



BUTTERFLY CONSERVATION SA INC.

NEWSLETTER

No. 64: May 2018

BIODIVERSITY AND BUTTERFLIES WORKSHOP

Karen Lane - Growing Bush

Poduced for the BUTTERFLY FORUM, BUTTERFLY CONSERVATION SOCIETY OF SA, OCTOBER 2017.

Read "Attracting Butterflies to your Garden, What to conserve in the Adelaide Region" "produced by the SA Butterfly Conservation Society for more details but some of the basics are written below.

Why plant for Butterflies in your garden

Butterfly Gardening means you will also attract other fauna to your garden like native bees, birds and reptiles which creates a much more interesting, dynamic and sustainable garden. Butterfly gardening adds to the biodiversity of your area making a better environment for everyone to live in.

Why use locally indigenous plants?

1. The main reason is the potential of creating pest plants by putting in plants that are not local to your area.
2. Most local native plants do not require any pesticides, a big bonus when you are trying to encourage butterflies and their caterpillars and other wildlife into your garden.
3. Most local natives do not require fertilising which means you are not polluting local water catchments.
4. Local natives are adapted to local growing conditions so should be more successful growing in your garden than many other introduced plants.
5. Many local natives will recruit by themselves so creating a more sustainable garden which will eventually require little to no extra planting. This is a huge cost saving and it is fun watching all the new plants coming up by themselves in your garden!

How can I plant my garden to encourage butterflies?

1. Choose a selection of different species of flowering plants that will provide nectar all year round for butterflies that visit or live in your garden.
2. Plant host plants so they will stay in your garden and lay eggs for the next generations of butterflies.
3. Create safe places for them by having tangly, wild areas for them to hide from predators like birds.
4. Have some areas of rocks for sun basking and shallow water for hot days.
5. Reduce or eliminate pesticide use in your garden.

IN THIS ISSUE

- Biodiversity and Butterflies
- Sale of *Gahnia filum* wetland
- Challenging
- Chequered Copper butterfly event in the Adelaide parklands
- A butterfly garden
- What's for Sale
- FACT SHEET Monarch
- FACT SHEET Rearing Monarch Caterpillars
- Desert Parks on-line bookings
- National parks on-line booking
- Invitation
- Public Talks program 2018
- Jan Forrest OAM talk
- Rodney Hutchinson talk
- Prof. Jim Gehling talk
- New members
- Notes and Diary Dates



Two native nectar plants, top everlasting daisy *Helichrysum apiculatum* and above christmas bush *Bursaria spinosa* Photos: T.Berkinshaw

BUTTERFLY CONSERVATION SA. INC. Membership enquiries: membership@butterflyconservationsa.net.au or online: www.butterflyconservationsa.net.au/product/become-a-member/ Membership payments (\$10pa - plus \$10 surcharge for posted newsletters): to Treasurer: C/- South Australian Museum, North Terrace, ADELAIDE. 5000. 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.

What can I plant to feed butterflies?

Butterflies will feed from just about any flowering plant that produces nectar (some plants like conifers, Acacias and grasses flower but don't produce nectar).

Butterflies especially like flowers that are brightly coloured and have multiple flowering heads such as those growing in the daisy family.

What can I plant to feed caterpillars?

This is a bit more complicated than the nectar part above. Many butterfly species have very specific host plants that they will lay their eggs on as their caterpillars will only eat specific plants. However a general garden planting plan to provide caterpillar "munchies" for most of the commoner Adelaide and outer metropolitan Adelaide butterflies should include food plants from each of the following groups (1 to 7).

1. Native grasses (although many introduced grasses will do the job they can quickly become serious Bushland weeds). Grasses will provide food plants for the caterpillars of many different species of Xenicas, Grass Darts and the Common Brown butterflies.
2. Native peas. There are many species of native peas that can be used in a butterfly garden and they are the host plants of many of our smaller butterflies from the Blue families. *Cullen australasicum*, a native pea, is also a host plant for several of our local Swallowtails. All the peas are good nectar plants as well.
3. Wattles (*Acacia* sp.) for Wattle Blues.
4. Saltbushes, host plants for Saltbush Blues especially found in coastal areas.
5. Daisies, host plants for Painted Ladies and also excellent nectar plants.
6. Goodenia and Scaevolas (Fanflowers) host plants for the Meadow Argus and also excellent nectar plants.
7. Sedges and Lomandras (Lomandras are actually a type of lily) these plants are harder to source, but provide host plants for many species of Skipper Butterflies.

Below are some extra plants it is worthwhile conserving or trying to source for planting in your garden

8. Stinging nettles, a patch is worthwhile for Admiral Butterflies.
9. Mistletoe for the beautiful Azure Butterflies.
10. *Oxalis perennans* for the Chequered Copper.
11. Senna if you are in Northern Adelaide or mallee for butterflies in the Whites and Yellows families.
12. *Adriana quadripartita* if you are on or near

coastal areas for the rare Bitterbush Blue.
13. Quandongs for Woodwhites.

If you choose a variety of plants from the first seven groups you can get a very good start on butterfly gardening and encourage many of the commoner butterflies to share your garden with you. Then you can add some more specific host plants from those that are more difficult to grow or buy.

Happy Butterfly gardening!



Top: Nectar and food plant Fan flower *Scaevola albida*. Photo: R.Sandercock; Food plants: close up of Wallaby grass *Themeda triandra* seed heads. Photo: P.Paton; Grass *Poa poiformis* Photo: R.Grund; Native pea *Cullen australasicum* Photo: P.Paton; Saltbush *Atriplex semi-baccata*. Photo: R.Sandercock; *Lomandra longifolia* Photo: R.Grund; also nectar plant *Goodenia geniculata*. Photo: J.Hunter

PROPOSED SALE OF GAHNIA WETLAND AT WATSONS GAP NEAR PORT ELLIOTT

A proposal to sell a portion of *Gahnia filum* wetland at Lot 4 Port Elliott Road, Hayborough at Watsons Gap near Port Elliott and a proposal to develop a portion into a housing development is of concern to members of the BCSA committee. Here is the advert.

<https://www.realestate.com.au/property/lot-4-port-elliott-rd-hayborough-sa-5211>.



This area is considered to be a highly significant, extensive butterfly habitat, suitable for additional revegetation with foodplants for threatened butterfly species and / or reintroduction of threatened butterfly species.



“Seeds of South

Australia bio-regions” lists the bog plant *Wilsonia rotundifolia* (round-leaf *Wilsonia*) and *Gahnia filum* (Thatching Grass) as Vulnerable in the Flinders/Lofty Block which is the NRM area in which this land resides. Both plants occur on this land. The area also supports 25 species of birds.

If you would like to write to Alexandrina Council officials to express concern please contact Secretary Jan Forrest, secretary@butterflyconservationsa.net.au or Chairman Mike Moore chairman@butterflyconservation.net.au for a copy of our letter to Council, the draft management plan of Watsons Gap and a list of contacts in the Alexandrina Council.

CHALLENGING

Once you were a greedy grub,
a caterpillar, munching leaves.
Burst each skin and eat some more,
a demolition expert.
Until at last, with no skins left
your hormones made you stop to rest.
So fat and tired, you wandered off
to find a proper hanging place
where you could spin a silken cord,
split once more and lose your legs.

Now here you are a chrysalis,
a minute Chinese lantern
of softest green with spots of gold
a folded bud of promise.
You sleep, head down inside your shell
a helpless shiny captive,
remote from all your striving genes
programmed to complete your change,
and dream, perhaps, of flying?

Soon you'll be a butterfly
complete with in-built memory
inherited through eons past
from multitudes of brilliant wings.
How else explain your miracle?
You know already, how to fly
a zig-zag path, to trick the birds:
you've never seen a flower before,
but heady nectar makes you drink:
who can believe it's accident
that makes your species mass migrate?

(Poet unknown)

CHEQUERED COPPER BUTTERFLY & BIODIVERSITY IN THE ADELAIDE CITY GRASSLANDS EVENT

on Saturday 12 May 2018 - 1.00-3.00pm

The Chequered Copper Butterfly & Biodiversity in the Adelaide City Grasslands event on 12 May 2018, commences at 1.00pm, will include a guided walk in the Biodiversity area of Victoria Park/Pakapakanthi Park 16. Please assemble near the Victoria Park Grandstand prior to 1.00pm. A 1 hour walk will enable you to hear about the work being undertaken by the Adelaide City Council and the proposed Friends of Chequered Copper Butterfly to protect and enhance biodiversity in the city parklands.

Following the walk a forum with speakers discussing the biodiversity of the region, ecology of the Chequered Copper butterfly and its habitat will be held from 2.00-3.00pm. **Registration for the forum** (limited to 40 people) **is essential, and can be made on Eventbrite:**

<https://www.eventbrite.com/e/chequered-copper-butterfly-biodiversity-in-the-adelaide-city-grasslands-tickets-45607795143>

This event is organised by the Future Leaders in Sustainability Group, with the theme 'BiodiverCity', in collaboration with the Adelaide City Council and Butterfly Conservation SA Inc. Enquiries: Sarah Harman on sahar81@gmail.com or Gerry Butler Publications@butterflyconservationsa.net.au.



Lucia limbaria Chequered Copper Photo: LF Hunt

SNIPPETS FROM MEMBERS

I'd like to share some information on these regular visitors to my garden. They come every year but I can never grow enough "Swan bushes" to feed all of the caterpillars. I've just come in from my butterfly garden where I found over 30 caterpillars of varying sizes. Sadly the bush won't sustain all of them. I transferred four to another bush in another garden section.

Please find attached some photos. Some taken last year and some just now.

They don't eat anything but the swan bushes. The butterflies feed on the Purple salvia, Geisha girl along with many other flowers we have.

Regards,
Jean Phillips
MURRAY BRIDGE SA



WHAT'S FOR SALE? - WE NOW HAVE AN ON-LINE SHOP

BOOKS *"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). Postage \$7.

"The Making of a Monarch" by Linda Shmith has now been reprinted. Cost \$20 plus postage \$7.00.

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

Postage and packaging \$7 One book plus one DVD postage \$15.

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

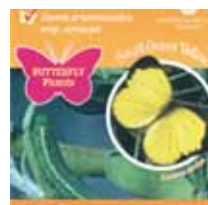
Single posters: *"Bats of SE South Australia"* and *"The Bilby - Endangered Species"* posters are available for \$5 each, plus postage.

Poster postage is \$12 for up to 6 posters. Posters are free to schools, but incur postage.

SITE SIGNS: Application form to register a butterfly site is available on the butterfly gardening website. Cost including postage \$50.

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

If you would like to order any of our merchandise, obtain an order form for a site sign, plant tags or schools poster set, please email: info@butterflyconservationsa.net.au or write to the Secretary C/- South Australian Museum, North Terrace, ADELAIDE. 5000 or check out the **ON-LINE STORE** at www.butterflyconservationsa.net.au.



Wanderer

also known as the Monarch

Class:	Insecta
Order:	Lepidoptera
Family:	Nymphalidae
Genus:	<i>Danaus</i>
Species:	<i>plexippus plexippus</i>

Interesting aspects:

The Monarch (or Wanderer) Butterfly was once confined to North, Central and parts of South America. During the nineteenth century however it migrated to western Europe as well as across the Pacific to Australia. It was first reported from Sydney in 1856, and was quite common around Adelaide by 1881. All phases of its lifecycle are poisonous. The larval milkweed food plants contain poisons which the larvae are able to retain in their bodies as protection against predation. This butterfly is probably one of the longest lived of any butterfly, due to its tough wings, durable body, and inedible poisonous properties. The over-wintering generation can live for 8-9 months.

Description

Wingspan: male 93mm male, female 92mm

Upperside: The upperside wings are tawny-orange with black veins on wing margins and white spots.

Underside: wings are similar but with a background colour of pale yellow-brown, black on wing margins with white spots.

Distribution

It occurs mainly in the south and east of Australia, including Kangaroo Island and Tasmania. In South Australia it occurs commonly in the southern settled areas where its introduced food plants are cultivated or have become weeds. It has not been documented as occurring in northern pastoral areas, but as the butterfly is a strong migrant it may appear there occasionally. It used to be extremely common in the Adelaide Hills in the recent past due to large areas of the hillsides being covered with the introduced milkweed (broad-leaved cotton-bush). With weed control the weeds have diminished along with the butterfly. It still maintains a strong presence along the coast of Adelaide.



Egg, pupa, adult upperside and underside Photos: LFHunt. Caterpillar RHFisher. Right: overwintering in Onkaparinga Gorge. Photo Colin Cock.



**BUTTERFLY
CONSERVATION
SA. Inc.**

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

Larval foodplants

The larvae of the Monarch feed on a number of introduced foodplants, for example *Araujia sericifera* (cruel plant), *Asclepias curassavica* (red-head cotton-bush), *Gomphocarpus fruticosus* (swan plant), *G. cancellatus* (broad-leaved cotton-bush) and *Orbea variegata* (carrion flower). Around Adelaide, *Gomphocarpus cancellatus* and *G. fruticosus* are the main foodplants. Interestingly, the larvae will not eat the native milkweeds, in particular *Cyanchum* or *Sarcostemma* spp., although they eat the plants belonging to these two genera in the Americas.

Habitat and Ecology

The introduced foodplants occur as weeds in a wide variety of habitats, but survive best in areas with reliable rainfall. The butterfly will not utilise the native milk-sap plants.

Flight period

It is possible to find the butterfly throughout the year in southern settled areas though it is an unusual sighting in winter. During the winter months it tends to stay close to its foodplant growing in sheltered areas.



The butterfly becomes reproductively active during October, and there are continuous broods into Autumn, which can be completed in 5-6 weeks.

Threats

There are no major threats although the foodplants are considered weeds outside of cultivation.

Conservation Strategy

As a migrant or introduced species to Australia the Monarch has no conservation status.



Cotton bush Photo: RHFisher

NOTES on managing the Wanderer (Monarch) *Danaus plexippus plexippus* caterpillar food plants.

There are three main food plants of the Wanderer Butterfly caterpillars however all have a milky sticky latex sap (common to the Asclepiadaceae family) **which can cause skin irritation to some people.** Wear gloves, but especially wash hands before eating. Do not touch your eyes.

The swan plant or narrow leaved cotton bush (*Gomphocarpus fruticosus*) is sometimes available from garden nurseries. The broad leaved cotton bush or milkweed (*Gomphocarpus cancellatus*) is a roadside weed and a weed of waste lands around Adelaide and surrounds. It is these weedy stands which maintain both the native Lesser Wanderer (*Danaus petilia*) and the naturalized wanderer (Monarch) butterflies that breed around Adelaide. The garden plant, the red milkweed bush (*Asclepias curassavica*) is a more attractive board leaved species having orange-red flowers. Seeds can be bought off eBay. The plant is subject to frost damage. All of the above plants are attacked by sap sucking insects.

Each of these species has the potential to become an environmental weed, but with a few precautions they can be contained where you want them. They are not listed as a declared plant under the NRM Act and it is not illegal to grow them. They germinate readily from seed, so removing the green soft spiny seed pods before they mature will prevent seed from being dispersed. When the pods dry out they shed black seeds attached to cotton-like 'parachutes'. Learn the appearance of seedlings so that if self-seeding does occur they can be hand weeded. Caterpillars prefer fresh tender shoots and leaves, so if removing old bushes or branches do so carefully with thought for the environment, e.g. wrap and burn.

The caterpillars are voracious feeders and in many situations will control the spread of milk weeds (a form of biological control), because they can completely defoliate plants eating leaves and flowers just leaving bare stems. Your small young 'nursery plants' may need netting to protect them from egg laying butterflies until they get larger.

ACKNOWLEDGEMENTS *Danaus plexippus plexippus* fact sheet:

Majority of text, map and flight bar from: 'Butterflies of South Australia' website by Roger Grund much of which includes biological information by the late Lindsay Hunt.

Notes on handling the caterpillar food plants by Linda Shmith.

Other references and contributors include: Michael Moore; Andrew Lines; 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, May 2018.

BUTTERFLY CONSERVATION SA Inc.

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 our book 'Attracting Butterflies to your Garden, what to grow and conserve in the Adelaide region' or to purchase a 'Butterfly Garden' DVD contact the Secretary, c/- South Australian Museum, North Terrace, ADELAIDE 5000.

WEBSITE: www.butterflyconservationsa.net.au

EMAIL: info@butterflyconservationsa.net.au

Rearing Wanderer Caterpillars

If you have some Wanderer caterpillars, either given to you or hatched from butterfly eggs on your own milkweed plant it is suggested that in order to increase the probability of them reaching the pupa (or chrysalis) stage that you should bring them inside.

You need something like a cage, aquarium, terrarium or large glass vase and a warm, light spot where you can monitor, feed and keep them safe from predators.



Caterpillars, pupa and adult butterflies all need oxygen so ensure only 'netting' covers the top or sides.

A caterpillar cage can be made by purchasing a sturdy plastic crate with a hinged lid. Use a jigsaw to cut a hold in the lid. Remember to leave a strip all around wide enough to fasten aluminium strips to hold fly wire in place with small bolts with nuts. At the back cut another hole, again fasten fly wire with aluminium strips



Photos. Top left: Aquarium..Photo: Linda Shmith.

Above and left: Plastic box cage, top right shows corner of lid. Above, Jar with holes cut for plant. Photos: Jan Forrest.



Photo left :The smaller plastic box cage, there is less room for plant. Photo: Jan Forrest

Below 2nd instar larva feeding. Photo: LF Hunt.

Cut holes in the top of the lid of a jar to put the foodplant stalks into. There are two sizes of these crates 58cm high and 38cm high. Use the smaller size when using broad-leaf cotton bush however the taller crate is better when using the narrow-leaf swan plant as their stalks are longer.

If you receive **eggs** on leaves they will take about 5-7 days to hatch into caterpillars. Sometimes not all the eggs will hatch. The newly emerged caterpillars are tiny - only 2mm long. You may see where they are eating the leaves.



The **caterpillars** will eat, grow and create frass (caterpillar poo). Their frass however is quite dry and does not smell, so place some paper towel in the bottom of the container then just sweep the bottom of the box and replace the paper on the floor.

You will need to feed your caterpillars regularly place a cutting of their food plant either the Narrow-leafed Swan-plant or Broad-leafed Cotton-bush into a small jar of water. Remember to water the plant, to stop the leaves from wilting. When the plant becomes limp or is all eaten, it is time to replace it with fresh leaves. You may need to move the small caterpillars onto another leaf but be very gentle. Cut the leaf they are feeding on or pick them up on a leaf.

Sometimes the caterpillars will just sit on the plant or walls and not do anything. Don't worry, they may be changing their skins into the next 'instar'. Be careful when you open and close the box or cage, as the caterpillars may have crawled around and be on the lid.

Caterpillar deaths. It is possible that not all of your caterpillars will go through their full life cycle. They may just hang limply from the plant or ceiling. That could be because they have been 'parasitized' by a wasp or other

**BUTTERFLY
CONSERVATION
SA. Inc.**

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

insect and become food for the young of the wasp. This just nature's way of stopping there being too many butterflies"! If that happens, remove the dead caterpillar and flush it down the toilet.

Pupation. Eventually the caterpillars will be fully grown to about 50mm long (about three weeks from emerging from the egg). The caterpillars will go walk-about, looking for a suitable place to pupate.

Usually this will be on the ceiling of the box or cage. They will hang from the ceiling in a J shape. Eventually they will wiggle and squirm, shed their last caterpillar skin and form a green pupa or chrysalis.



Sometimes the caterpillar will pupate on the plant. If that happens, cut the leaf or stem where the pupa is and stick the leaf to the ceiling with electrical tape. Alternatively pin the leaf or stalk to some curtains making sure there is sufficient room below the pupa for the emerging butterfly to stretch out its wings. If it falls to the floor tie some cotton thread around the 'cremaster' (the 'stem' of the pupa) and tape the thread to the ceiling.



After about two weeks the pupa will darken and you may see the orange and black colours of the wings through the pupal case. The adult butterfly will emerge when the pupal case becomes opaque as the pupa pulls away from the casing.

The adult butterfly. There may be a blurt of liquid onto the walls or floor when it emerges, that's OK, but a bit messy. The butterfly wings will be crumpled up and wet, so it hangs from where it is allowing the wings to stretch out and dry.

Eventually after about an hour or two, it will open and close its wings and may flutter around trying to get out. When that happens open the door ideally that same day ensuring that:

- it is not raining
- it is not too windy
- it is not too late in the day
- preferably onto a bush or flower, then if you wait awhile it will fly off.

You may like to carefully move your finger close and let the butterfly climb onto your finger, you can then shift the butterfly onto a plant and it may sit there for awhile before flying off. If you have put the butterfly on a nectar plant, a daisy, lantana, buddleia or other plants with tiny flowers you may see the butterfly unroll its 'proboscis' from under its head and take a sip of nectar from the flower.

Keep a record. Write down

- what you do
- when the eggs hatch
- how long the caterpillars are
- when the caterpillars pupate
- when the adult butterfly emerges

Then publish your report and send an email to Butterfly Conservation SA at info@butterflyconservationsa.net.au saying what you found out we may be able to publish your report in our newsletter.

In summary:

Glass or plastic container, cover/sides must allow airflow.

Paper towel for caterpillar poo and ease of cleaning

Fresh milkweed or swan plant leaf supply

Warm/light spot (not too hot or they will die)

Caterpillars likely to go 'walkabout' if no lid, netting on top

Release adult butterfly same day

If you need to retain - put some cut orange, watermelon or sugar water as a potential source of food for adults.



Top left pre-pupa, below adult about to emerge from pupal case. Photos: LFHunt. Above right: Adult on broad-leaved cotton-bush, below left young swan plants and right 'swan' seed and pod, below fresh seed pod. Photos: Jan Forrest

ACKNOWLEDGEMENTS *Rearing Wanderer caterpillars* fact sheet:

Written by Linda Shmith and John Wilson

Production: Jan Forrest OAM, May 2018.

BUTTERFLY CONSERVATION SA Inc.

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 our book '*Attracting Butterflies to your Garden, what to grow and conserve in the Adelaide region*' or to purchase a '*Butterfly Garden*' DVD contact the Secretary, c/- South Australian Museum, North Terrace, ADELAIDE 5000.

WEBSITE: www.butterflygardening.net.au

EMAIL: info@butterflygardening.net.au

DESERT PARKS, ON-LINE PARK ENTRY AND CAMPING BOOKINGS

From 1 June 2017, entry and camping for Ikara-Flinders Ranges National Park, Vulkathunha-Gammon Ranges National Park, Innamincka Regional Reserve, Malkumba-Coongie Lakes National Park, Witjira National Park and Kati Thanda-Lake Eyre National Park will need to be booked through a booking system. Grindell's Hut, Nudlamutana Hut and the Balcanoona Shearers Quarters in Vulkathunha-Gammon Ranges National Park will also be available to be booked online before you go. The system has been rolled out across South Australia, and many other states and countries have online booking system for their parks.

The new booking system recognises that there is often high demand for some camping areas during peak periods, and will allow visitors to book their favourite campsites 12 months in advance of a planned visit. For many people it will be a more convenient experience; they can plan and book ahead from the comfort of their home, and they won't have to carry the correct amount of cash.

The Desert Parks Pass that covers entry and camping to the Simpson Desert Regional Reserve and Simpson Desert Conservation Park will still be purchased via normal arrangements. After purchasing your Desert Parks Pass, you will be required to go on-line to book campsites in other parks that are covered by the Desert Parks Pass such as Witjira National Park, Innamincka Regional Reserve, Malkumba-Coongie Lakes National Park and Kati Thanda-Lake Eyre National Park. When booking a campsite, the booking system will ask if you have a Desert Parks Pass, so you will not have to pay twice.

Park visitors need to visit www.parks.sa.gov.au to make their bookings. Preferably visitors will book before they leave home, however some visitors prefer not to plan ahead. As mobile reception is limited or non-existent in the Region, or if visitors do not have access to the Internet while travelling, a number of businesses in strategic, remote locations have become agents. These agents can be found at www.parks.sa.gov.au

It is acknowledged that in the first year, there will be confusion for some visitors, but as other States have had similar systems already in place and as word gets around, this will reduce in time.

For further information on this matter please contact the Desert Parks Pass Administration Officer on 08 8648 5328 or DEWNRDesertParks@sa.gov.au.

ON-LINE PARK ENTRY AND CAMPING BOOKINGS FOR MANY OF SOUTH AUSTRALIAN NATIONAL PARKS AND GOLD PASS

As a member of the Friends of Parks, Butterfly Conservation South Australia is issued annually with an on-line booking number so that active members can avail themselves of reduced rates for entry and camping bookings at most National Parks in South Australia.

If you are planning a camping holiday or plan to visit some of South Australian National Parks please email Gil Hollamby membership@butterflyconservationsa.net.au or Jan Forrest info@butterflyconservationsa.net.au to receive our unique number and instructions of which parks are covered under this system and how to go about booking your campsite or entry permit.

If you have been an active member of BCSA for 15 years or more and have not been given the opportunity to apply for a **gold pass** (free entry to many SA Parks) please contact Jan Forrest info@butterflyconservation.net.au.

As our original membership records are on an old computer program and are not complete not everyone who is eligible may have been contacted when this system was first promoted a couple of years ago.

INVITATION - from Karen and Chris Lane

Butterfly Conservation Society members are invited to join a trip organised by Australian Plant Society SA at our place

81 Mcleay Road Hindmarsh Island
(drive down Randell Road approx 8 kms, turn right at the Murray Mouth turnoff (Sesmacho Road,) drive approx 1 km, turn right onto Mcleay Road, we are second on the left).

Sunday 23rd September

at 12.30 for the afternoon.

Bring own lunch and walking shoes.
Tea and coffee will be provided.

See Bitterbush, *Gahnia filum* and other plants for habitat restoration and butterfly habitat.

STILL MISSING - MIGRATION OF THE WANDERER BUTTERFLY VIDEO

A couple of years or so ago a member gave Jan Forrest a copy of the DVD '*Born to Move*' Episode 1 produced by National Geographic. The DVD features the migration of the Wanderer/Monarch butterfly from Mexico to Canada and return. We had in mind to store it with the Laptop and show this fantastic video should a guest speaker booked for one of the public talks, is unavailable at the last minute.

However, unfortunately our copy was lent to another member who expressed an interest in the Monarch butterfly and regrettably, it has not been returned. If you have our copy of this amazing video could you please return it to Jan Forrest, or if you own your own copy could we please copy it for possible use at a Public Talk. Thanks you.

BUTTERFLY CONSERVATION SA INC.

presents

a PUBLIC TALKS PROGRAM for 2018

**Butterfly Conservation
South Australia Inc.**

presents

a PUBLIC TALKS
PROGRAM for 2018

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

At the Clarence Park Community Centre
72-74 East Avenue, Black Forest.

Bus route W91/W90: stop 10.

Noarlunga Train service: Clarence Park Station.

Glenelg Tram: Forestville stop 4, 9min walk south.

Entry by donation (minimum of \$2).

Bookings not required

Please bring supper to share, 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.

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

Photo L.F.Hunt. Bitter-bush blue butterfly *Theclinessthes albocincta*

BUTTERFLY CONSERVATION SA INC.

c/- South Australian Museum, North Terrace, ADELAIDE

For further information contact: Jan Forrest 8297 8230

Annual membership: \$10 per year. If a hardcopy of the newsletter
is requested, add a surcharge of \$10 for postage. Life Membership
\$200.

Website: www.butterflyconservationsa.net.au

Resources for sale:

Book '*Attracting butterflies to your garden, what to grow
and conserve in the Adelaide region*' (2nd edition). RRP
\$29.95

At the talks program or on-line - \$25ea and \$20 for members
(one only at this price).

Books, spider posters and plant tags are available at the online
shop: www.butterflyconservationsa.net.au/shop.

5th June: The Great Victoria Desert. Although the largest desert
in South Australia many people do not know where it is, and few
have visited. Jan Forrest OAM will show stunning images of the
flora and fauna of this little known SA destination and discuss
projects carried out by members of the GVD Friends group,
including vegetation monitoring using a drone and monitoring
quandong trees for camel damage.

3rd July: The story of Ants. Rodney Hutchinson will provide
a fascinating insight in the life history of ants including their
symbiotic relationship with Lycaenid butterflies and how
the little known dinosaur ant, *Notomyrmecia macrops* was
discovered.

7th August: Ediacara. Affiliate Professor Dr Jim Gehling AO will
discuss his research into the oldest known animal fossils, the
South Australian Ediacara and Emu Bay Biota. This includes
the spectacular rocks and fossils of the Flinders Ranges and
Kangaroo Island and extends to working on fossil-bearing
strata of the same age in Canada, the USA, the UK, China and
Namibia.

**4th September: 6.30pm BCSA AGM 7.00pm Public Talk How
the Afghan camaleers shaped our state.** Historian Pamela
Rajkowski OAM will trace the early routes of the Afghan came-
leers in South Australia and how they shaped our economy.

**2nd October: "The importance of symbiotic relationships
between flowers, insects and microbes for pollination
and development."** Dr Miguel de Barros Lopez will present
the latest findings in this rapidly changing field, from the
importance of gut microbes for insect metamorphosis to the
role of yeast in pollination.

6th November: 'Creating a butterfly garden' Member Roz
Daniell and partner have created a beautiful butterfly garden
at Forrestville and is now creating a 'rain
garden' in the street. Find out their process
and progress as well as their tricks and hints
for going about it.



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



DON'T FORGET TO BYO CUP

THE GREAT VICTORIA DESERT - 5th June.

Jan Forrest OAM is the President of the Friends of the Great Victoria Desert Parks as well as Secretary to Butterfly Conservation South Australia.



Jan first visited the Great Victoria Desert in 1976 with a Museum expedition and has continued to undertake scientific projects in this special part of South Australia since that time.

The Great Victoria is the largest desert in Australia (and South Australia) comprising 800 square km. It extends west from the Stuart Highway in South Australia to Laverton in Western Australia, north of the Nullarbor Plain and south of the Everard, Musgrave and Rawlinson Ranges.

Jan will show images of the desert plants and animals and provide an overview of the projects presently being undertaken by the Friends of the Great Victoria Desert group including:

- photographing existing vegetation survey plots by the traditional method
- photographing the above plots using a drone
- monitoring camel damage on quandong trees using a program called cybertracker on a phone
- recording and photographing bird species including the iconic Princess Parrot and plotting the magnificent large Marble or Desert Gums in which they nest.
- extending the distribution knowledge of *Eucalyptus wyolensis* a recently discovered species of Eucalypt.
- collecting invertebrates for the Sth. Aust. Museum
- digging 'mole holes' to seek information on the distribution of the Marsupial Mole.

THE STORY OF ANTS - 3rd July

Speaker **Rodney Hutchinson**, a volunteer at the South Australian Museum, has had a long involvement with Natural History and is a member of the Field Naturalists Society of South Australia. Originally involved in field surveys with the subsidiary Mammal Club interest ultimately turned to entomology and collecting for the Museum.



On retirement at 55 from a career in the State Public Service Rodney joined the Museum to work with its "Ant Man" Archie McArthur assisting in the gradual adoption of digital imaging which was then gradually replacing film. Archie was feverishly working on the genus *Camponotus* and went on to publish 3 books on that genus and encouraged Rodney to concentrate on the genus *Myrmecia*, a more primitive ant, which led to an interest in the so-called "Dinosaur Ant" *Nothomyrmecia macrops*.

Rodney is currently assisting in rearranging the entire entomological collection following the installation of a vast Compactus system to replace aging wood drawers and cabinets.

**EDIACARA - 7th August**

Affiliate Professor Dr Jim Gehling AO will discuss his research into the oldest known animal fossils, the South Australian Ediacara and Emu Bay Biota. This includes the spectacular rocks and fossils of the Flinders Ranges and Kangaroo Island and extends to working on fossil-bearing strata of the same age in Canada, the USA, the UK, China and Namibia.

He will also describe the case of our current, Dept of Environment supported case, for serial listing of the Flinders Ranges sites relating to the **Origins and Evolution of Complex life on Earth** for proposed **World Heritage Nomination**.

In 1946, while exploring for minerals, geologist Reginald Sprigg discovered fossil imprints in rocks around the low hills of the western Flinders Ranges at the old Ediacara minefield. Sprigg's discovery was extremely important, as it was the first time the fossilised remains of an entire community of soft-bodied creatures had been found in such abundance anywhere in the world. The fossils preserved in the ancient sea-floor at Ediacara record the first known multicellular animal life on Earth that predates the Cambrian. This diverse and exquisitely preserved community of ancient organisms represents a significant snapshot of our geological heritage.

The fossils of this period resemble the flatworms, soft corals and jellyfish we know today and range in size from a few centimetres up to a metre long. This diverse array of fossil specimens includes anemones, annelid worms, crustaceans, echinoderms and possible ancestors of trilobites. Other forms resemble modern sea-pens and worms.

The Ediacaran Period is the first geological period to be declared in 120 years and the first to be named after a location in the Southern Hemisphere. Covering an interval of around 88 million years from 630 to 542 million years ago, the start of the Ediacaran Period corresponds to the end of a worldwide glaciation known as "Snowball Earth" as well as significant changes in carbon levels.



WELCOME TO NEW MEMBERS (from January 2018):

Helen	BARNETT	Markus	BERESFORD	Jonette	THORSTEINSEN
Sally	BLECKLY	Anne	FRODSHAM	Madeline	MACEY
Jade	HARMER	Bernie & Jill	MILLBURN	Jeannie	SMITH
Phillippa	HORSELL	Jan	BEARE	Stephen	FULLER
Angela	WOODCOCK	Rosalyn	SHUTE	Marcelle	MULLER
Cristy	SEYMOUR	Bruce	WILSON	Fern	RAINTREE
Robyn	JOHNSON	Ian	MARTIN	Andy	SAUNDERS
Wendy	OSBORNE	Ursula	DOROCK	Hilary	McKAY
Dinny	VAN DEN BRAND	Abbie	MATHESON	Ali	TILLER
Glen	THOMPSON	Ann	NEWBERY	Alison	BOCK
Gerda	KELLY	Jenny	RATHJEN	Jean	PHILLIPS
Kate	MCLEAY	Jacquie	HERITAGE	Nils	BEAVEN
Kathie	MUIR	Richard	GLATZ	Jenni	HARRISON
David	WILLIAMS	Alison June	STEPHENS	Beth	SCHULTZ
Mark	NITSCHKE	Donna	SKODA	Steve	RATE
Trevor & Eija	MURCH-LEMPINEN	Shana	WORRELL		
Alanna	MATTHEWS	Amelie	BOTTRILL		
Lindy	McCALLUM	Teresa	SHEPHERDSON		
Rachele	KIRK	Susan	MORONEY		
Merri	STODART	Jane	BROADWAY		
Anthony	MORLEY	Lucinda	EMERSON		
Jamie	HARRIS	Julie	TODD		
Lynne	LAYNG	Michael	BURRELL		
Sue	DURAND	Gayle	MILLS		
Simon	GOULD	Marion	DAVIS		

Articles for the next newsletter to:
'The Editor'
BCSA Newsletter C/-
info@butterflyconservationsa.net.au

**SEE PAGE 3 FOR
INFORMATION ON
POTENTIAL SALE AND
DEVELOPMENT OF A
SIGNIFICANT *GAHNIA
FILUM* WETLAND
BUTTERFLY SITE, AND
HOW YOU CAN HELP.**

BUTTERFLY CONSERVATION SA Inc.

C/- South Australian Museum, North Terrace, ADELAIDE, 5000
Email: info@butterflyconservationsa.net.au
Chairman: Mike Moore - chairman@butterflyconservationsa.net.au
Secretary: **vacant** - secretary@butterflyconservationsa.net.au
Newsletter editor: Jan Forrest OAM - info@butterflyconservationsa.net.au
Treasurer: John Wilson - treasurer@butterflyconservationsa.net.au
Membership Officer: Gil Hollamby - membership@butterflyconservationsa.net.au
Publications Officer: Gerry Butler - publications@butterflyconservationsa.net.au
Committee: Andrew Lines, David Keane, Bernadette Johnson, Erin Fagan-Jeffries (social media) and Bryan Haywood (endangered species advocate).
Consultants: Roger Grund and 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 Mike Moore.

PUBLIC TALKS PROGRAM 2016: first Tuesday March - November, Clarence Park Community Centre 6.15pm for a 6.30pm start to 8.30pm.

Next talk: 6th June: Great Victoria Desert - Jan Forrest OAM

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 (R Grund private site) - http://www.sabutterflies.org.au (has been off-line however it will be back on-line shortly).

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



Butterfly-Conservation-
South-Australia



ButterflyConSA



Butterfly_Conserva-
tion_SA

