



GENUS *OGYRIS*

Article by *Mike Moore*

Photographs by *Lindsay Hunt*

Why would I want to write about the Genus *Ogyris*?

Well! Firstly, they are spectacularly beautiful, shimmering blue, butterflies. Secondly, many species have fascinating, even secret life cycles. Thirdly, of the fourteen Australian species we have nine in South Australia and lastly it is an Australian evolved Genus found no-where else in the world, with Australia having fourteen species and New Guinea one.

This is what I hope will be the first in a series of articles about this Genus.

Where Does *Ogyris* Fit Into The Scheme Of Things?

To appreciate this we need to do a little Taxonomy. You may like to refer to the diagram on the next page as we go through this together.

The Kingdom Animalia (Animals) is split up into 19 to approximately 30 Phyla (depending on the Taxonomist) - one of which is the Phylum Arthropoda.

The Phylum Arthropoda is split up into a number of Classes one of which is the Class Insecta others include Arachnida (Spiders, Scorpions and Ticks), and Crustacea (Crabs etc.)

The Class Insecta is split into a large number of Insect Orders.

For example -

- Order Coleoptera – beetles
- Order Orthoptera - grasshoppers and crickets
- Order Diptera - flies and mosquitoes
- Order Odonata - dragonflies and damselflies
- Order Hymenoptera - wasps, bees and ants
- Order Lepidoptera - moths and butterflies
- and many other Orders



Ogyris amaryllis Satin Azure or Amaryllis Azure left Male upper side, right Female upper side.

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CAN YOU HELP?

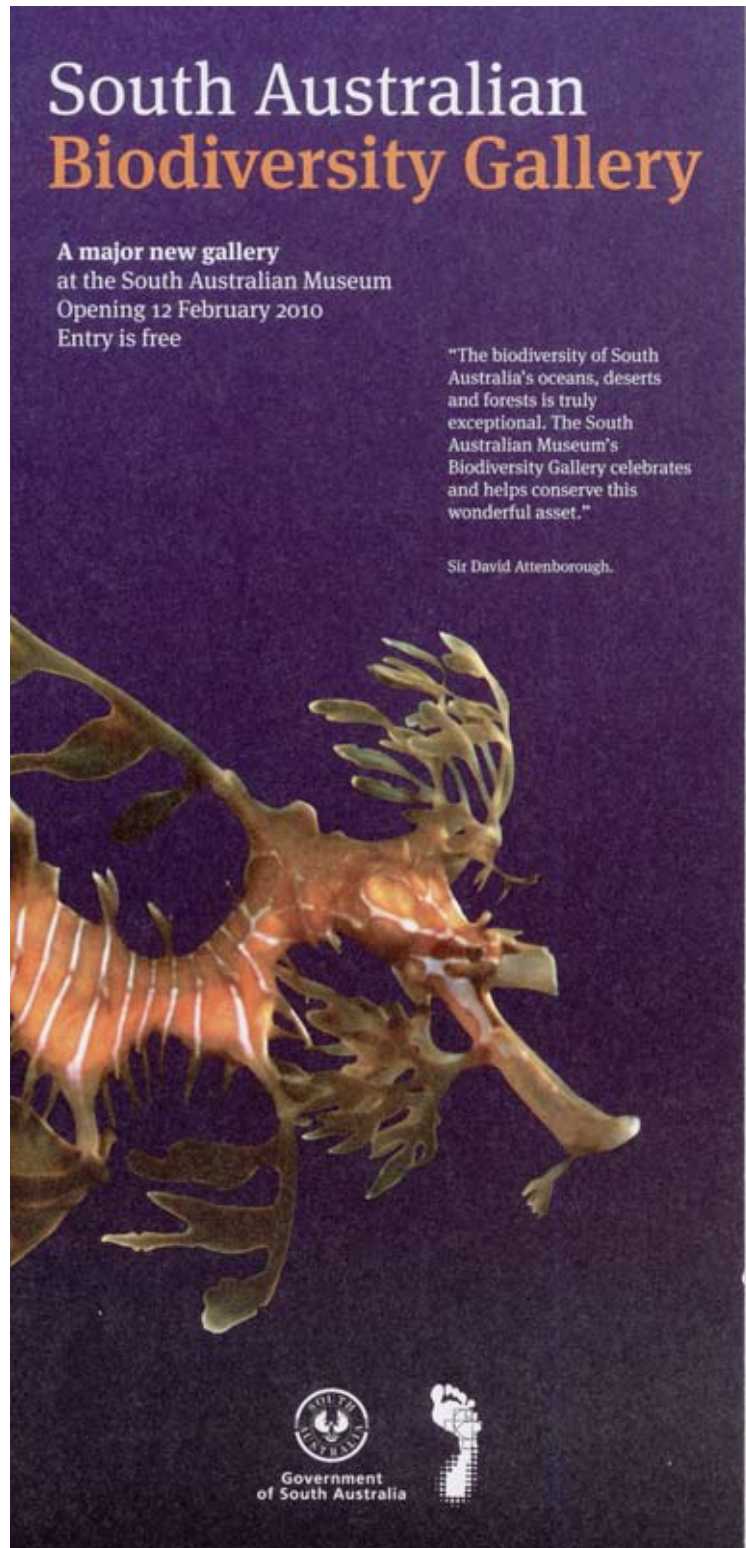
Sales of our book 'Attracting Butterflies to your Garden' have slowed considerably. MEMBERS- CAN YOU SELL SOME? contact Jan Forrest for more information.

BUTTERFLIES OF SINGAPORE
An Aussie Skipperoo Comes to Town

Introducing the Yellow Palm Dart
 (*Cephrènes trichopepla*).

Check out this website for information of Butterflies of Singapore <http://butterflycircle.blogspot.com/>. The site includes some stunning images of butterflies and some interesting articles.

The new **Biodiversity Gallery at the SAMuseum** provides visitors with a journey through South Australian habitats from the Arid, Semi-Arid, Temperate Woodland, Coastal to the Underwater. 18 concept cases also feature. These include: 'Parasites you live with'; 'Feeding at Sea'; 'Life Underground'; 'Extinctions'; 'Evolution'; 'Camouflage and Deception'; 'Survivors' and 'The Need to Breed'.



WE NEED YOUR HELP AT THE FOLLOWING EVENT:
Sunday Mail Home Living Expo, Adelaide Showground Saturday 24th April 10am - 5pm, Sunday 25th April 12noon - 6.00pm and Monday 26th April 10am - 5.00pm. **Site G14.**

CONTACT: Jan Forrest 8297 8230 if you can help look after our stall at this event with dates and times you can attend and your contact details. Jan will return your call and advise the arrangements for collecting entry and parking

LIFE MEMBERSHIP

At the December committee meeting it was agreed that the fee for Life Membership should be set at \$200. An option to apply for Life Membership will be included in the next renewal notice to be included with the May newsletter.

It is with sadness that we report the death of long term member Sam Aquilina, our condolences to his family.

An apology from the Editor

Please accept my apologies for the lateness of the first newsletter of the year. My involvement with the Biodiversity Gallery at the SAMuseum left little time to undertake voluntary work prior to the opening of the gallery on 11th February.

I am now retired (WOOPEE) so future newsletters should be on time although most retirees say they wonder how they ever had time to work, they are so busy!

I will continue at the SAMuseum, probably two days a week as an Honorary Associate, so can still be contacted via the Museum email address.

Classically the Orders are divided into Families but the accepted practice these days is to split the Orders into Superfamilies. This practice has come about to make management of the number of species easier and to better demonstrate evolutionary relationships.

The Order Lepidoptera (Moths and Butterflies) is split into about 30 Superfamilies - only two of which are usually collected but Butterfly enthusiasts. These are the Papilionoidea (True butterflies) and the Hesperioidea (Skippers). A Lepidopterist however may collect all 30 of them.

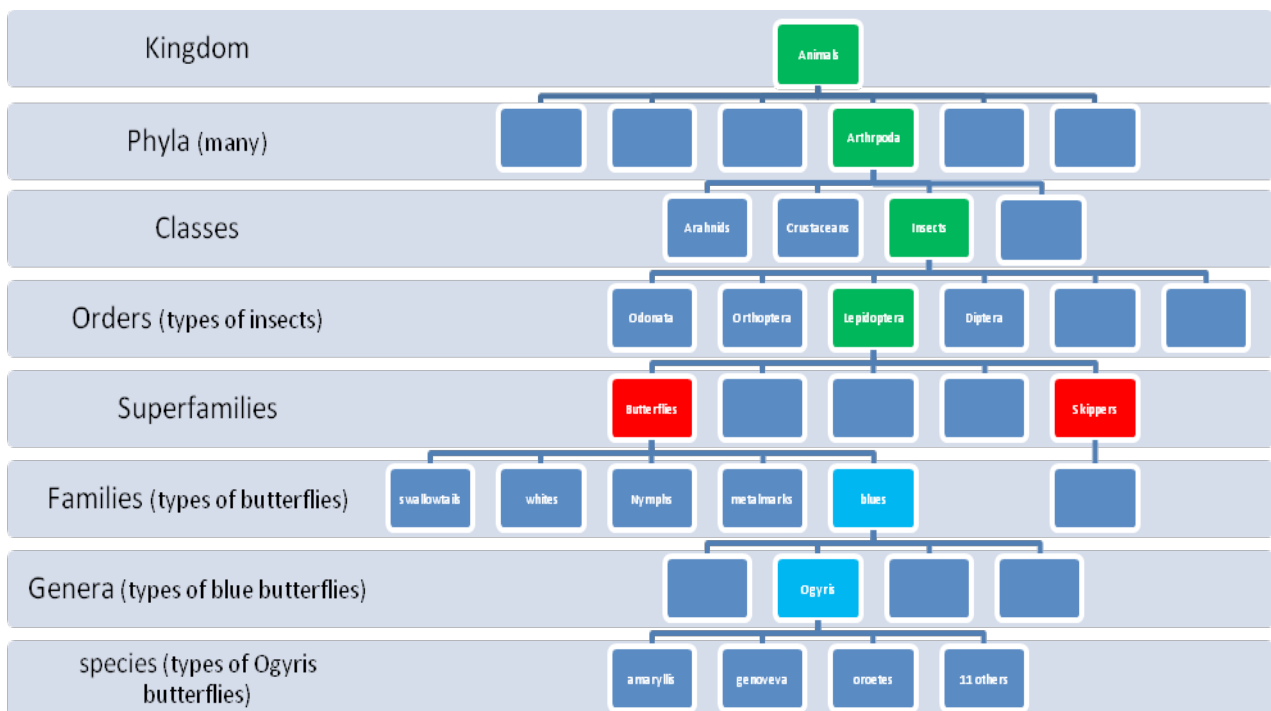
Almost there!

The Superfamily Papilionoidea is subsequently organised into 5 Families
The Papilionidae (Swallowtails), Pieridae (Whites and Yellows), Nymphalidae (a mixture of groups including Browns), Riodinidae (Metalmarks) and Lycaenidae (Blues).

Families are split up into Genera. The Family Lycaenidae (Blues) is the Family with the largest number of Genera.

Finally Genera are split up into different species. The beautiful Genus *Ogyris* is one of the many Lycaenid Genera. It is a Genus that is thought to have evolved in Australia and spread in a limited way into New Guinea.

So we are going to discuss a closely related group of beautiful blue butterflies that have evolved in Australia and are well represented in SA.



Some General Life History

Ten of the fourteen Australian *Ogyris* species eat mistletoe. Why eat mistletoe? I am not sure anyone really knows why mistletoe is the plant that these butterflies have evolved to eat (what do they get out of this plant that they cannot get out of others?) but mistletoes are one of those groups of plants that make and store a number of toxins in their tissues. It is likely that when the larvae of *Ogyris* eat this mistletoe they can take and store these toxins in their tissues thus making them toxic to predators. Note too that some other species of butterfly eat mistletoe as do many moth species.

The second General History fact of note is the Genus' association with ants. Forming associations with ants is a common feature of Australian Lycaenids (Blues). Indeed we have a greater percentage of ant/butterfly associations in our butterfly fauna than anywhere in the rest of the world. This ant/butterfly relationship is a mutually beneficial one, it is advantageous to the butterflies to associate with the ants (protection from predation) and advantageous to the ants to associate with the butterflies (sugar/protein source).

Back to the Genus *Ogyris*! Some species form only a casual association with ants, that is, they can placate the ants when they come looking for food. Some *Ogyris* species do however form intimate essential relationships with ant species that are so important that they could not survive without the ants. More of that later.

Well let's start.

Scientific name: *Ogyris amaryllis*
Common Name: Satin Azure or Amaryllis Azure

Status

This is the most common and most widespread *Ogyris* species. In this part of the country it seems to be one of the group that does not form a close association with ant species, but is often found in the company of ants. It seems to local collectors (nationally the debate is alive and well!!) to be living a largely independent life style hiding under the bark of the host plant during the day and crawling out at night to feed on mistletoe.

Although common and widespread it is not seen by many people because -

- mistletoe clumps are not common in our suburbs although more common than most realize!
- their habit of sitting on its mistletoe clump or host plant with its wings closed, fore wings laid back, exposing only its wonderful cryptically camouflaged undersides.
- it flies very rapidly around mistletoe containing plants
- it usually flies quite high up because that is where the mistletoe is.



Underside of *Ogyris amaryllis*. Above female, right male. The male does not have the scarlet markings on the underside of the wings.

When I lived at Waikerie during the hot dry months of January and February this was, in some locations, the most common butterfly around. More importantly for many of our readers this is a butterfly that can be found in and around the city.

Mistletoes

O. amaryllis lives on a wide variety of mistletoe species but there are two species that it particularly likes. Probably the most commonly used mistletoe species is *Amyema miquellii*, a common mistletoe found on *Eucalyptus* (Gum) trees where its hanging eucalypt shaped leaves harmonise with the host plant. The butterfly does seem to prefer however a much smaller slender leaved species, which forms smaller clumps and lives in *Acacia* (Wattle) trees and shrubs. This second species is *Amyema preisii*, which appears as a green clump in a duller foliaged wattle. When it flowers in late summer it becomes a notable addition to the wattle with its clusters of lovely red flowers.

Habits

The *Ogyris* males travel rapidly between mistletoe containing plants looking for females. Any resting males respond to this motion and rise to challenge the newly arriving males resulting in what appears to be a fast wheeling dog fight inside or around the host plant by up to three or four butterflies. Wandering females are exposed to this behaviour too and often get caught up in it.

Female butterflies are mated only once and probably soon after emerging. After that they move widely looking for suitable locations to lay their eggs. The excitable males cannot on sight tell that the female has been mated and try to attract her interest continually disturbing her search for egg laying sites.

The females lay their eggs onto the mistletoe plants. Where the eggs are laid and how many are laid at one time may depend on how much time the female has undisturbed, how old she is and whether there is ant scent (pheromone) on tree or shrub. The eggs can be laid singly on the edges of the leaves of the mistletoe plant or in small clumps (2-10 eggs) on



flowering buds or on the butt or branches of the mistletoe plant.

Life Stages

Most butterfly eggs are about 1 mm in diameter and the caterpillars that emerge from them are correspondingly small– but so cute. Newly hatched *O. amaryllis* caterpillars are about 2mm long, green and with long setae (hairs) projecting upwards. The seeming vulnerability of these tiny creatures never fail to amaze me!

It seems that the very young caterpillars feed on the mistletoe during the day relying on their colouration to camouflage themselves. As the caterpillars mature their habits change to feeding at night and hiding during the day. On Eucalypts they like to hide near the mistletoe usually under bits of mistletoe or eucalypt bark and this is where they can be found when the bark pieces in these areas are carefully peeled away. They can also be found in borer holes in *Acacia* species. If neither of these sites are available they may simply sit motionless in a crevice, or out of the way location. Others collectors reported finding caterpillars in ant nests but I have never seen this. This is an area that warrants more field work.

I did once find a mature larvae at the base of a *Myoporum* tree around at the entrance to a nest of *Camponotus* ants, and even though the caterpillar was far more exposed than I have at any time seen them, the ants were not paying any real attention to it and I spent many non-harassed minutes carefully and gently collecting the larva. In species where the ants are involved with the caterpillars the ants swarm all over you, attempting to bite.

As the caterpillars grow they change in appearance from green with long setae (hair like structures) to green and no setae to grey brown and hairless. When mature the caterpillars are quite broad and flat.

In my experience it is unusual to find more than one caterpillar per mistletoe clump and only on a few occasions have I ever found any ants in attendance and even then only one or two small black ones which have not shown any real devotion to caterpillars.

When fully mature they look for a place to pupate. I have never found any live pupae in the wild and can only assume that they either move onto the tree/shrub proper and pupate on or under loose bark as do other species of *Ogyris* or they pupate on loose material around the base of the host plant.

General Notes

This butterfly is found widely throughout the state (not KI or SE) but may be missing from areas of high land clearance. As with other *Ogyris* species the blue areas are larger and brighter as you move more inland, and in consequence the black areas are reduced in size. This is thought to have something to do with the need to raise the body temperature quickly in the mornings. The



Amyema miquellii on mallee eucalypt



Ogyris amaryllis egg cluster from mistletoe butt



First instar (newly hatched) caterpillar

sexes are dimorphic. (e.g. Different in appearance).

Though this article has been drawn largely from my own experience I have in writing this referred to other references, Braby – Australian Butterflies, Fisher – Butterflies of South Australia and Grund – Butterflies of SA website. I have been surprised at apparent contradictions in these articles and my own experience, and encourage interested readers to read more widely. It is clear that there is still much to be found out about this relatively common butterfly. If any readers can add from their own experiences I would be happy to receive that information.

My Experiences

As mentioned before this is a common butterfly particularly in mallee areas. It is most easily located in areas where the common, head high, spiky, “dagger leaved” wattle, *Acacia colletioides* is found. The *Amyema preissii* clumps are easily seen and the butterflies are usually obvious.

If butterflies are not flying, tap the plants with a stick or “gently” lob a stone in the vicinity of the mistletoe and if present the butterflies will rise rapidly and circle the plant flashing their brilliant blue wing colour in the sun. These can be caught if you have a net or better still you can search the clumps for eggs and these can be raised in jars. (See Article on Raising Butterflies in Coffee Jars in the next newsletter). Be careful not to have too many caterpillars in the one jar as they are carnivorous on each other if the food levels get a little low. The caterpillars particularly like the flowers but will happily eat the mistletoe leaves.

This is a good species with which to begin your butterfly collecting or raising. Remember you can always release the raised individuals back into their original population. Do not release them locally if you have translocated them some distance from collection.



Images from top: late second instar caterpillar eating flower; third instar caterpillar; mature caterpillar; pupa.

NEWSLETTER DILEMMA

Unfortunately the cost of printing and posting the newsletter has almost doubled. To keep the membership fee low, thus encouraging more to join, plus the fact that many members now choose to receive their newsletter via email it has been decided by the committee to provide the printed version of the newsletter in black and white. This will reduce costs and still provide a service for those members that do not have access to email. The full colour version will continue to be emailed to members and can be downloaded from our BCSA website. **If you have an email address but currently receive a posted copy and would like the newsletter emailed in colour please contact Secretary Jan Forrest.**

DOUGLAS SCRUB - McLAREN VALE'S BEST KEPT SECRET

Located near McLaren Flat in the southern vales winery district *Douglas Scrub* is the Girl Guides camping, conference and environmental education centre.

This is your invitation to attend an OPEN DAY at Douglas Scrub, Douglas Gully Road, McLaren Flat (opposite Woodstock Winery) on Sunday 23rd May from 10.00am - 4.30pm.

This wonderful property which includes a portion of heritage listed scrub, caters for all age groups. Clubs especially adult clubs and family groups are welcome.

A total of 58 people can be accommodated (or 29 using bottom bunks only) in comfortable bunkhouse accommodation. Camping sites are unlimited and there are a number of secluded camping areas so campers, caravan clubs (powered and un-powered sites), four wheel drive clubs, walking clubs and family groups can be afforded privacy, yet still have close access to toilet blocks. There is one on-site van.

Douglas Scrub also caters for day picnic groups and day conferences and seminars.

The **Open Day** will provide an opportunity to check out the facilities, walk the nature trail and view the native animals.

This property is a wonderful venue for weekend get-aways. Although the location is so close to Adelaide, the heritage scrub setting, tall trees, birds and facilities ensure a relaxing time. The local area also provides tourist venues to visit, including a cellar door winery just across the road.

If you are interested in viewing the property at another time contact Managers Stephen or Vicki on 08 83820155 or email dscrub@senet.com.au. Bookings are made at Guide House 8418 0900.

So if you, a member of your family, your school, adult club, youth club or business are looking for an inexpensive venue for overnight accommodation for a family reunion, weekday or weekend get-away, a day conference, seminar or picnic please contact the Douglas Scrub Managers, Guide House staff or Chairman of the Management Committee Jan Forrest.

In recent years very large capital costs have meant financial viability of the property has been compromised. As a consequence the Board of Girl Guides SA are considering selling *Douglas Scrub*. This would be a tragedy for the people of South Australia. The committee have twelve months to 'turn the property around' and your booking will ensure the property remains viable. Please pass this information onto others who may be interested in checking out Douglas Scrub at the open day or who may be interested in making a booking.

Contacts:

Douglas Scub Managers: 08 0383 0155
 Guide House for bookings and info. : 08 8418 0900
 Jan Forrest (chairman): 08 8297 8230
 Helen Goldney (deputy chairman): 83325341



A BUTTERFLY VIDEO FOR SCHOOLS

Film maker Tracy Baron and Environmentalist Carolyn Herbert are presently working with the committee to produce a DVD promoting butterfly gardening and the Butterfly Challenge to school children.

Production is now underway and Tracy is keen to hear from anyone who currently has indigenous butterflies in their garden or patch of native scrub. We have footage of the Wanderer and Cabbage White butterflies however it is the native species we especially want to capture on film. We realize it is now getting a bit late in the season and we may have to wait until next year however there may still be some species flying and if you can help please telephone Tracy on 08 8277 7469 mob: 040357629.

We are also seeking sponsorship for the DVD so if you have any ideas please contact Secretary Jan Forrest.

BCSA NATURE QUIZ No.4 by D. Keane

1. What meteorological effect was coined by Edward Lorenz?
2. What is a group of rhinos called and an Oscar winning film?
3. Which European country means 'land of rabbits'?
4. Vanilla comes from which group of 'testicular' plants?
5. Where would a Tangerine live?
6. A Hawaiian musical instrument meaning 'jumping flea'.
7. What sort of insect is a firefly?
8. What type of creatures are horned toads and glass snakes?
9. How many eyes does a bee normally have?
10. Which Aussie animal, related to the ring tailed possum means 'no drink'?

Answers:

1. The 'Butterfly Effect', 2. Crash, 3. Spain, 4. Orchids, 5. Argentina 6. Ukelele, 7. Beetle, 8. Lizards, 9. Five, 10. Koala

EXCURSION - MOTH NIGHT

At: Douglas Scrub, McLaren Flat. **Cost:** \$5.00pp

On: Sunday 11th April. **From:** 5.00pm - 10.00pm

Bring: drinks and meat for BBQ & salad/sweet to share.

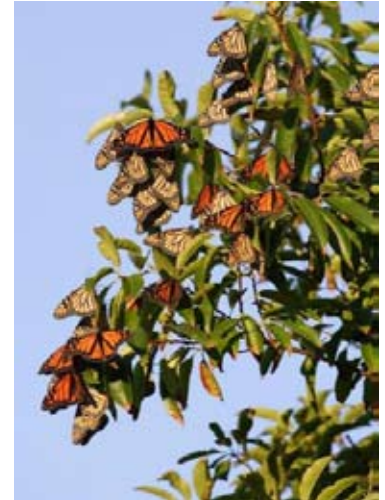
If coming: contact Jan Forrest after 7th April.

Genetic Basis For Migration In Monarch Butterflies Uncovered

<http://www.sciencedaily.com/releases/2009/03/090330200615.htm>

ScienceDaily (Mar. 31, 2009) — Scientists studying Eastern North American monarch butterflies (*Danaus plexippus*) have uncovered a suite of genes that may be involved in driving the butterflies to migrate towards Mexico for the winter. Their research describes 40 genes that are linked to the butterflies' compulsion to orientate themselves by an internal 'sun compass' and begin the 4000km journey southwards.

Type in the link above to see further information on this fascinating research and other monarch butterfly related stories.



Credit: iStockphoto/Paul Tessier)

BUTTERFLY CONSERVATION SA Inc.

Chairman: David Keane

Secretary and Newsletter Editor: Jan Forrest OAM C/- South Australian Museum, North Terrace, ADELAIDE, 5000 ph (08) 8207 7503.

email <jan.forrest@samuseum.sa.gov.au > or <forrestjan@adam.com.au>

Treasurer : 5 Oakleigh Road, MARION. 5043 S.AUST.

OUTREACH PROGRAM

The full exhibition and AO size panels from the Exhibition "Where have all the Butterflies gone?" are available from Jan Forrest at the South Australian Museum for use by Landcare and other Conservation groups at seminars, conferences and workshops or just for display. Included are five introductory panels, and seventeen panels from seven habitat areas: Coastal, Grasses, Mallee, Urban, Migration/Vagrant, Eucalyptus Forrest/Woodland, Arid, Wetland and Lower South East.

DIARY DATES

MEETINGS - Committee meetings are normally held bi-monthly (usually the second Monday of the month) at 6.00pm in the Urrbrae Wetlands Resource Centre, Cross Roads, Urrbrae or at a committee members home. All members are welcome to attend. If you would like to attend please contact Secretary Jan Forrest.

Next Meeting: 12th April 6.00pm, 30 Churchill Avenue, CLARENCE PARK.

Excursion: 'Moth Night' on 11th April, at Douglas Scrub, Douglas Gully Road, McLAREN FLAT. From 5.00pm - 10.00pm. Cost: \$5.00 pp. Bring drinks and own meat for a BBQ plus salad or sweet to share. If coming: contact Jan Forrest after 7th April, 2010.

WEB SITES

"Butterfly Gardening" - www.butterflygardening.net.au

'Butterfly Conservation SA Inc.' <http://www.chariot.net.au/~bcsa/index.htm>

'South Australian Butterflies' (Roger Grund private site)

- <http://www.chariot.net.au/~rgrund/index.htm>

'Butterfly Watch' and 'Butterfly Challenge' - SAMuseum website

www.samuseum.sa.gov.au then click on 'Whats On' then 'online exhibitions'.

Teacher Resources (Jackie Miers) - http://www.teachers.ash.org.au/jmresources/butadelaide/Butterflies_of_Adelaide.html

WELCOME TO NEW MEMBERS:

Carolyn HERBERT

Isobell KLARENBUHL

Stan and Jean ROBINSON

RIDLEY GROVE COMMUNITY GARDEN

Sophie THOMSON

Marc BLACKBOROUGH

Jenny and Dennis ROCKLEY

Cherry MACKLIN

Des and Leslie MENZ

Kathy, Don, Mary & David BRYKER

DIREK SCHOOLS

Frances DUDLEY

FLAGSTAFF OVAL

KINDERGARTEN

UPPER STURT PRIMARY SCHOOL

Annie ROBERTS

Mark WARD

COROMANDEL VALLEY PRIMARY SCHOOL

