



BUTTERFLY CONSERVATION SA INC.

NEWSLETTER

No. 76: August 2021

CREATING A MORE BUTTERFLY FRIENDLY ADELAIDE

A new program to create a more butterfly friendly metropolitan South Australia has been launched as part of Adelaide's push to become a National Park City.

Green Adelaide is leading a new program to enhance butterfly friendly habitat across metropolitan South Australia by working closely with partners and butterfly experts for a range of threatened butterfly species, including the yellowish sedge-skipper, bitter-bush blue and chequered copper butterfly.

Green Adelaide Board Presiding Member Professor Chris Daniels said as a result of Adelaide's urban development these threatened species need a habitat boost to protect their populations.

"Butterflies are native pollinators and an essential building block of a healthy environment, but several species are under pressure due to urban sprawl," Prof Daniels said.

"This new program will create a more butterfly friendly city by working with key partners such as the City of Adelaide, our coastal councils and Butterfly Conservation SA to prioritise areas to plant more butterfly friendly habitat, as well as boost awareness of these insects that spread happiness for children and adults alike.

"Butterflies need our help to create their new homes, so they can create a healthy environment for us to enjoy."

This re-wilding program, with the recently announced scoping study to reintroduce platypus back to the River Torrens, demonstrates Green Adelaide's commitment for Adelaide to become the next National Park City.

Professor Daniels added that the yellowish sedge-skipper (*Hesperilla flavescens*), bitter-bush blue (*Theclines thes albocincta*) and chequered copper (*Lucia limbaria*) butterflies have near vanished from metropolitan Adelaide because there is less of their habitat around.

"Community groups such as Butterfly Conservation SA have been working hard to conserve these important native pollinators with awareness raising activities, targeted plantings and ecological burns, but more attention is needed to support the future of these threatened species," Professor Daniels said.

A National Park City is a new notion for Adelaide to create a movement for a more liveable metropolitan SA that brings social, economic and environment benefits, through a better connection between people and nature. For more visit: adelaidenationalparkcity.org

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Theclines thes albocincta LFHunt

Lucia limbaria LHunt

Heteronomympha merope RHFisher

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TWO NEW SPECIES OF GHOST MOTH FROM KANGAROO ISLAND

Mike Moore

The world was very different 300 million years ago! All of the continental land masses were grouped together into one almost pole to pole supercontinent we have named, Pangea. Most of this supercontinent was over the south pole, including the pieces that now make up modern Australia and India.

Continental distribution is vitally important in the world's weather, and the Permian continental arrangement meant that the Earth became much drier and cooler, so cold in fact that the last part of the Permian saw the formation of massive ice sheets in the southern hemisphere particularly over "Australia" and "India".

This cooling and drying saw the demise of the huge wet forests that covered much of the land. These forests, would die, and the swamps dry out, over time, forming into the huge coal beds that have provided so much energy for our modern world; The Permian signalled the end of the Carboniferous period.

The Permian period was thought to be about 47 million years in duration and ended with massive Volcanic activity in the northern hemisphere in an area which is now part of Siberia in Russia. The end of the Permian saw the largest mass extinction in the history of the planet where 95% of marine and 70% of terrestrial, organisms, were made extinct.

What caused the end of the Permian era is hotly debated. There are many theories and all have evidence to back them up. Perhaps, there was no single event but each added a little into the mix. The volcanic activity releasing massive amounts of toxic gases, a massive meteorite impact in Antarctica, ocean venting of huge amounts of poisonous H₂S gas (hydrogen sulphide – rotten egg gas), temperature rise due to the volcanic activity thawing massive amounts of frozen subsurface methane, even increased radiation from supernovae have all been suggested. Pangea seemed to move slightly further north during this time too in preparation for the major splits that produced Laurasia and Gondwanaland. These would occur in the next major geological epoch, the Mesozoic.

What has all this to do with Kangaroo Island you ask? A good question!

Kangaroo Island is separated from mainland Australia by a 73m (maximum) deep trench that is currently filled with sea water and is called Backstairs Passage. It is thought that this trench was formed when the massive ice sheets of the late Permian retreated (and eventually disappeared) and hence created the reality that is Kangaroo Island. This retreating ice sheet also had a lot to do with the creation of Spencer and St. Vincent Gulfs.

For a lot of the time that Kangaroo Island has been in existence it has been separated by the sea, but every time the Earth has cooled significantly the sea level drops and Kangaroo Island again becomes part of mainland Australia. It is thought that this has happened at least eight times since Kangaroo Island was first formed.

The last time this cooling and sea level drop occurred was, in Australia, about 33000 years ago, ending about 20000 years ago with Kangaroo Island finally becoming an Island again about 14000 years ago.

Evolution, the genetic change in organisms, requires isolation and hence islands are a particularly good place to observe evolutionary change. Kangaroo Island has been isolated for a lot of time by the sea and even when reattached, the environment of a "dry" Backstairs Passage might not have been suitable for organisms living on Kangaroo Island or the Australian mainland to move easily from one location to the other, hence organisms isolated on Kangaroo Island might have been in that situation for many millions of years, certainly enough time for evolution to be observed.

In April 2019 Marion and I travelled to Kangaroo Island to collect Hepialid moths. Kangaroo Island had in the past provided some interesting Hepialid specimens and there had not been any serious collecting on the island since the 1950s.

In 2018 Simonsen in his review of half of the Australian Hepialid Moths had recognised two endemic species on Kangaroo Island, an *Aenetus* species that he named *Aenetus tindalei*, after the famous South Australian who had collected the first specimens, and an *Abantiades* species that he named *Abantiades macropusinsulariae*. *Macropusinsulariae* actually means Island of the Kangaroo and although a mouthful seems an appropriate nomenclature.

Although too late to collect *Aenetus tindalei*, we knew that other interesting specimens were possible too from the Island. Two unnamed *Oxycaenus* species had been collected there, both of which seemed that they might be unique to the Island. One had been collected in 1949 in Flinders Chase, but with no further information as to whereabouts whilst the other species had been collected from American River in 1956 by F.M. Angel. Another, smaller *Abantiades* species, *Abantiades pica* had last been collected at Cape Borda in 1921 and so there was a lot to anticipate.

2019 was of course the driest year ever recorded on Kangaroo Island with the first "drought" breaking rains falling on April 30, and as Hepialid moths like rain periods to time their hatching, the first four weeks turned out to be more of a holiday than a collecting trip, and we had a wonderful time moving over the island – we think we drove down every road on the Island. We had anticipated staying for 2 months and it was good that we did as we had to do the bulk of our collecting in May.

Like all collecting trips there were some parts that were wildly successful others that were not. We did not collect either of the two unnamed *Oxycaenus* species, nor did we collect *Abantiades pica*, we did however collect many specimens, amongst them, *Abantiades macropusinsulariae*, and unexpectedly collected a lot of *Oxycaenus occidentalis*, and a form of *Abantiades atripalpis* that I had been (and still am!) researching. Most unexpectedly we collected 2 species new to science; one of these due to a late night jaunt by our long term friend Greg Sara!

Both of these new species have relatives on the mainland but none in South Australia. Some simple DNA work done on these species suggested that they had been isolated on Kangaroo Island for more than 6 million years. In that time, they have changed to better suit the conditions on the island, whereas on the mainland the local SA populations have failed to survive or have been forced to

retreat to areas that were more suitable to them. One of the new species, *Abantiades rubrus* has relatives in Eastern Australia; the other species *Abantiades penneshawensis* has relatives in the south western part of Western Australia. I named the first mentioned species, *rubrus*, because of the reddish colouring suffusing the specimens. This species was collected in the western part of the island. The second species I named, *penneshawensis*, because the students at Penneshaw school had collected two of the four specimens we collected (I gave a talk there and their teacher was encouraging them to collect moths and butterflies!) and I wanted to demonstrate my thanks to them for their interest. This species was collected at the eastern end of the island and feeds on *Allocasuarina* trees.

Figure 1. *Abantiades rubrus*Figure 2. *Abantiades penneshawensis*Figure 3. live specimen of *Abantiades penneshawensis*

We did do some DNA tests on *Abantiades marcidus* specimens from KI and mainland SA and found no significant difference in the Mito COI gene between these two populations. It is unlikely that specimens fly from the mainland to the island or vice versa so this means that the population on Kangaroo Island has not been isolated long enough for major differences to show up in the DNA. So, we surmise, their isolation has only been a recent event.

Figure 3. Distribution map of *Abantiades* spp.

Kangaroo Island now has three endemic species of Hepialid moths. Might there be more?

The catastrophic fires that ravaged the Island at the end of 2019 burnt out completely, the known range of the new species *Abantiades rubrus*, the site of collection of the unnamed *Oxycaenus* from Flinders Chase, and the sites of collection of *Abantiades pica*.



Figure 4. Fire map of Kangaroo Island 2019-2020.

Whether these species still exist on the Island is currently unknown, we can only hope that their lifestyle of having a lengthy subterranean existence for their larvae, will help in this regard.

The fires of 2019-2020, Australia wide, will have wiped out countless populations of Lepidoptera reducing the ability of these species to survive on this Continent. We need to make our politicians aware of this and make sure that they react positively to ensure the continued survival of Australia's unique plants and animals.

What is Australia without its wildlife?

FOR YOUR DIARY

November 5th (venue tbc) Workshop on
*'Threatened species of butterflies and moths
and how we can conserve and manage
Lepidoptera.'*

HOW DO INSECTS SEE THE WORLD? - LOW SPATIAL RESOLUTION

YURI OGAWA (Research Associate, Flinders University)

Insects are beautiful and exciting. The beauty and diversity found in their body and exquisite behaviours always entertain us. Why are butterflies highly diverse in wing colouration?

How do Australian bull ants go back to their nest without a google map? How do hoverflies detect and chase other insects to defend territory? You would also have your own fascinating questions regarding insects. Some information here about how insects see the world may help understand them.

Like us, animals also rely on vision to perform daily activities that include finding food and mating partners and moving around in the cluttered landscape. Insects have compound eyes consisting of many individual eyelets called ommatidia. For example, the eye of the Eastern Pale Clouded Yellow *Colias erate* consists of about 6,500 ommatidia (Figure 1A).

These ommatidia contain receptors that receive light individually from their surroundings (Figure 1B). After the light is transformed into electrical energy within receptors, it all travels to and is processed in the insect brain. The visual information is eventually combined and forms just one image that enables insects to make decisions and behave.

With compound eyes, insects perceive one formed image, but it is often with low resolution. It is limited by the number of ommatidia in an eye. Having 6,500 ommatidia in an eye means Pieridae butterflies see the world with a “camera” with only 6,500 pixels. Considering current mobile phone cameras have 12 megapixels (12 million pixels), the butterfly eyes are limited to provide crisper and clearer images of the world. If a human had compound eyes with our eye’s resolution, they would be one meter in diameter.

One of the ways to quantify the spatial resolution of animals is to measure the electrical activity of neurons in the eye while showing black and white bars of various sizes. Researchers test neurons to discriminate how many black and white bar cycles in one degree, which is a degree covered by your thumb at your arm length.

Differences in the number of cycles between animals enable us to compare the eye’s resolution. For example, if an animal can discriminate fine details in a scene, neurons in the eye respond well to finer black and white bars, high cycles per degree (Figure 2).

Conversely, the neurons would react only to wider black and white bars if animals have a low spatial resolution. When attached a small electrode on the eye surface, the neurons in Australian bull ants and honeybees with ca. 5000 ommatidia in a compound eye respond to black-white bars at 0.6 cycles per degree, which is wider black-white bars.

As humans can discriminate about 50 black-white finer bars in a degree, it indicates that insects typically have 100 times lower spatial resolution. It is interesting how then insects perform exquisite behaviours with small sensors.

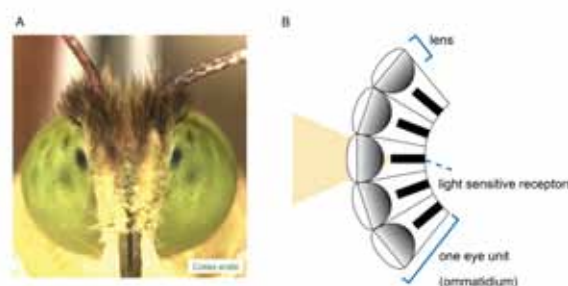


Figure 1. Compound eyes provide lower resolution. A) Like other insects, Pieridae butterfly, *Colias erate*, have compound eyes. B) Insect compound eye contains hundreds to thousands of eye units called ommatidium. The light sensitive receptors in an ommatidium receive light coming from its own tiny facet lens.



Figure 2. Animals having higher spatial resolution respond to finer black-white bars. Insects typically discriminate 0.6 black-white bar cycles in a degree, which are wider bars. It is 100 times lower than the human’s spatial resolution.

NATIONAL SCIENCE WEEK WEBINAR 18th AUGUST by ZOOM

Our National Science Week event will be held on 18th August, focussing on the butterfly family Nymphalidae, especially Brown butterflies.

Mike Kearney from the University of Melbourne will talk on: ‘the ecology of the Common Brown Butterfly *Heteronympha merope* and how this species has been used to understand how insects respond to climate variability and change.’

On Wednesday 18th August from 1830-2030 (CST) via Zoom. Members will receive a link from our Membership officer Gil Hollamby, closer to the date.

Mottled Grass-skipper

also known as the Cynone Skipper

Class: Insecta
Order: Lepidoptera
Family: Hesperiidae
Genus: *Anisynta*
Species: *cynone*
Subspecies: *cynone*

The Mottled Grass-skipper was once more widely spread throughout SA than it is today. With the clearing of land around Adelaide, Yorke Peninsula and in the Mid-North it now has a patchy distribution. It occurred in coastal areas, grasslands and open-woodlands, the areas most heavily cleared in the past.

Description

Wingspan: male 23 mm; female 24 mm.

Upperside: dark brown; fore wing with about ten white or pale yellow spots; hind wing sometimes with a small white streak.

Underside: ground colour varies from grey-brown to rich yellowish-brown; fore wing with a dark brown wedge-shaped patch with a group of three and another group of four white spots; hind wing with variable white spots including a broken band near the edge. The female can be distinguished from the male by the presence of three additional pale yellow spots on the underside of the fore wing. The spots on the upperside of the fore wing are generally more prominent in the female.

Distribution

This species is endemic to Australia. It used to occur on both sides of the Mount Lofty Ranges but is now found only in the Goolwa area, and on the Adelaide plains from Willunga to Port Wakefield. It once had a patchy distribution on Yorke Peninsula. It was also found through the Mid-North but now occurs only around Burra. Very little survey work has been done on this skipper in SA and it is possible it may have a more extensive range than presently recorded (Grund 1999). It is also found in north-western Victoria



Photos: egg, first instar larva, larva making shelter, mature larva, pupa and adult upperside. LFHunt.

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and as far down as Robe. Another subspecies *A. c. gunneda* is known only from Gunnedah and Somerton, NSW (Braby 2000).

Larval Foodplants

In SA the larvae are known to feed on
**Brachypodium distachyon* (false broom),
**Cynodon dactylon* (couch), **Ehrharta calycina*
 (perennial veldt grass), and **Piptatherum*
miliaceum (rice millet) (Grund 1999). It also feeds
 on *Austrostipa scabra* and *Poa* spp. aff. *sieberiana*.

Habitat and Ecology

The skipper occurs mainly in coastal sedgeland habitats in SA (Fisher 1978), but is largely restricted to urban areas in the wheat belt of Vic, especially on vacant land where the introduced food plant *Oryzopsis miliacea* and other grasses are left unmowed (F. Douglas 1993). The species was discovered recently in the natural habitat of *Allocasuarina luehmannii* and *Eucalyptus gracilis* open-woodland with an understorey of *Austrostipa* and *Rytidosperma* (formerly *Austrodanthonia*) grasses in the Murray-Sunset National Park (F. Douglas). The distribution of this butterfly is patchy and fragmented, possibly as a result of the larval food plants through grazing. It is not certain whether the species prefers introduced grasses in some areas of its range or has switched to these plants because the native food plants and habitat have declined significantly (Braby 2000).

Flight Period

It is single brooded with a short flight period during early autumn, from March to mid-April.



Threats

In rural areas where adults are sometimes abundant locally, burning off and spraying of the larval foods may pose a significant threat to colonies. Timing of work is essential so as not to destroy pupa or eggs.

Conservation

The adult Mottled Grass-skipper is normally seen in SA from March to mid-April, occasionally in May. In areas where it occurs, the protection and reintroduction of native grasses, including *Austrostipa* and *Rytidosperma* (formerly *Austrodanthonia*), would increase its chances of survival.



Photos: adult underside. RGrund. Foodplant *Austrostipa scabra*. R.Sandcock. Habitat RGrund.

ACKNOWLEDGEMENTS *Anisynta cynone* 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, July 2021.

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is a not-for-profit organisation for those interested in conserving the habitat of Lepidoptera (butterflies and moths) and other animals.
 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.

WEBSITE: www.butterflyconservationsa.net.au
EMAIL: info@butterflyconservation.net.au

Rayed Blue

Class: Insecta
Order: Lepidoptera
Family: Lycaenidae
Genus: *Candalides*
Species: *heathi*
Subspecies: *heathi*



The rayed Blue is a pretty butterfly when freshly emerged, with the veins on the upperside wings noticeably highlighted with yellowish-brown scales which give it a rayed appearance. They usually fly close to the ground, and while some females remain near the food plant they more often tend to wander, looking for new sources of food.

Description

Wingspan: male 28mm; female 29mm.

Upperside of both males and females is bronze-brown suffused with pinkish-purple it can vary in the male with the suffusion of pinkish-purple scales ranging from bronze-brown to dull pinkish-bronze and purple. In the female the upperside ground colour can range from dark-brown to pale coppery-brown.

Underside of both males and females is greyish-white with a series of small black spots near the edges of both wings. The spots are often larger on the hind wings. This species is very variable. The ground colour can vary from dull grey to greyish-white, and the spots can be large or very small.

Distribution

This species is endemic to Australia and occurs in all the mainland states on the coast, the ranges and in the inland. It occurs in the southern half of South Australia, excluding western Eyre Peninsula and the lower South East.



Larval Foodplants

The larvae of the Rayed Blue feed on plants such as *Westringia fruticosa*, *Prostanthera nivea*, *Eremophila deserti*, *E. longifolia*, *Myoporum parvifolium*, *Plantago* spp. *Derwentia derwentiana*, *D. perfoliata*, *Pimelea* spp. and

Photos: Eggs; egg case with attendant ant; 2nd instar larva and attendant ants; mature larva; prepupa and pupa; adult underside. LFHunt.



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introduced *Plantago lanceolata* all of which grow as small shrubs or as ground cover plants in more open areas. In South Australia they are also known to feed upon the introduced *Plantago lanceolata* near Adelaide, and *Eremophila* spp. and *Westringia* spp. further inland. The presence of larvae is usually indicated by a few small black *Iridomyrmex* species ants and by the transparent “tracks” on the leaves caused by the larvae eating the tissue on the under surface, and leaving the veins and upper cuticle intact. The ants are not obligatory, and in the case of some small ants they will quickly disperse when danger threatens the larva. A plant supporting a number of larvae soon loses its leaves but recovers quickly when the larvae leave to pupate. This usually occurs some distance from the food plants, beneath the bark of a tree or on a fence post or where it can be attached to something well above the ground.

Habitat and Ecology

The preferred habitats of the Rayed Blue include coastal heathland, eucalypt woodland, brigalow woodland, sub-alpine woodland and mallee woodland. Populations are very localised, occurring mainly where the larval food plants occur.

Flight Period

In the southern temperate areas the Rayed Blue flies during the warmer months, with a peak emergence in early spring. It usually over-winters in cooler areas as pupae.



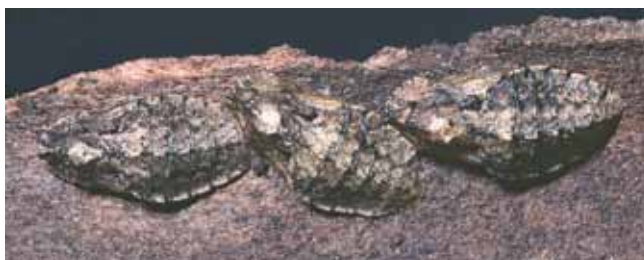
Threats

Bushfires, drought and urban and agricultural expansion are the main threats, but as the butterfly utilises diverse food plants occurring in many habitats it is believed not to be unduly threatened.

Conservation

Along the Mt Lofty Ranges its principal food plant is now the introduced weed, ribwort plantain (*Plantago lanceolata*). However, another food plant the endangered *Derwentia derwentiana* (Derwent speedwell) could be considered for re-vegetation projects which would help to conserve both the butterfly and the plant.

Photos: Pupa; adult female upperside all photos LFHunt.
Hostplant *Westringia rigida* O'Sullivan Beach, photo RSandicock.
Habitat coastal heath, Port Stanvac photo RGrund.



ACKNOWLEDGEMENTS *Candalides heathi* fact sheet:

Majority of text and map from: 'Caterpillars moths and their plants of southern Australia' PBMcQuillan et.al. 2019. Flight 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, July 2021.

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EXPLORING BOANDIK CREATION STORIES AT MT BURR SWAMP

Bryan Haywood Senior Ecologist with Nature Glenelg Trust

Environmental education and biodiversity improvements are continuing at Mt Burr Swamp, thanks to the recent support of Responsible Wood. Responsible Wood oversees sustainable forest management in Australia and launched its new Small Grants Program last year to support collaborative projects that connect communities to their local certified forests.

The Mt Burr Swamp Restoration Reserve is embedded within a Responsible Wood certified forest and, with annual support also coming from OneFortyOne, we were successful in obtaining funding to continue education and biodiversity improvements over the past eight months. The project was about creating a walking trail linked to Boandik culture, Indigenous use plants, and bushfoods while depicting Creation stories and involving Indigenous and non-Indigenous community.

The project commenced in November 2020 and was recently completed. The aims of the project were to:

- facilitate a Cultural camp experience for year 7 students lead by local First Nations Elders and/or experts;
- create carvings to display Boandik Creation stories;
- coordinate contractors to make improvements to the education facility increasing suitability for holding education activities;
- grow and plant Indigenous use and bushfoods along a trail weaving around the creation stories carvings;
- encourage Indigenous and non-Indigenous community members to be involved during the camp experiences, trail development and planting; and
- paint stepping stones with local flora and fauna and/or interpretation of Culture by students to line the trail.

Numerous participants attended working bees, a 3 day cultural camp, day excursions, and planting days from November 2020 to June 2021.

The Cultural camp, held in late November, saw 90 year 7 students (45 boys and 45 girls) from Tenison Woods College come out of the classroom to set up tents, throw boomerangs, listen to campfire stories, learn basket weaving, paint stepping stones of significant plants and

animals, and learn about local biodiversity – with activities led by experts in their fields.

Future camps will further develop displays highlighting the restoration site, First Nations peoples' values, and significant flora and fauna.

Acknowledgements

NGT would like to thank our First Nations people who participated in the project especially the Brookes family for their energy, enthusiasm and ideas around this project, the carvings which tell some important stories and developing the annual camp program; and OneFortyOne (OFO) for support with education centre improvements, the removal of the ex-pine plantation area (earlier in 2020) which we then developed into the walk area for this project, and for the donation of OFO staff time to participate in our winter working bee.

A huge thankyou to:

- Tenison Woods College (especially David Meziniec, Chris Lloyd and Nick Patzel) for their education and on-ground support towards this project and for arranging assistance to undertake the planting of the Indigenous use and bushfoods along the walk at short notice.
- Our amazing NGT nursery volunteers for your weekly assistance to Ryan to prepare our plants for the planting day.
- Responsible Wood for encouraging and accepting the project into their funding program – thank you Megan and Jason.



Responsible[®]
Wood RW/1-10-1



Creation Stories: Walk, Bushfood, Revegetation and Stepping Stones. Mt.Burr Swamp.



Creation Stories: Walk and Carvings (seven of the fifteen). Mt.Burr Swamp

KESAB Sustainable Communities

Community projects help connect, beautify and care for our communities. Sustainable Communities, previously known as Tidy Towns, celebrates the achievements of communities by showcasing community projects. This allows for broad relationship building, sharing of initiatives and an opportunity to highlight the benefits of the area for tourism, business and residents.

KESAB is pleased to invite submissions to the Sustainable Communities Awards. entries are open between 1 July and 10 September 2021.

Any planned, maintained or initiated community projects within the current financial year can be entered, with all submissions considered.

For further information call Sarah at KESAB: (08) 8234 7255.

PARK TERRACE AND ESPLANADE ARDROSSAN GRASSLANDS MANAGEMENT PLAN

Further to BCSA newsletter 75 article (page 10) a final copy of this plan is now available. The plan documents the history, conservation significance and management priorities of the 4 hectare area which contains 80 native plant species and is the most significant grassland remnant in the area. The plan was funded by Northern & Yorke Landscape Board with assistance from National Trust of SA. A copy of the plan can be downloaded from the web at https://greeningaustralia.org.au/wp-content/uploads/2021/06/ArdrossanGrasslandManagementPlan_Final_300621.pdf.

The plan details butterflies and moths recorded or possibly in the Ardrossan area and also reported in an 1880s article by Otto Tepper. To get involved in future monitoring or for more information contact Adrian Shackley, Secretary Friends of Park Terrace and Esplanade reserves at finniss@bigpond.net.au or phone 0429004363.

Report extract: **Butterflies and Moths Recorded in the Ardrossan District (source ALA 2021)**

Butterflies:

Varied Dusky-blue (*Candalides hyacinthinus*); Rayed Blue (*Candalides heathi heathi*); Small Grass-yellow; (*Eurema smilax*); White-veined Grass-skipper (*Herimosa albovenata albovenata*); Icilius Blue (*Jalmenus icilius*); Australian Painted Lady (*Vanessa kershawi*).

Moths:

Heliothis Moth (*Helicoverpa punctigera*) Ribbed Case Moth (*Hyalarcta nigrescens*); Orange Sun Moth (*Synemon nais*).

Editor note: Congratulations to all involved on such a comprehensive report, so full of information, it will serve as a fantastic resource for future work in this local area.



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*



CITIZEN SCIENCE PROJECT

Amazing news for Dr Erinn Fagan-Jeffries, former committee member of BCSA, and SA Museum winning 1 of 9 national projects. Dr Fagan-Jeffries' Citizen Science project includes: \$479,554 for the Museum Board's (South Australian Museum) "Insect Investigators" program, which engages community members in biodiversity discovery.

Schools and community groups in SA, WA and Qld will monitor a Malaise trap, which passively collects flying insects. They will partner with professional taxonomic scientists to document local insect fauna, and potentially name any new species collected in their traps."



BUTTERFLY CONSERVATION SA

Members are advised that the ANNUAL GENERAL MEETING and PUBLIC TALK will be held at the Plympton Community Hall and via ZOOM on 7th September, 2021 at 6.30pm.

Members for whom we have an email address will be advised of the arrangements prior to the meeting.

NOMINATION FORM for the 2021 – 2022 year

Completed Nomination Forms can either be emailed to (secretary@butterflyconservationsa.net.au) or posted (PO Box 4, Daw Park, SA 5041), or hand delivered to the Secretary at AGM. You may nominate yourself.

I (name of nominator), being a member of Butterfly Conservation SA,

hereby nominate:

to the position of: Chairperson, Secretary, Treasurer, Committee Member (please circle)

Tasks on the committee can include: minute secretary, web master, social media co-ordinator, public talks convener, newsletter editor, online sales manager and publications manager. If you have an interest in assisting in one of these roles please circle.

Signed: (Nominator)

Seconded by:

Nomination accepted:

PUBLIC TALKS PROGRAM 2021

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 and 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.



John is an Agricultural Scientist and Natural Resource Economist who has worked in more than 50 countries for the World Bank, Global Environment Facility and private sector as well as Australian and other national aid agencies.

His interest in landscape design for biodiversity and productivity stemmed from early work with Bill Mollison during the late 1970s when Permaculture was evolving. More recently he has worked on biodiversity conservation in private land as a public good and additional boost to farming productivity in east Africa, SE Asia and several Pacific countries as well as Australia.

John owns and actively manages the Yundi Nature Conservancy, which includes Fleurieu Swamp and Woodland ecosystems – protected by Heritage Agreements.

5th October. Nest Boxes and the animals and birds in the Adelaide area who rely on hollows for their homes.

With the loss of habitat especially large trees there are fewer hollows available for the animals and birds who rely on these refuges to live and nest. Many councils and native reserves now provide artificial homes for these animals in the form of nest boxes. James Smith, Education Officer



at the South Australian Museum will show us the different boxes available and how to maintain them. He will also provide information about the ecology of the different

animals and birds who use hollows and nest boxes for their homes. A monitoring Nest Box camera will also be available to show those members at Plympton. This talk will be useful for those who have their own boxes or are thinking about installing some in your back yard or native scrub.

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.*



Peter McQuillan is no stranger to BCSA as an Honorary Consultant and author of our most recent book 'Caterpillars, moths and their plants of southern Australia' he has made a significant contribution to the profile of BCSA as a respected and authoritative organisation on butterflies and moths in Australia.

Now retired from the University of Tasmania he continues his research and supervision of PhD students as well as finding time to undertake field work in remote parts of Tasmania.

This event will celebrate the South Australian Museum's 165th birthday and will be held in the foyer at 6.30pm.

It will be a ticketed event, cost \$25. Canapes and light refreshments will be provided. The event tickets will be available on the BCSA Online Store and a link will be provided in the near future as part of the promotion

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.

Postal Address; PO Box 4, DAW PARK 5041 South Australia

Email: info@butterflyconservationsa.net.au

Chairman: Gerry Butler - chairman@butterflyconservationsa.net.au 0407972149

Secretary: Sukhpreet Singh Bala - secretary@butterflyconservationsa.net.au

Treasurer: Dan Daneshi - treasurer@butterflyconservationsa.net.au 0468 449 331

Membership: Gil Hollamby - membership@butterflyconservation.sa.net.au

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 Macdonald - 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.

18th August, National Science Week via Zoom *The Nymphalidae butterflies* 7.30 - 9.30pm.

5th November (venue tbc) Workshop on *Threatened species of butterflies and moths and how we can conserve and manage Lepidoptera*.

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. 6th Sept. 6.30pm BCSA AGM. **7.00pm** Public Talk *The current and future prospects for biodiversity conservation on private land*.

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>

emerald beauties heterogeneous gems fly in the night sky

Lynda Geller

So called Emeralds are green colored moths of the inchworm (Geometridae) family.



Chlorocoma sp RGrund



WELCOME TO NEW MEMBERS

Sukhpreet Singh Bala

Judi Przibilla

Ilze Genovese

Katrina Baker

Penny Marsh

Cathy Cavallo

Kylie Cook

Leanne Gluyas

Stuart Hennissett

Catherine

Naomi Findlay (AAEE)

Deborah Smith

Eira Thorstensson

Neil Cheshire

Raewyn Thomas

Monica Riordan

Jacqui Miller

Cheryl Hutchins

Robyn McMahon

Jenny Brown



KONICA MINOLTA

Thanks to Chris Lane and
Konica Minolta for their generous
support to BCSA.

Konica Minolta is a Landcare Australia
National Partner



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