eat away their fins) and cause water quality to drop.

For nature to thrive with us in the city, we all need to know Adelaide's weeds and pests.

Green Adelaide is funding weed removal and supporting environmental education to help landholders understand how best to control pest plants and animals.

7. Nature education

Nature education is not just for kids. We can all enjoy learning about Adelaide's special natural environment.

Green Adelaide is partnering with its community to ignite everyone's curiosity and knowledge of nature, and is delivering backyards workshops.

You can join us on the journey to create a cooler, greener, wilder and more climate-resilient Adelaide to live, work, visit, enjoy and love – learn, get involved, partner and chat with us.

INVERTEBRATE BIODIVERSITY and the GREEN ADELAIDE initiative

In 2015 our constitution was changed from just promoting the conservation of butterfly habitat but to include an emphasis on **conserving invertebrate biodiversity**.

The Green Adelaide initiative is an ideal opportunity to undertake projects to further this aim. If you have project ideas for the management committee to consider putting forward please contact the BCSA Chairman Gerry Butler or talk to one of the committee members.

Genoveva Azure

also known as the Purple Azure.

Class: Insecta
Order: Lepidoptera
Family: Lycaenidae
Genus: *Ogyris*
Species: *genoveva*

The Genoveva Azure is a spectacular species widely spread throughout the eastern part of the state in a variety of habitats. The sexes are strongly dimorphic; that is, the separate sexes look markedly different though in South Australia it would be difficult to confuse either with any other species. In the wild this species also requires certain species of *Camponotus* ants to complete its life cycle.

Description

Wingspan: male 47 mm; female 53 mm. the shape of the male's forewing is more triangular.
Underside: both sexes are very cryptically coloured with streaks and swirls of black and grey, making the butterflies almost impossible to see with their wings closed when sitting on the trunk of a tree.
Upperside: Female, large cream or yellow spot sits in a black triangular area on the forewing. Rear of the forewing is usually iridescent azure blue in colour, greenish in some individuals. The rear wing has a black edge to it, the rest of it being coloured in the same blue colouration present on the forewing. In the males the wings are edged with black but the rest of the wing are an iridescent purple.

Distribution

In South Australia this species is found throughout the Eastern Mallee, the Flinders Ranges and Adelaide Hills. There are no records from the state's southeast, Eyre Peninsula or the far west. It is widespread in eastern Australia ranging from Victoria to the southern areas of Queensland. A few specimens have been collected in south-eastern Western Australia.



Larval Foodplants

Eggs are laid on Eucalypt trees that have the mistletoe *Amyema miquelii* or *A. pendula* growing upon them and that are strongly



Photos: eggs. LFHunt. Caterpillars, adult female upperside and underside. RHFisher.

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scented with the pheromones of *Camponotus* ants (*C. consobrinus* (Adelaide Hills) or *C. nigriceps* (Mallee areas). The caterpillars eat the mistletoe leaves and flowers.

Habitat and Ecology

Eggs can be laid anywhere from the butt of the mistletoe to the entrance to the ant chamber at the base of the tree. The eggs hatch and the tiny caterpillars are found by the ants as they forage over the tree. The caterpillars are herded together and moved into a cavity or knot hole or under some loose piece of bark close to the base of the mistletoe and protected by the continuous presence of some of the ants. When too large to be safely maintained close to their mistletoe food they are moved into the ant chamber or close to the base of the tree. The ants then shepherd the caterpillars moving them up to the mistletoe just after dusk, watching over them as they feed and then return them to the nest when finished. Up to 40 caterpillars may be tended at any one time. The caterpillars pupate in the nest (usually close to the exit) and leave when hatched. The ants provide the ants with sugar and protein secretions.

Flight Period

The butterfly flying period varies in different areas of the state being slightly longer in the warmer inland regions where flying periods from September to April are possible.

Threats

The necessity of having ants and food plant available



together means the numbers of this butterfly are always going to be relatively low. Human interference particularly land clearance remains the most potentially dangerous threat.

Conservation

This is a spectacular and interesting butterfly that is rare and quite secretive. Colonies can continue to exist on the same trees for many years so it is important to monitor population sites and numbers and for landowners to check carefully before any tree felling is carried out.

Photos: Adult male upperside and underside. LFHunt. Mistletoe *Amyema miquelii* flowers. LFHunt. *Amyema* sp. on Eucalypt. RGrund.



ACKNOWLEDGEMENTS *Ogyris genoveva* fact sheet:

Text, map and flight bar from: 'SA butterflies and moths' R.Grund website <https://sabutterflies.org.au>.
Other references and contributors include: Mike Moore, Andrew Lines and Braby MF 2004 *The complete field guide to Butterflies of Australia*; 'SA butterflies and moths' R.Grund website.
Production: Jan Forrest OAM, April 2021.

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For further information or to purchase one of 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' or to purchase a 'Butterfly Garden' DVD, moth and spider posters contact the Secretary, c/- South Australian Museum, North Terrace, ADELAIDE 5000.

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Rain Moths

also known as *Bardi* or *Barti* Moths

Class: Insecta
Order: Lepidoptera
Family: Hepialidae
Genus: *Abantiades*
Species: *atripalpis*

The larval stage of this moth may last for several years, living underground feeding on the roots of Eucalypt trees. Empty pupal cases protruding from the ground, especially along river banks and following rain when the soil is moistened tells us adult moths have emerged. The adults however, do not have mouth parts to feed or drink and only live long enough to mate and if a female, to lay eggs. Larvae, pupae and adult moths featured in the seasonal diet of Aboriginal people.

The moths are famous for being able to predict rain. In some areas in autumn, the moths appear on only one night each year, yet all appear together in droves, and always just a few hours before a major downpour in that area. Perhaps the rain helps wash the scattered eggs into crevices in the ground, as well as dormant seeds to germinate, so that after the eggs hatch: the young caterpillars can easily find roots on which to feed.

Description

Wingspan: Male: 100-110 mm, Female: 150-170 mm.

Upperside: Grey-brown wings, often with two ragged silver flash markings across each forewing. The forewings can often also show intricate sinuous patterns of pale lines. Male antennae are unusual for having three rows of comb-like teeth projecting from the shaft, rather than two.

Distribution

Occurs through much of the temperate southern half of Australia including southern Queensland, south to Victoria and Tasmania, South Australia and Western Australia.



Larval Foodplants

Caterpillars feed mainly on roots of various Eucalypts especially River Red gum *Eucalyptus camaldulensis*. Medium to tall tree to 40 m high, with a large spreading crown. Bark is smooth, mottled white, yellow and grey and shedding at intervals throughout the year. Rough at the base of the tree.



Top: one day old eggs. **Below:** caterpillar, newly emerged. **Right:** pupal case protruding from ground. **Centre:** pupal case under bangalay *Eucalyptus botryoides*. Photos: Roger Grund. **Above:** adult and male antennae. Photos: Lindsay Hunt.

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Habitat and Ecology

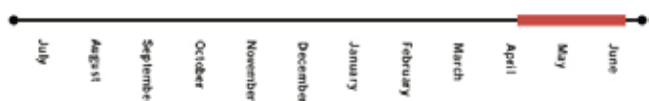
Eggs are spherical, initially creamy yellow, later blackish and hatch in 3-4 weeks. Young caterpillars probably feed on detritus or fungi on the ground, but later form silk-lined tunnels in the soil and feed externally on the roots of eucalypts. Tunnels may be up to 100 cm deep. The larval stage may last for several years. Mature caterpillars are 90 mm to 110 mm long and are whitish with a reddish head capsule. Pupation occurs in the tunnel after the entrance is plugged with soil. The pupa can move up and down the tunnel using strong ridges on the abdomen.

Adult moths emerge in the evening after soaking autumn rains, and the empty pupal cases protruding from the tunnel are commonly seen on the ground near trees. Magpies, currawongs and other birds feast on the emerging moths. Adults do not feed as they do not have mouth parts to feed or drink. They survive on the fats built up during their larval stage and live only long enough to mate then lay up to 40,000 eggs which are scattered over the ground by the female flying near gum trees.

A similar species is the pindi moth *Abantiades marcidus* which is comparable in size and has a similar life history.

Flight Period

Early April to early June.



Threats

No major threats

Conservation

This moth is common after rain when empty pupal cases are often found protruding from the ground. Ensuring Eucalyptus trees continue to be planted.

in urban parklands especially along waterways will ensure the survival of this species and many other moths who make Eucalypts their home.



River Red Gum *Eucalyptus camaldulensis* Photo: Peter Lang. Buds Photo: ALCarle. Fruit Photo: Peter Lang. Flowers. Photo: unknown.



Similar species, adult pindi moth *Abantiades marcidus* Tindale Photo: R. Grund.

ACKNOWLEDGEMENTS *Abantiades atripalpis* fact sheet:

Majority of text and map from: 'Caterpillars moths and their plants of southern Australia' PBMQuillan et.al. 2019. Fight bar adapted from: 'SA butterflies and moths' R.Grund website. <https://sabutterflies.org.au>. Also notes from Don Herbison-Evans and Stella Crossley www.butterflyhouse.com.au. Production: Jan Forrest OAM, April 2021.

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Everything you need to know about creating a wilder Adelaide

Reprinted from Green Adelaide Newsletter 25 March 2021

You may have heard that Green Adelaide has a vision to make Adelaide a cooler, greener and wilder city. But what does the term wilder really mean? Read on to find out.

Yellow-tailed black cockatoo. Photo credit: Clive Furler.

What do you picture when you hear of plans to make metro Adelaide a wilder place? Maybe its kangaroos hopping around Rundle Mall, koalas hanging off the Elder Park rotunda, or kookaburras laughing from atop of the National Wine Centre. While these ideas may sound attractive to some, it's not quite what we mean.

Wilder is an all-encompassing term that signifies a strong connection between people, water, land, plants and animals.

How will Adelaide become wilder?

Wilding is about restoring nature and creating a balance between what is man-made and the natural environment. It is also about enhancing and protecting the wild that already exists.

It isn't just about one particular species too. It's about enhancing our beautiful city with our iconic and lesser-known plants and animals.

Each creature has an important role to play. Butterflies, bats, bees and small birds pollinate native plants, while insects and other creepy crawlies help maintain healthy soils and provide a yummy lunch to those higher in the food chain.



What are the benefits of a wilder Adelaide?

By nurturing and protecting metro Adelaide's wildness, damaged ecosystems can heal, threatened species can thrive, and nature can become more resilient to the impacts of climate change.

What can you do to help wild Adelaide?

The great thing about wilding Adelaide is that everyone can be involved and you can start by noticing what already exists around you. Next time you are outside stop!

Notice a family of screeching cockatoos in your local park, or the enormous gum tree on your walk to school, or even a bottlebrush tree abuzz with bees. This is the beauty of wild.

- You can nurture your local patch of wild by:
- Looking after existing plants.
- Planting new plants or creating lush roof top gardens and green walls.
- Watering local plants in need.
- Adding a bee hotel to your garden.
- Reducing any use of insecticides.
- Getting involved with local community planting/greening projects.

When it comes to wilding Adelaide you are limited only by your imagination. Nature is wild, there's no doubt about it. Let's get a little wild with nature!

GIL'S COVID PROJECT

During the Covid lock down, Gil Hollamby our Membership Officer started a project in his back yard by setting up a 80 watt LED UV globe against a sheet. Bunning sells these globes as spares for the Gecko Bug catcher. He used it once or twice a week from just before sunset until midnight.

Over the summer there were many beetles, bugs, wasps, flies and Katydid as well as moths. The 'Summer' moths suddenly disappeared at the beginning of April and have now been replaced by the 'Autumn' moth species, usually larger and later in the night than the summer ones.

Gil now has over 12 months of observations and specimens from the one site in his back yard at Williamstown and intends to record the observations with photos in iNaturalist. These photos were all taken on the same night.



Androchlea milvaria p. 131



Thalaina angulosa p. 128



Chlenias sp. p.122



Plesanemma fucata p. 126



Gastrinodes argoplaca p. 118



Paralaea sp.



Fisera sp.

All moths above from the Family GEOMETRIDAE



Trictena atripalpis Family HEPIALIDAE

Page numbers are from the BCSA book 'Caterpillars moths and their plants of Southern Australia'

Butterfly Conservation South Australia Inc.

presents the eleventh

PUBLIC TALKS PROGRAM for 2021

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).

Venue of the November talk will be in the SA Museum foyer.

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 (unless otherwise advised).

Bring 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.

Photo Greg Coote: Chequered Copper butterfly *Lucia limbaria*



PUBLIC TALKS PROGRAM 2021

1st June: Wetlands of the Sturt River. Marion resident and former member of the Oaklands Wetlands committee David Jarman will provide an overview of the Warraparinga, Morphetteville Race Course and Oaklands wetlands. Correctly designed and managed wetlands perform a great contribution to our way of life. Water is becoming our most precious resource and David is concerned that in the future our focus will not be over fossil fuel but over clean water. Two of the above wetlands feature "Aquifer Recharge" and David will explain how this works during his talk.

6th July Mites. Dr. Matthew Shaw from the South Australian Museum will provide an insight into the mini world of mites and their contribution to composting vegetable matter into soil.

3rd August. An introduction to butterfly observation.

Committee member and former Chairman of BCSA Mike Moore will provide practical hints on observing adult butterflies and their caterpillars and will include an overview of the butterfly app. produced by the Australian National University.

7th Sept. 6.30pm BCSA AGM 7.00pm Public Talk *The current and future prospects for biodiversity conservation on private land.*

John Fargher, of the Yundi Nature Conservancy, will talk about explore the current policy settings for private conservation in different Australian states, and provide examples from practical experience of managing a re-wilding and biodiversity maintenance program at the Yundi Nature Conservancy on Fleurieu Peninsula, with some specific examples relating to butterflies and moths.

5th Oct. The disappearing 'inscape'. Soil is one of our most precious resources and the composition of the top 15cm is critical to the survival of all plants and micro organisms. Committee member Andrew Walters will provide an insight into what happens to our soil over time and how we can assist our plants to grow, by managing the 'inscape' or top 15cm.

Thursday 4th Nov. VENUE SA Museum foyer. Why nectar is important to butterflies and where they find it. Nectar is the major energy source for butterflies but species differ greatly in the range of flowers they exploit. Recent research has shown that only a small range of herbs, shrubs and a few trees account for most visits. These include native daisies, teatrees and bursaria as well as certain weeds such as scabiosa and blackberry. Presented by Dr. Peter McQuillan from the University of Tasmania, this talk will be of interest to those wishing to provide nectar for visiting butterflies to your garden and those interested in remnant vegetation conservation. *This will be a ticketed event.*

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

'The views of our presenters are their personal views.'



Fairy Moth *Nemophora laurella*

Photographed by Greg Coote on 19th January on a Christmas Bush *Bursaria spinosa* at around 1.30pm at the St. Peters Billabong. This is a re-vegetation site off Linear Park, it was a sunny day with a temperature in the mid 20s.



Dr. Peter McQuillan has provided the following comments: These moths are quite a primitive moth and a member of the small family Adelidae. The larvae feed inside the seed pods of *Bursaria spinosa* and the adult moths are nectar feeders on the flowers. They are day-flying.



BUTTERFLY CONSERVATION SA INC.

C/- South Australian Museum, North Terrace, ADELAIDE

For further information contact: Jan Forrest 8297 8230

Annual membership: \$20 per year. Less 50% discount if you opt to receive the newsletter via email. Life Membership \$200.

Website: www.butterflyconservationsa.net.au

Resources for sale: at public talk meetings or on-line at
www.butterflyconservationsa.net.au/shop.

Books 'Attracting butterflies to your garden, what to grow
and conserve in the Adelaide region' (2nd edition).

'Caterpillars moths and their plants of southern Australia'.

plus large spider posters, A3 size moth posters and plant tags.

Don't forget to BYO cup and supper to share (served covid safe) to our public talks.

ARDROSSAN PROJECT

BCSA member Adrian Shackley is looking for help with an Ardrossan project. An area of about 4 ha of town parkland just south of Park Terrace contains high quality remnant native grass/sedgeland. As part of future conservation the Friends group supporting the area is looking for people to drop in occasionally and record butterflies, moths or other insects. Contact Adrian on 0429004363 if you are interested.

1st June: Wetlands of the Sturt River.

Marion resident and former member of the Oaklands Wetlands committee David Jarman will provide an overview of the Warraparinga, Morphetteville Race Course and Oaklands wetlands. Correctly designed and managed wetlands perform a great contribution to our way of life. Water is becoming our most precious resource and David is concerned that in the future our focus will not be over fossil fuel but over clean water. Two of the above wetlands feature "Aquifer Recharge" and David will explain how this works during his talk.



David graduated from Adelaide University in 1964 with a BA degree majoring in Geography, History and Music and completed a Dip Ed in secondary teaching. He has taught at Westminster School for over 40 years and has lived in the district of Marion all his working life. He has undertaken a great deal of research on various subjects including the history of Marion. This talk on the wetlands is one of five he has prepared. David acknowledges that South Australia has led the world in aquifer recharge.

6th July Mites. Dr. Matthew Shaw from the South Australian Museum will provide an insight into the mini world of mites and their contribution to composting vegetable matter into soil.

Multitudes of Mites

Looking for animal groups that are underappreciated, diverse, and have important roles in ecosystems, led Dr Matt Shaw to mites.



Mites are one of the diverse animal groups on Earth but one of the least well known. There are estimated to be 500,000 spp worldwide and at least 70,000 in Australia. Despite mostly escaping our notice, these tiny but complex arachnids occupy an extreme variety of habitats. The diversity of habitats occupied by mites rivals those occupied by insects. Matt will introduce this group showing the range of habitats they occupy and some of the secrets of their success. Mites have undergone spectacular radiations by hitchhiking on, and often feeding from larger animals, as well as being one of the most diverse and influential components of the soil and leaf litter.

Dr Matt Shaw has been a Collection Manager in Terrestrial Invertebrates since December 2018. He has worked at the Queensland Museum in Brisbane in various research and collection-based roles in the Arachnology section plus public outreach/identification roles in the Discovery Centre. Before moving to Adelaide he was Associate Curator (Natural History) at Canterbury Museum in Christchurch for six years.

**3rd August. An introduction to butterfly observation.**

Committee member and former Chairman of BCSA Mike Moore will provide practical hints on observing adult butterflies and their caterpillars and Chris Sanderson from the Australian National University will provide an overview of the new butterfly app.

A first-of-its-kind citizen science project will put amateur butterfly-watchers at the forefront of research and conservation for the insect. The Butterflies Australia Project is led by researchers at the Australian National University (ANU).

Budding butterfly chasers won't even need a net. As part of the project they can download an app to record and upload what type of butterflies they've seen and where, giving scientists crucial information that will help protect at-risk species.

Research Officer Chris Sanderson says while butterflies are one of our best known insect species, there's a serious lack of scientific data about them. "Everyone loves butterflies, but there is still so much to learn about them," he said. "And anyone who takes part in this project could be the person to make the next big discovery."

The project will create a database of butterfly sightings in Australia. "Butterflies are an excellent species to target, as they are active during the day, and often large and brightly coloured, making them easier to spot," Mr Sanderson said.

"By collating both old and new sightings into a central database, and verifying it through a panel of experts, this project will allow for research and conservation work that is currently impossible." An example of this is the Bulloak Jewel (*Hypochrysops piceatus*), which has only been spotted in a handful of locations, many of which are just thin strips of trees alongside highways.

"If citizen scientists could find more locations where the Bulloak Jewel occurs, it would totally change how we are able to manage and conserve this species," Mr Sanderson said. "This is crucial. In Australia there are currently eight types of butterfly listed as threatened with extinction, but experts believe as many as 38 species are potentially under threat."

Butterfly expert and ANU Associate Professor Michael Braby says the project is hugely important for the future of butterfly research in Australia. "There is critical need to get accurate information on the distribution of butterflies. Such data will assist in conservation planning and decision-making regarding land use," he said. "It will also help us assess how species are changing over time, for example, in relation to climate change."

The app is available for download on both iOS and Android. Anyone interested in taking part can download the app to help them get started. The app will include a field guide with basic information about how to identify every species of butterfly found in Australia. Where possible, there'll also be photos of all the different forms and life stages of each species.

More information is available at www.butterflies.org.au and on the Butterflies Australia Facebook Page. The Butterflies Australia Project is being funded by a citizen science grant from the Department of Industry, Innovation and Science.

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" **2nd 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. Free download available.

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 \$60 includes postage.

PLANT TAGS: See list and form available on website. \$2.00 per tag, inc. 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.

BUTTERFLY CONSERVATION SA Inc.

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

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Newsletter Editor and Public Talks Convener: Jan Forrest OAM -

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

Committee: Andrew Lines, Bernadette Johnson, Bryan Haywood (endangered species advocate), Anne Frodsham, Cristy Seymour (Social Media) and Lionel Edwards (website).

Book sales: Sarah McDonald - 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 2021: first Tuesday March - November, at the Plympton Community Centre, 34 Long Street, Plympton. 6.15pm for a 6.30pm start to 8.30pm. with an option for some talks to be viewed via Zoom. Please watch your email for information regarding public talks.

NEXT TALK: Tuesday 1st June: *Wetlands of the Sturt River* presented by Marion resident and former member of the Oaklands Wetlands committee David Jarman.

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 and now managed by BCSA).

Landscape SA Boards, Urban Biodiversity: <https://landscape.sa.gov.au/hf/plants-and-animals/native-plants-animals-and-biodiversity/urban-biodiversity>

WELCOME TO NEW MEMBERS

Julie Milburn
Tamica Dunn
Glenyss Richardson
Kirsten Oh
Zane Gough
Sarah Adams
Janet Allen
Artemiy Hussnain
Tim Boote
Rosey Pounsett
Talia Vandyk
Kathy Glover
Debra Richards-Jones
Nathaniel Johnston
Kay Dowling
Rebecca Goodwin
Shelley Robins
Rachel Short
Kelly Sharplin
David Indley
Sandra Holt
Bridgette Schwanitz
Geoffery Nowak
Adrienne Janes
Georgina Halliday
Terry Rose
Laree Flowers
Sharon Trappel
Stephanie McDonald
Liz Ingoldby (McLaren Flat PS)
Deborah Twining
Kay Loechel
Nerida Bright



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Thanks to Chris Lane and
Konica Minolta for their generous
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