

BUTTERFLY CONSERVATION SAINC.

NEWSLETTER

No. 39: October 2010

SOUTH AUSTRALIA'S SUN-MOTHS (SYNEMON SPECIES, CASTNIIDAE).

Roger Grund

Eight (or possibly as many as ten) sun-moth species are presently known from South Australia (S.A.). They are classified under the genus Synemon and have clubbed antennae similar to butterflies. They are eye-catching day-flying moths that fly in full sun in warm to hot weather during the heat of the day from about 10.00am to 3.00pm, (cloud cover may cause the moths to be inactive). Five of the species are small (wing expanse 22-40mm about the size of a bee), while the others are large (wing expanse 34-52mm about the size of the Painted Lady butterfly)(1). They fly in the vicinity of their larval host-plants. The larvae are mini-bardi/witchetty grubs, living either below ground on the roots or within the base of the plants, and can take up to several years to complete their life stage depending on the environmental conditions at the time. Six of the S.A. species utilise tussock grasses as host-plants, while the other three species utilise dry-land sedge-like plants. Consequently the former species are in direct competition with farmers' livestock and have suffered the most from habitat clearing and stock degradation due to overgrazing, and the use of poison sprays to control locusts, mosquitos and weeds. Four of the grass-dependant species are now threatened in South Australia, with a further two borderline. Some of the moths during their evolution have lost the use of their feeding proboscis and consequently only live a short period until their reserves of body fat have been used up, which may only be a few days.

Their flight is swift when disturbed, near ground level and the small species are then quickly lost from sight, but at other times they are usually found resting either on the ground or on low plants and grasses, or are seen flying slowly; the males looking for females, or the females looking for host-plants to lay eggs on. When at rest, sunmoths can either take on a position typical of many moths with wings folded along their bodies in the shape of a tent (Fig. 1), or if on the ground, with wings flattened and partially open (Fig. 2). The females have a long extendible ovipositor (a tubular abdominal egg laying device) (e.g. Fig. 3) used to lay a large spindle shaped egg deep within the base of the host-plant. The forewings of the moths typically have a camouflage pattern of brown or grey-black, with streaks of white, while the hindwings have large display-patterns of either red, orange or yellow that are used as aposematic flash displays to startle potential predators. The flight times and the length of the flight period of the moths are not well known in S.A. but it seems

Continued Page 3

IN THIS ISSUE

- South Australia's Sun-Moths *Synemon* species
- 2009-2010 Chairmans Report
- 2009-2010 Financial Statement, note.
- Thanks
- Life Member
- Nectar Plant list
- · Nectar Plants
- Can you help?
- email addresses please
- 2011 meetings
- News and Diary Dates
- Outreach Program
- Websites





Figs 1-2: *Synemon* 'flinders ranges', wing expanse 38mm (bar is 10mm); (1) male in 'tent' pose, (2) female with partially opened wings showing its flash colours.

BUTTERFLY CONSERVATION SA. INC. for membership enquiries and annual membership payments (\$10): Treasurer: 5 Oakleigh Road, MARION. 5043 S.AUST.

2010 PRESIDENT'S REPORT

The year was another with enthusiastic running by Jan Forrest and the committee and especially Mike Moore taking the financial reins in keeping us in the black and up to date. Special thanks to Jan for putting together those wonderful and informative newsletters, it's a big job. Thanks also go to the SA Museum for their support. We have had 65 new members which include individuals and schools. My personal thanks go to the committee for all their support during the year, and other volunteers for all their assistance.

Over the past year our activities have included:

- Working on a new book to illustrate and identify moth caterpillars in the garden and natural bushland areas. As you know there are over 2000 moths and around 80 butterflies in SA. Moths are important in providing a food source for birds etc and keeping the natural world healthy. More to come on that in our newsletters.
- This year saw the opening of the SA Biodiversity Gallery at the SA Museum to show the public the rich diversity of the natural world, including our butterflies.
- Several expos were manned by the members, which saw many of our butterfly gardening books being sold. Thanks to all those involved.
- Tracy Baron and Carolyn Herbert are producing a Butterfly Garden DVD, with a children's drawing competition for the front cover, and setting up a display at the Museum in September. Thanks for your time and effort.
- Our newsletters number 38 with over 230 pages of facts and information about the world of butterflies in SA. The major newsletter articles included:
- o The genus Ogyris by Mike Moore (Photos by the late Lindsay Hunt)
- o Raising butterflies and moths at home by Mike Moore
- o Butterfly trail in the Lebombo mountains in S. Africa by Andy Young
- o Wanderer (Monarch) Butterflies 'case for and against' by Jan Forrest

We regretted the loss of a great friend and entomologist Sam Aquilina, who was one of those who inspired us to start BCSA in early 1999.

The following 12 months we will seek to:

- · Incorporate more joint meetings and talks with other groups like the Nature Conservation and Biology Societies of SA etc.
- · Take road shows to country SA to inform Land-care, schools and community groups about butterflies, moths and habitats.
- Collect moth caterpillar photos and information from members and the public for a new publication. Collect and rear caterpillars.
- Continue to feature interesting articles, expositions and promotion of butterflies. All contributions welcome!
- Include a regular monthly program of speakers as well as our general meetings.

Groups such as ours would not function without the support and grant funding from Government agencies and other organisations. Thanks to Jan for all her work in keeping BCSA going over the 10 years as our secretary. Thanks to the committee and members for their support and contributions to a successful year.

David Keane Chairman Butterfly Conservation SA Inc. 7th September, 2010

2009-2010 AUDITED FINANCIAL REPORT

A note from the Secretary Jan Forrest

I can assure members that the 2009-2010 accounts have been audited and all found correct, however as Mike Moore the Treasurer is presently 'out bush' I was unable to obtain a copy for printing in this newsletter.

A copy of the final 2009 audited financial statements will be published in the next newsletter.

MANY THANKS to the members who have helped out on the three recent promotion displays. Richard Rowland, Gerry Butler, Roger Grund, Jan Forrest, Bill Rowland, Gill Hollamby, Keith Joan Caldicott, Suzie Clarke and Pam DiLorenzo.

WELCOME TO OUR FIRST LIFE MEMBER -RICHARD ROWLAND



Continued from page 1.

the proboscis (nectar) feeding species as a local group can fly for long periods of a month or more, while the non-feeding species have very short flight periods of 1-2 weeks and they usually have coincident emergences so that all the moths are available at once for mating. Flight periods of individuals have been documented from 1-10 days.

The sun-moths are similar to many butterflies as regards conservation. Most require special habitat that has historically been subjected to large-scale clearance for urban and farming activity, leaving small fragmented patches of habitat remaining for the use of sun-moths. The fragmented habitat has then subsequently been subjected to a variety of degradational processes such as overgrazing, weed-infestations, fire-management and mosquitolocust eradication spraying programmes. Some of the moths have developed defences from fires by having their larvae live underground, and these can survive fires provided they are not repetitive. Many sun-moth populations (particularly the non-feeding types) have very restricted dispersal ability and are therefore confined to their present habitat fragments. If the habitat fragment is destroyed, then so too is the sun-moth population.

BCSA is therefore interested in knowing whether any unknown sun-moth populations (unknown to scientists) exist, so that conservation management policies can be developed to either preserve the habitat fragments containing the moths or so that scientists can be prepared to translocate populations to another habitat if the original habitat is to be destroyed or interfered with.

The following are short data synopses for each moth, and BCSA is eager for its members to be on the lookout for the moths (particularly for the threatened species) during the members' travels, or outdoor leisure and exercising periods; by recording the species, place, time and habitat, making a note of its exact location so it can be found again. A photo of the moth and location would also be excellent for those capable, and the moths are often amenable to photography if you approach carefully. Such areas could be roadside vegetation remnants, undeveloped roadways and tracks, grazing properties, country golf courses, conservation parks, reserves, and perhaps even rail-line reserves (but remember to stay safe). The information can be forwarded to the Secretary Jan Forrest; see email address at end of newsletter. Nice photos could also be placed on the BCSA website.

LARGE SPECIES

Synemon selene (the Pale Sun-moth): Is a large, iconic day-flying moth that once used to occur on the Adelaide Plains and Barossa Valley, (and there is one record from near Renmark). It has a wing expanse of about 35-52mm, (the female being larger, as for all other sun-moths except for S. plana). It was once locally common in the Two Wells area,

but has not been recorded in S.A. since 1948. It is now regarded as critically endangered in S.A. (if not already extinct).

It flies in open woodland-native grassland habitat comprising a high proportion of wallaby grass (*Austrodanthonia*), its larval host. The forewings are dull brown coloured, cryptically streaked with white (Fig. 3). The hindwings are also brown but are marked with large, dull orange spots. In S.A. both male and female moths have occurred, whereas in north-west Victoria the same or similar moths are parthenogenic and only females occur! (a situation that also occurs in worker bees). The moth (including Victorian specimens) has mainly been recorded flying during February and early March. In the Two Wells area it was most prolific during the first week of March.

BCSA would appreciate if keen members could check out native grassland (wallaby grass) areas in the above localities for the moth during its known flight period, or even in your own local areas, such as the east side of the Mt Lofty Ranges to the Murray River (east of the Barossa Valley and Adelaide), and even elsewhere such as along the Murray Bridge-Pinnaroo Roads.

Synemon parthenoides (Orange Spotted Sun-moth): Has a similar pattern to *S. selene* but the 'ground' colour is black rather than brown (Fig. 4), and tends to fly in spring-early summer rather than late summer. It is the most common species and generally occurs in sandy woodland throughout temperate S.A. particularly where a known sedge hostplant *Lepidosperma carphoides* (black rapier-sedge) occurs. It has a wing expanse of 35-50mm and a long group-flight period during September-January, with specimens flying earlier on northern Eyre Peninsula and near Ceduna.

Synemon jcaria (Reddish-orange Sun-moth): Differs from S. selene by having a hindwing that is mostly orange-red coloured and the forewings (in males) tend to be much more pointed (Fig. 5). The underside has conspicuous white markings within the red pattern. On the mainland it occurs in woodland and grassland containing Lomandra effusa (scented iron-grass), a low growing dry-land mat-rush having narrow strap-like leaves with the ends divided into two short needle-like points. This host-plant is common throughout southern S.A., and typical habitat occurs along the east side of the Mt Lofty Ranges (e.g.Callington). However this sun-moth has rarely been recorded on mainland S.A., with documented specimens only from the Barossa Valley, southern Yorke Peninsula, and near Mannum. The same species (or possibly a similar species known as Synemon 'ignita') also occurs on Kangaroo Island (K.I.) where it utilises a different hostplant, the dryland sedge *Lepidosperma* viscidum (sticky sword-sedge), as Lomandra effusa does not occur on K.I. BCSA member Andy Young recently discovered its use of the former host-plant. Their wing expanse is 34-52mm and the recorded flight period is during late February-early March on the mainland, and late January-early February on K.I. On the mainland the species is threatened by farming and fire management practices, although on K.I. the species still seems to be secure.

Synemon 'Flinders Ranges' (Flinders Ranges Sun-moth): Differs from S. selene by having a hindwing that is nearly all yellow-orange coloured (Fig. 2), and is presently documented only from the Flinders-Olary Ranges along ephemeral creeks containing its host-grass Cymbopogon ambiguus (lemon-scented or kerosene grass). It has a wing expanse of 34-38mm and flies in spring during late October-early November, and is threatened by pastoral practices and locust spraying. The range of this species may be more extensive than presently recorded as the host Cymbopogon also occurs in the Southern Flinders and Gawler Ranges and the Far North-west Regions, or perhaps there may even be new species to be discovered in S.A. as other sunmoths are known to utilise this plant in neighbouring Australian states.

SMALL SPECIES

Synemon discalis (Small Orange Spotted Sunmoth): Has a morphology the same as *S. parthenoides* and is probably a form of it, differing only by its smaller size 30-39mm and its use of the low growing dry-land sedge *Gahnia lanigera* (black-grass saw-sedge) as a hostplant. It occurs in the cooler temperate areas of southern S.A. where the host sedge grows (in limestone mallee country). It flies in spring during October-early November and is not presently threatened.

Synemon nais (Orange Sun-moth): One of the smallest sun-moths 22-30mm (Fig. 6), that occurs on the temperate native grassland plains in southern S.A. It flies in spring during September-October. Without close examination it could be confused with the small skippers Ocybadistes walkeri hypochlorus (Southern Grass-dart) and Taractrocera papyria (White-banded Grass-dart)(2), although these skippers do not normally occur in this sun-moth's habitat.

Synemon plana (Golden Sun-moth): An unusual moth, 31-35mm (the male is larger) with dimorphic male and female morphologies; the male being all brown (Fig. 7) while the female has bright, all yellow-orange hindwings on the upperside (Fig. 8) (but which are white on the underside). The male does most of the flying while the female normally stays on the host grasses displaying her yellow hindwings. Host plants usually comprise Austrodanthonia species, but the moth has also been found utilising alien pastoral grasses e.g. Nassella neesiana (Chilean needle grass) and Bothriochloa macra (redleg grass). It has only been recorded once in S.A. from Bordertown in early December

1975. This town's 'Common' area may be a good area to look for it again, and based on its occurrence in Victoria and N.S.W. it could occur in other parts of the Southeast Region of S.A. It is still known from non-arid areas of west Victoria where it is threatened by farming practices and locust spraying.

Synemon theresa (Cryptic Sun-moth): A threatened species due to urban expansion and government fire management policies. It is now only known in Australia from the Mt Lofty Ranges where it occurs in open native-grass woodlands containing wallaby and spear (*Austrostipa*) grasses. Possibly its last population exists in the Adelaide Hills. It has a wing expanse of 26-40mm (Fig. 9) and tends to fly in summer during December-January. It may be confused with another (but common) unrelated day-flying moth *Epicoma tristis* (tea-tree Epicoma moth)(3), which flies later during March.

Synemon nullarbor (Nullarbor Sun-moth): A very small species 24-26mm (Fig. 10) only recently discovered by the author, and similar to *S. theresa* but presently only known to fly in autumn on the native grassland expanses of the Nullarbor Plains, although there is no reason why it should not occur elsewhere in S.A. in similar grassland situations where *S. nais* also occurs.

ACKNOWLEDGMENTS

The author is grateful to Len Willan, photographer of the images for S. plana displayed on the CSIRO Entomology website 'Australian Moths Online'(1), for their permissions to use these images in this article.

REFERENCES

- (1) CSIRO Entomology, 2009. Australian Moths Online, Castniidae. Viewed 01 July 2009, http://www.ento.csiro.au/gallery/moths/Castniidae (2) Hunt, L., Grund, R., Keane, D. & Forrest, J. 2007. Attracting butterflies to your garden. Butterfly Conservation South Australia Inc pub., Adelaide. 164pp.
- (3) McQuillan, P.B. & Forrest, J.A. 1985. A guide to Common Moths of the Adelaide Region. Special Educational Bulletin Series (No. 5). South Australian Museum, Adelaide. 52pp.



Fig 3: Synemon selene female 50mm



Fig 5: Synemon jcaria male 40mm.



Fig 7: Synemon plana male 34mm

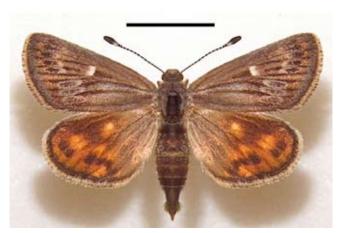


Fig 9: Synemon theresa female 36mm



Fig 4: Synemon parthenoides female 50mm

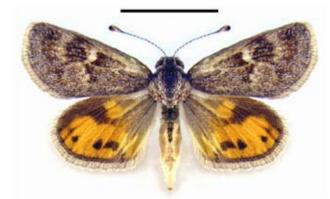


Fig 6: Synemon nais female 30mm



Fig 8: Synemon nais male 32mm



Fig 10: Synemon nullarbor female 26mm

NECTAR PLANT LIST

Adult butterflies lay their eggs on a food source for their caterpillars. However, when it comes to finding nectar to feed on, the plants listed will provide an excellent food source for all butterflies. Check the Urban Forest website to ensure they are suited to your area.

Ground laver

Ammobium Daisy (Ammobium alatum) (garden plant exotic to SA)

Austral Trefoil (Lotus australis) Blue Pincushion (Brunonia australis) Brachycomes (*Brachycome* spp.)

Button Everlasting (Helichrysum scorpioides)

Candles (Stackhousia spp.)

Clustered Everlasting (Chrysocephalum semipapposum) Common Everlasting (Chrysocephalum apiculatum)

Common Purslane (Portulaca oleracea) Creeping Boobialla (Myoporum parvifolium)

Daisies and Fuzz weeds (Vittadinia spp.)

Everlastings (*Leucochrysum* spp.) Everlastings (*Helichrysum* spp.) Fairy Fan-flower (Scaevola aemula)

Fan-flowers (*Scaevola* spp.) Glycines (Glycine spp.) Guinea flower (*Hibbertia* spp.)

Mallee Smooth-nettle (Parietaria cardiostegia)

Minuria daisies (Minuria spp.) Native Cranberry (Kunzea pomifera)

Native Liquorice (*Glycyrrhiza acanthocarpa*)

Native Sorrel (Oxalis perennans) Pale Fan-flower (Scaevola albida) Red-flower Trefoil (*Lotus cruentus*)

Rice Flowers (*Pimelea* spp.)

Running Postman (Kennedia prostrata)

Saltbushes (*Atriplex* spp.)

Scrub or Native Stinging Nettle (*Urtica incisa*)

Smooth-nettle (Parietaria debilis)

Snapdragon (Antirrhinum spp.) (garden plant exotic to

Strawflower (Xerochrysum bracteatum) Tiny Cudweed (Gnaphalium indutum)

Wirewort (Asteridea athrixioides f. athrixioides)

Yam Daisy (Microseris lanceolata)

Sedges

Hard Mat-rush (*Lomandra multiflora* ssp. *dura*) Mount Lofty Mat-rush (*Lomandra fibrata*)

Small Mat-rush (Lomandra nana)

Soft-tussock Mat-rush (Lomandra densiflora)

Yaccas (*Xanthorrhoea* spp.)

Shrubs

Acacia simmonsiana (Acacia simmonsiana)

Baeckeas (Baeckea spp.)

Billy-buttons (Calocephalus spp.)

Bitter Pea (Daviesia spp.)

Bottlebrushes (Callistemon spp.)

Bristly Bush-pea (*Pultenaea acerosa*) Broom Baekea (Babingtonia behrii)

Christmas bush; sweet bursaria (Bursaria spinosa)

Coastal Umbrella-bush (Acacia cupularis)

Cockies Tongue (Templetonia retusa)

Daisy bushes (Olearia spp.)

Dense Bush-pea (Pultenaea densifolia)

Desert Cassia (Senna artemisioides ssp. petiolaris) Elegant Wattle (Acacia victoriae ssp. victoriae) Fine-leaf Desert Senna (Senna artemisioides ssp. filifolia)

Fringe Myrtle (*Calytrix* spp.)

Gold-dust Wattle (Acacia acinacea)

Goodenias (Goodenia spp.)

Grey Mulga (Acacia brachybotrya)

Hakeas (*Hakea* spp.)

Mallee Pea (Eutaxia microphylla)

Mealy Wattle (Acacia farinosa)

Mint bush (*Prostanthera ovalifolia*) (garden plant exotic

Mt Lofty groundsel (Senecio hypoleucus) Narrow-leaf Bush-pea (Pultenaea tenuifolia)

Native Lilac (Hardenbergia violacea)

Needle Wattle (Acacia rigens)

Ploughshare Wattle (Acacia gunnii)

Punty Bush (Senna artemisioides ssp. X coriacea)

Rock Wattle (Acacia rupicola) Showy Parrot-pea (Dillwynia sericea) Silver Mulga (Acacia argyrophylla) Small Darwinia (Darwinia micropetala)

Spreading Scurf-Pea (*Psoralea*) (*Cullen patens*) Sticky Boobialla (Myoporum petiolatum)

Sticky Wattle (Acacia dodonaeifolia)

Stiff Westringia or Western Rosemary (Westringia rigida)

Sunrays and Everlastings (*Rhodanthe* spp.) Sweet Quandong (Santalum acuminatum) Tall Scurf pea (*Psoralea*) (*Cullen australasicum*)

Thorn Wattle (Acacia continua) Thryptomenes (*Thryptomene* spp.) Twiggy Bush-pea (Pultenaea largiflorens)

Umbrella Bush or Sandhill Wattle (Acacia ligulata)

Wallowa (Acacia calamifolia)

Weeping Emubush or Berrigan (Eremophila longifolia)

Trees and Mistletoes

Mistletoe hosted by trees are listed in [square brackets]. Black Tea Tree (Melaleuca lanceolata) [Melaleuca

Mistletoe]

Blackwood (Acacia melanoxylon) [Drooping & Wire-leaf Mistletoes]

Boobialla (Myoporum insulare) Box Mistletoe (Amyema miquelii)

Buloke Mistletoe (*Amyema linophylla* ssp. *orientale*) Cootamundra Wattle (Acacia baileyana) (exotic to SA)

Desert Lime (Eremocitrus) (Citrus glauca)

Drooping Mistletoe (Amyema pendula ssp. pendula)

False Sandalwood (Myoporum platycarpum)

Fleshy Mistletoe (Amyema miraculosa ssp. boormanii)

Golden Wattle (Acacia pycnantha)

Grey Mistletoe (*Amyema quandang* var. *quandang*)

Gum Trees and Mallee (Eucalyptus spp.) [Box Mistletoe]

Hard-leaf Wattle (Acacia sclerophylla)

Illawarra Flame-tree (Brachychiton acerifolius) (exotic to SA)

Kurrajong (Brachychiton populneus (exotic to SA))

Lacebark or White Kurrajong (Brachychiton discolor) (exotic to SA)

Melaleuca Mistletoe (Amyema melaleucae)

Mulga (*Acacia aneura* complex)

Myoporum floribundum (Myoporum floribundum)

Native Myrtle (*Myoporum montanum*) Native Willow (Acacia salicina)

Swamp Paper-bark (Melaleuca halmaturorum) [Melaleuca Mistletoe]

Tea Trees (Leptospermum spp.)

Western Myall (Acacia papyrocarpa) [Grey Mistletoe]

Wire-leaf Mistletoe (Amyema preissii)

Wirilda (Acacia retinodes)

NECTAR PLANTS

Adult butterflies need nectar as their food source. Whilst most flowering plants provide nectar (even salt bushes when flowering) there are some plants that are more attractive to butterflies than others. The adult butterfly uses its proboscis to suck up nectar and plants that are flat and have a number of flowering heads are preferred. See list over.

















left: Christman Bush *Bursaria spinosa* Photo: DHirst Showy Parrot-pea *Dillwynia sericea* Photo: JHunter Everlasting *Helicrysum* sp. Photo: JAForrest Rice flower *Pimelia glauca* Photo: JHunter right: Fan-flower (*Scaevola* spp.) Photo: JAForrest Golden wattle *Acacia pycnantha* Photo: JAForrest Mistletoe *Amyema micquelli* Photo: JAForrest Koonamore Daisy *Erodiophyllum elderi* Photo: HAdams

CAN YOU HELP?

Sales of our book

'Attracting Butterflies to your Garden' have slowed considerably.

MEMBERS- CAN YOU SELL SOME? contact Jan Forrest 82978230 for more information.

DO WE HAVE YOUR EMAIL ADDRESS ON RECORD?

If you are not receiving notices and reminders about events recorded in the newsletter then your email address is probably not on record. So, if you have an email address please send it to the Secretary forrestjan@adam. com.au. Some members do not want their newsletter emailed and prefer it to be posted (even though it comes in Black and White) that is ok as there are two lists, all emails and emails for sending out newsletters.

2011 PROGRAM OF TALKS

at the Clarence Park Community Centre East
Avenue, Black Forest
first Tuesday of the month commencing March
2011 at 6.15pm for at 6.30pm start
Cost: \$2 (to cover hall hire)
bring supper to share

PUT THESE DATES IN YOUR DIARY:

1st March 5th April
3rd May 7th June
5th July 2nd August
6th September 4th October

1st November

WE ARE PRESENTLY SEEKING SPEAKERS:

If you would like to be a speaker or can provide information on interesting speakers please contact Secretary Jan Forrest forrestjan@adam.com.au. Further information including speaker list in next newsletter and on our website http://www.chariot.net.au/~bcsa/index.htm

BUTTERFLY CONSERVATION SA Inc.

Chairman: David Keane

Secretary and Newsletter Editor: Jan Forrest OAM C/- South Australian Museum, North Terrace, ADELAIDE, 5000 ph H (08) 82978230. 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

COMMITTEE MEETINGS - 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**: 8th November, 6.00pm, 30 Churchill Avenue, CLARENCE PARK.

GENERAL MEETINGS - From start of 2011 we are planning to hold monthly general meetings with a guest speaker. Program, venue and dates to be advised.

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:

Phil Bromley
Kathryn Mroczek
Ann Matthews
Kate Hislop
Peter Hornsby
Barbara & Don Hayman
Stephen Lockwood

