



BUTTERFLY CONSERVATION SA INC.

NEWSLETTER

No. 54: March, 2015

COPPER AT THE BUS STOP!

Following the exciting re-discovery of the Chequered Copper Butterfly *Lucia limbaria* surviving in Victoria Park several years ago, this species has now turned up at Elizabeth Vale. Local resident Alison Stephens reported seeing the butterfly to the Museum Information Centre and brought along some photos to prove it! She had seen adult butterflies at least three times last year between September and December and also previously in 2012 and 2013.

Secretary Jan Forrest visited the area near Calvary Central District Hospital and could not locate any food plants other than the very healthy specimen featured growing happily under the bus stop shelter. Unfortunately this is in an extremely vulnerable position. It looks like a weed and may very well be poisoned by council workers. On page 2 is an article by David Keane on how to spot the difference between the native and introduced *Oxalis*. Whilst the butterfly probably prefers the native *Oxalis perennans*, it has also been recorded feeding on the introduced species *Oxalis corniculata*.

CAN YOU HELP

It would be wonderful if someone living near the Calvary Central District Hospital could plant and maintain some of the caterpillar foodplant *Oxalis perennans* in their garden or find out if some could be planted in the garden at the hospital. This may ensure the long term survival of this butterfly in this location.

Photos: top and below *Oxalis* foodplant (at the bus stop), Jan Forrest; Adult Chequered Copper underside Alison Stephens; Adult butterfly LFHunt.



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PLANT TAGS NOW AVAILABLE FOR SALE

Measuring 10cm x 10cm, these attractive plant tags are now available from the Secretary Jan Forrest and at displays at Sophie's Patch over Easter, the Home Living Expo, APS plant show and sale at Wayville in April and at the Reptile and Frog Expo in May also at Wayville. See page 9 and page 10 for the order form.

Cost of \$2 per tag includes a plastic stake; postage is included in this cost. They are durable and waterproof with a projected life of five years outside. See pages 9 and 10 for the order form. Separate order forms can be emailed to you on request.

What can you plant to attract butterflies to your garden?

These durable and waterproof plant tags will inform you and your visitors about the link between habitat and our beautiful butterflies.

Order from the website below, or email info@butterflygardening.net.au.

Butterfly Gardening

www.butterflygardening.net.au

BUTTERFLY CONSERVATION SA. INC. Membership enquiries: info@butterflygardening.net.au
 Membership payments (\$20pa - less 50% discount for email membership): to Treasurer: C/- South Australian Museum, North Terrace, ADELAIDE. 5000. Cheques to be made out to: Butterfly Conservation SA Inc.
 Direct Debit details: BSB633000 Account No: 152785838 Bank: Bendigo Bank. Account Name: Butterfly Conservation SA Inc.
 Please email Treasurer if paying by direct debit: info@butterflygardening.net.au (Attention Treasurer)

PLANTS SUITABLE FOR A BUTTERFLY GARDEN

A full list can be found in 'Attracting Butterflies to your Garden' (BCSA book) 2007.

Note: Choose species suitable for site requirements such as: aspect, maximum growth, soil type, public safety (spines/poisonous/root damage/debris etc), watering and maintenance needs. Will it grow here satisfactorily? Choose plants which will need little to maintain (mulch heavily and keep the ground cool) You are NOT choosing plants YOU like, it's for butterflies and their habitat. Avoid herbicides at all times.

- 1) South Australian species for nectar:
 - Bursaria spinosa* "sweet bursaria"
 - Myoporum platycarpum* "false sandalwood"
 - Myoporum insulare, montanum, parvifolium* for ground cover, *platycarpum* the "boobiallas"
 - Senecio hypoleucus, glomeratus* and others "groundsels" which improve soils
 - Olearia grandiflora* "Mt Lofty daisy bush" & *O. ramulosa*
 - Santalum acuminatum* "quandong"
 - Leptospermum* spp. (*L. myrsinoides* and *continentale*)
 - Scaevola* spp. "fan flowers"
- 2) South Australian species caterpillar food plants:
 - native grasses such as *Austrostipa* spp. "spear grasses", *Austrodanthonia* spp. "wallaby grasses".
 - Oxalis perennans* "native sorrel" for ground cover
 - Cullen astralasicum* "scurf pea"
 - Eremophila* spp. "emu bushes"
 - Pultenaea* spp. "bush peas"
 - Acacia* spp. "wattles" (use low growing species)
 - Microlaena stipoides* "meadow rice grass" (ground cover)
 - Gahnia sieberiana, filum* and others "saw sedges" for skippers
- 3) Garden plant species for nectar:
 - Buddleia* spp. (all species can be used in urban area)
 - Verbenas and lantanas (low growing cultivars only)
 - An array of annuals with 'small tubular' flowers
- 4) Garden plant species as food plants:
 - Nasturtiums and crucifers
 - Asclepiads "milkweed and swan bush" (for both Lesser Wanderer & Monarch)
 - Citrus* spp. (food and nectar)

Note: Some butterflies are attracted to weedy species such as "plantain" (food for the Meadow Argus), "cape weed" (food and nectar for the painted lady), "stinging nettles" (food for the Australian Admiral). Remember wildlife is not attracted to a manicured, clean, hot, exposed and sterile place. Provide coolness, damp spots and dappled shade.

D. Keane (BCSA)



Photo: *Scaevola aemula* L.Paton

DON'T BE SOUR OR SOB OVER YOUR OXALIS - D. Keane

Food plant of the Chequered Copper butterfly -

Lucia limbaria

What is the difference between the introduced "Creeping Oxalis" (*Oxalis corniculata*) and the native equivalent "Native Oxalis" (*Oxalis perennans*)? One simple answer 'not much', they are very similar in many ways. In the interests of the butterflies' survival both plant species will provide the same food source and habitat requirements. Both species of oxalis are associated with symbiotic relationship with certain ants. The Australian Admiral butterfly is in a similar situation in that the introduced and native stinging nettles are the food plant and both have to be maintained if the butterflies are to visit our gardens. It is important to note that not all introduced plants should be treated as 'weeds' (only when they become a threat to the native species and habitats). Many introduced plants have an important ecological role to play in maintaining our biodiversity now that natural systems are changing and disappearing. The native oxalis should take precedence over the introduced one if propagated as a food source. Only 'declared/proclaimed plants' are prohibited to be propagated or sold. Note 1: Robert H. Fisher only mentions *O. corniculata* as the food-plant (Butterflies of South Australia 1978).

Field guide:

Oxalis perennans: (syn. *O. exilis*) this native species to South Australia usually occurs in untouched or native areas such as woodland and grasslands, especially the Adelaide Plains. The leaves (more reflexed) are much greener and flowers are erect and larger in contrast with the foliage and the flowers and fruits appear above the leaf mass.

**Oxalis corniculata* ssp. *corniculata*: this introduced species usually occurs in cosmopolitan areas, in gardens, nursery pots and disturbed areas. The leaves (more open and flat, but not always) are green often with a yellowy to a bronze colour, more loosely spreading and bending along stems, flowers and fruits usually stay below the leaf mass. This plant is variable depending on where its growing. Clue: If it is very 'weedy' it is likely to be *Oxalis corniculata*.

Botanical guide: No straight forward or conclusive difference can be determined as there is conflicting information in both the Flora of South Australia, and It's Blue With Five Petals (two notable references for SA if you want to become more oxalidaceous). Ref: Census of South Australian Vascular Plants 2005.

Native oxalis



Introduced oxalis



Photos: Left DKeane. Right 'Western Weeds', 2007, The Weeds Society of WA Inc



**AUSTRALIAN ARID LANDS
BOTANIC GARDEN**

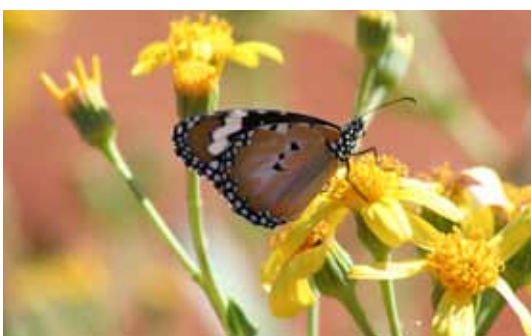


Located just out of Port Augusta, this unique South Australian icon is a fantastic place to see Australian native plants growing and their website provides hints and garden designs for different conditions including a coastal garden, mallee, arid courtyard, desert garden and others. Check it out. <http://www.aalbg.sa.gov.au/>

Member Bernie Haase sent these stunning butterfly images taken in the Arid Lands Botanic Gardens and nearby Mambray Creek.



AridSmart[®]
AUSSIE PLANTS FOR AUSSIE CONDITIONS



All Butterfly Photos: Bernie Haase. From top left: Common Grass Blue, *Zizina labradus*; Painted Lady *Vanessa kershawi*; Chequered Swallowtail, *Papilio demolius*; Caper White *Belenois java*; Common Brown *Heteronymph merope*; Australian Admiral *Vanessa itea*; Painted ladies *Vanessa kershawi* and Meadow Argus *Junonia villida* on blossom.; Wood White *Delias aganippe* and left Lesser Wanderer *Danaus petilia*.

Loranthus Day Moth
Eutrichopidia latinus

Previously known as *Phalaena latina* Donovan 1805
Family NOCTUIDAE.

This large black and white day flying moth can be found throughout the southern Mt Lofty Ranges and Fleurieu Peninsula in a variety of habitats ranging from the high rainfall stringybark forests around Mt Lofty, Heathfield, Belair Nat Park- Waverly Lodge, in the foothills, at Cherry Gardens, Onkaparinga Gorge-(Piggott Range, Razor Back Ridge), down to the beach itself in the sandhills at Aldinga Scrub, further south at Kyeema Con Pk, also as far as Spring Mount Con Pk on the Fleurieu Peninsula.

Like most day flying moths, they slowly fly a metre or so from the ground. Although they will feed from other flowers, their attention is mainly towards the food-plant and its flowers, and are most often seen fluttering around and resting upon it. In flight, they look like the more common Vine Moth.

Observations of dependence on fire:

Much of the native flora is fire adapted and the food-plant (*Hibbertia* spp.) is amongst the first to re-grow after one of these events. Females prefer to lay their eggs on it's fresh, lush regrowth. This is when their numbers are usually at their highest, although not common this species responds well to fire.

The more recent the fire, the more moths were found. Within the first few years, 1 to 3 years of the fire, the population will be high, within the next few years, 4 to 6 years after fire, the population will drop-off again until there will be very few individuals present, giving maybe a false sense of rarity. In areas where bushfires have not occurred for many years this moth is rarely seen.

At the Belair Nat Park's upper waterfall near Waverly lodge, a large number appeared the next spring after a fire with more than 30 individuals flying in the immediate area along with a larger number of *Phigalia* skippers swarming over the freshly sprouted *Lomandra* spp.

In another spot (Kyeema Con Park) where the park had been burnt in the 1970s, this area had since "recovered" to what it once was and has remained free from bushfires for some decades since. The small colony of *E. latinus* that were present within this park were to be found at the bottom third of a fire track that ran through the park. Along this Fire Track, the edges had been mown back some 4-5 meters on either side, and here the moths can be found, flying back and forth and alighting upon the *Hibbertia* spp. Because the scrub had been mowed back plants like - yacca, hakea and hibbertia, amongst others, put out lots of lush new growth, and this is what kept the numbers at this location visible.

After many years of searching I only found a single male on the other side of the park, where he remained in that immediate vicinity for the next 10 days. In 2012 the Department of the Environment conducted a burn along a fire track back to the road that bounds the park (Woodgate Hill Rd.) the resulting population explosion was quite noticeable, individual males and some in twos and threes seemed to set

up small territories throughout the park and were chasing off "passing" males and each other. Females seemed to stay within the burnt area.

At the Aldinga Scrub, they weren't seen until a small fire was lit on the side of the road, edging the park close to the beach, an area of only 3m by 12ms was burnt and half a dozen individuals were flying for some weeks.

The moth will frequently rest on the trunks of burnt trees, which seems to provide the perfect camouflage. They also have excellent hearing and eyesight which makes them extremely difficult to approach, and when disturbed or become threatened they make a speedy exit.

Once this species was more widespread across the Adelaide Plains and Ranges but due to land clearance along with the slow relentless push of suburbia, much of its breeding grounds are now only found within the confines of what's left of our Conservation Parks along with occasional patches of good roadside vegetation. The food plant formed a consistent part of the lower understory vegetation throughout the whole region in the past.

Conservation:

Although seemingly rare this species will continue to pop up in the future as long as its habitat remains relatively intact, it could be a good indicator species in the future.

Note:

Aldinga Scrub Con Park covers some 300 hundred hectares, now a small island surrounded by a new housing estate, farmland and its western side boarded by the sea. Probably half this area remains relatively undisturbed and helps to show that if given enough space (not sure if it's enough for future use) and protection (something seemingly lacking), some of our native invertebrates along with others higher up the chain can hold on. It also shows that this moth's range once extended from the coast to the hills and gullies across the ranges.

Adult Description:

Wingspan: male 45 mm
female 55+ mm.

Body: stout, hairy, head - black with white band.

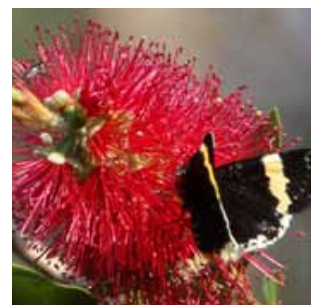
Thorax: black above, orange underneath, legs orange.

Abdomen: black ending with an orange tail tuft.

Male forewing: black with a broad white stripe on the forewing, wingtip white.

Male hindwing: black boarded by a white/cream band containing small black dots.

Female: larger and have a wider creamy yellow band on the forewing along with the border on the hind wing.



Photos: top adult Russell Best
below: Cathy Powers http://natureshare.org.au/observations/display=thumbnails&species=eutrichopidia_latinus

Similar Species:

Vine Moth (*Phalaenoides glycinæ* (Lewin)) but *E. latinus* lacks the extra markings (bars) on the forewing. The two often live in different environments.

Lewin's Day moth *Phalaenoides tristifica* (Hubner, 1818) but *E. latinus* is larger and lacks the extra markings of *P. tristifica*. Mistletoe Moth *Comocrus behri* differs by the extra barring on the fore-wing and that it flies high in the tree tops, where *E. latinus* flies lower to the ground.

Distribution:

Across the Mt Lofty Ranges and surrounding areas where suitable habitat still exists. Recently sighted 5th Oct 2013 on the outskirts of Pt Lincoln by J. Whittle, this species full range in South Australia is yet to be fully discovered and reported. Possibly present in the Flinders Ranges and Kangaroo Island.

It is also found in various environments further east in Vic, TAS, NSW, Southern Qld and around Cairns.

Foodplant:

DILLENLACEAE Hoary Guinea Flower *Hibbertia obtusifolia*
HALORAGACEAE Common Raspwort *Gonocarpus tetragynus* Labill.
Both species Native to Australia.

References:

Moths of Australia I.F.B. Common CSIRO Pub 1990
Project Noah: Google

Andrew Lines

DAY FLYING MOTH

This day flying moth turned up at Craigmore.

Peter McQuillan has identified it as *Cruria donowani* (Boisduval, 1832) an agaristid which is quite closely related to *Phalaenoides* spp. The larva feeds on tarvine *Boerhavia* which is common in drier areas. Peter went on to say that he had only seen it a few times around Adelaide however it is common in the Flinders Ranges.



Photos: Rosemarie Stacey

STILL FOR SALE 2 Genuine Akubra hats
Mens 'Stockman' size 56; Ladies 'Down Under' size 53
Contact: Editor Jan Forrest 82978230

PROMOTION OPPORTUNITIES

Can you spare a few hours to look after our promotion stand at the following:

SOPHIE'S PATCH

Where: 394 Springs Rd, Mt Barker Springs
When: Sat 4th - Tues 7th April (Easter)
Times: 10.00am - 4.30pm

SUNDAY MAIL HOME LIVING EXPO

Where: Jubilee Pavilion Wayville Showgrounds
When: Fri 24th - Sun 26th April (Anzac w/e)
Times: Friday 10am to 5pm
Saturday 12noon to 6pm
Sunday 10am to 5pm

AUSTRALIAN PLANTS SOCIETY SHOW AND STALL

Where: Wayville Showgrounds Rose Terrace entrance
When: Sat 25th - Sun 26th April (Anzac w/e)
Times: Sat. 10.00am - 5.00pm,
Sun 10.00am - 4.00PM

ADELAIDE REPTILE and FROG EXPO

Where: Wayville Showgrounds
When: Sat 16th - Sun 17th May
Times: 10.00am - 5.00pm

You do not need to be a butterfly expert, just be enthusiastic about habitat preservation, retention and revegetation and refer to our book - easy.

Please contact: Jan Forrest 82978230 if you can help.

MEMBERSHIP FEES and RENEWAL OF MEMBERSHIP

Annual membership fee is now \$20 pa with a 50% reduction (to \$10pa) if you receive your newsletter via email.

In the past the April/May Newsletter contain your membership renewal notices.

This year you will receive your notices in October/November as we have moved to a calendar year (approved at the last AGM).

22nd ANNUAL GENERAL MEETING OF FRIENDS OF PARKS INC,

will be held at the Hughes Resource Centre, Para Wirra Recreation Park on Monday 25th May, 2015. at 9.30am for 10.00am start.

Please contact Secretary Jan Forrest if you can attend to represent BCSA

Dolphin Day 2015 – Sat April 11th – 12pm – 5pm

Lighthouse Square, Port Adelaide

Discover the Adelaide Dolphin Sanctuary – right here in Port Adelaide. Dolphin Day is a fun family friendly event where you can learn about, participate and enjoy the Adelaide Dolphin Sanctuary while spending a fantastic day out with the family by (or on) the water!

A NEW EXTANT FAMILY OF PRIMITIVE MOTHS FROM KANGAROO ISLAND, AUSTRALIA, AND ITS SIGNIFICANCE FOR UNDERSTANDING EARLY LEPIDOPTERA EVOLUTION

Niel P. Kristensen 1*, Douglas J. Hilton 2, Axel Kallies 2, Liz Millar 2, Jadran Karota 3, Niklas Wahlberg 3, Stephena Wilcox 4, Richard Glatz 5,6,7, David A. Young 5, Glenn Cocking 8, Ted Edwards 8, George W. Gibbs 9 and Mike Halsey 10

1 Natural History Museum of Denmark (Zoology), University of Copenhagen, Copenhagen Ø, Denmark, 2 Department of Zoology, University of Melbourne, Parkville, Australia, 3 Laboratory of Genetics/Zoological Museum, Department of Biology, University of Turku, Turku, Finland, 4 The Australian Genome Research Facility, Parkville, Australia, 5 D’Estrees Entomology & Science Services, Kingscote, Australia, 6 School of Agriculture, Food and Wine, The University of Adelaide, Urrbrae, Australia, 7 South Australian Museum, Terrestrial Invertebrates, Adelaide, Australia, 8 Australian National Insect Collection, CSIRO, Canberra, Australia, 9 School of Biological Sciences, Victoria University, Wellington, New Zealand and 10 Murray-Darling Freshwater Research Centre, La Trobe University, Wodonga, Australia

Abstract. We report the first discovery since the 1970s of a new extant family (*Aenigmatineidae* fam.n.) of homoneurous moths, based on the small *Aenigmatinea glatzella* sp.n. from Kangaroo Island off southern Australia. It exhibits a combination of extraordinary anatomical characters, and, unlike most homoneurous moths, its larva is a conifer-feeder (stem mining in *Callitris*, Cupressaceae). While the adult’s mouthparts are strongly regressed, evidence from other morphological characters and from a Bayesian analysis of 25 genetic loci convincingly places the taxon among Glossata (‘tongue moths’). An unexpected tongue moth clade including Acanthopteroctetidae and Neopseustidae, suggested with low support in recent molecular analyses, remarkably becomes strongly supported when *Aenigmatinea* is included in the molecular analysis; the new taxon becomes subordinated in that clade (as sister group to Neopseustidae) and the clade itself appears as the sister group of all Heteroneura, representing the vast majority of all Lepidoptera. Including *Aenigmatinea* into the analysis thereby strengthens the surprising indication of non-monophyly of Myoglossata, and the new phylogeny requires an additional number of ad hoc assumptions of convergence/character reversals in early Lepidoptera evolution.

This published work has been registered in ZooBank, <http://zoobank.org/urn:lsid:zoobank.org:pub:44393B52-1889-431A-AB08-6BB-CF8F946B8>.



Etymology. Adjective, gender feminine, honouring the moth’s discoverer R. V. Glatz; the name also alludes to the unusual dearth of head scales, Glatz being German for a bald head.

Ed note: Richard Glatz lives on Kangaroo Island and is an Honorary Associate at the South Australian Museum.

Fig. 1. *Aenigmatinea glatzella*. (a) Male holotype; (b) female in typical upside-down posture on young foliage of host (*Callitris gracilis*); (c) larva partly removed from terminal cell inside *Callitris* stem.

Paper published in : Systematic Entomology (2015), 40, 5–16

BUSHFIRE

Member and former chairman of BCSA David Keane and family had a narrow escape from the frightening bushfires which threatened their home in January 2015. After watering down the house and office David left as the fire got to the front gate! Fortunately the house and office were spared. However fences and all sheds were lost including David’s beloved vintage car.

He has noted that people who visited after the fire, said “where are all the butterflies coming from? By the way you’ve got one on your shoulder” he said, it had risen from the ashes! Most buddleias and milk weeds survived in the garden and the breeding cages, as well as the butterfly site sign.

Just last week David sent this image of a stunning female Hepialid moth *Aenetus blackburnii*. It landed on the screen door and will now feature in our new moth book in preparation. This demonstrates the remarkable resilience of our native vegetation and wildlife.



Photos: David Keane. Hepialid moth *Aenetus blackburnii*, and aftermath of the fire at Inglewood, Adelaide hills Jan. 2015.

LONG-LOST BUTTERFLY RE-DISCOVERED ON KANGAROO ISLAND

Last year Colin Wilson was walking in a remote part of Flinders Chase National Park when a pair of mating butterflies landed near his feet. A flash of iridescent blue caught his eye so he snapped a photo and emailed it to Richard Glatz, a local insect specialist, to see if he could find out what it was.

Richard responded with some excitement that the photo might herald the re-discovery of the long-lost Eastern Large Bronze Azure butterfly, not seen on Kangaroo Island since 1934, but without an actual specimen he couldn't be sure.

This species is thought to have quite a bizarre life cycle. Females lay their eggs directly into the entrance of nests of a particular species of ant. The ants tend the caterpillars which repay the kindness of their hosts by eating their young. Not your ideal house guests, but the ants don't seem to notice.

Exactly one year after the lucky photo was taken, members of Friends of Parks KI Western Districts volunteered to act as butterfly spotters to help Richard and fellow insect enthusiast Andy Young see if they could nab some specimens to solve the mystery.

We got to our base camp on Friday evening to discover that Richard and Andy, who had arrived earlier in the day to reconnoitre the area, had already captured two male butterflies and decided that they were indeed the missing species. The lost had been found!

On Saturday morning we headed out with mounting excitement, armed with butterfly nets and sharp eyes, to see if we could add some female butterflies to the collection. As we were to find out, they fly swiftly and erratically and it is incredibly hard to follow them in flight. Even with a dozen pairs of eyes trying to track their movements, they would simply disappear in one spot magically reappearing many metres away.

It was a bit like a fishing trip: you should have seen the ones that got away! But eventually Graeme spotted another one, everybody fanned out to cover any escape and Andy moved in. This time it was success and a female to boot.

Richard will now get a DNA profile of the butterfly to answer the most interesting question: is it a sub-species of similar butterflies found on the mainland, or is it a completely separate species found only on KI?

Let's hope it's the latter. *Ogyris colinwilsoni* has a nice ring to it.

For more information about the butterfly please contact Dr Richard Glatz, D'Estrees Entomology & Science Services, Email: richard@dess.net.au Mobile: 0419843254.

Colin Wilson
Friends of Parks KI Western Districts
(with thanks for permission to reprint this article) Ed.

NEWS

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Rare butterfly rediscovered on Kangaroo Island after 80 year disappearance

891 ABC Adelaide | Tori Moore and Eloise Fuss
Posted about 3 hours ago



PHOTO: The eastern large bronze azure butterfly has metallic purple toned wings. (Supplied: Colin Wilson)

Volunteers believe they have identified a butterfly species on Kangaroo Island that has not been spotted locally since 1934.

The eastern large bronze azure butterfly had not been seen on the island for 80 years, but the Friends of Parks KI Western districts group and a number of scientists say they have recently spotted the species. Entomologist Dr Richard Glatz said it was an important find.

"It was one of the first butterflies that were noted by naturalists that came to South Australia when European settlement started" he said. "Basically it's a species that we haven't seen on Kangaroo Island for 80 years and in mainland South Australia since 1951".

The eastern large bronze azure butterfly was believed to have been spotted last year, but no samples were taken, prompting this year's collection expedition.

"They fly quite quickly and they're quite dark butterflies, so they're hard to see. They're quite a difficult thing to catch" Dr. Glatz said. "We only captured six individual over a few days of searching, so they weren't there in large numbers when we were there".

Tests are currently being carried out on the butterfly to confirm the recent finding. Researchers are comparing DNA sequences to samples from this butterfly and closely related species.

Dr. Glatz said the cause of the butterflies previous disappearance remains unknown.

"Most butterflies eat plants, but this one has become very highly specialised and the larvae live only in the nest of one species of ant". "So, on the surface of it, it's hard to see why it would disappear, even from fire, because that's quite a protected way to live".

Dr. Glatz said the rediscovery offered promise for the future of the species on Kangaroo Island. "It's always a bit worrying if a species like this disappears when you still have the habitat left". It's good that it is still here, because there are still large tracts of undisturbed native vegetation on Kangaroo Island".

SCARLET MILKWEED - FRIEND OR FOE (in the usa)?

Tropical or scarlet milkweed (*Asclepias curassavica*) is native to South America, but it has become naturalized in parts of several southern states, including Florida, Georgia, South Carolina, Tennessee, Louisiana, and Texas. Many questions and opinions exist regarding its use in gardens.



Tropical milkweed (*Asclepias curassavica*) at first glance seems to be a desirable garden plant given that it is a host plant for the monarch butterfly. Since we know the monarch population is in serious jeopardy, we might assume that tropical milkweed would help to slow the decline. However, several arguments have been raised both for and against the use of tropical milkweed.

Much has been written about the effects of *Oe* (*Ophryocystis elektroscirrha*), an obligate, protozoan parasite that infects monarch and queen butterflies with injurious effects. Well understood is the impact of *Oe* on non-migratory butterflies. Also substantiated by researchers is the notion that *Oe* is much more prevalent in areas where year round populations of monarchs reside due to the availability of tropical milkweed (*Asclepias curassavica*).

In regions where tropical milkweed has become naturalized, monarchs may establish year-round populations and fail to complete their migration. The incidence of *Oe* is much higher in these year-round populations of monarchs that do not migrate because the *Oe* is deposited on the leaves of tropical milkweed and passed on from generation to generation of butterflies.

In South Texas the situation is amplified because some researchers report that many monarchs stop before the migration is complete because of the availability of tropical milkweed. Scientists fear that *Oe* will proliferate among these overwintering butterflies and infect those that pass through on the journey to Mexico. Dr. Jeffrey Glassberg, president of the North American Butterfly Association, has seen little evidence that migrating monarchs stop in Texas. However he substantiates that the tropical milkweed that grows there year round supports a large population of Queens. Dr. Glassberg reports, "... when Monarchs migrate through the area in late October they continue to migrate southward and, so far as I can tell, few individuals pay any attention to the abundant *A. curassavica*." Dr. Glassberg would like to see data that supports the hypothesis that monarchs stop migrating when they encounter tropical milkweed.

Butterfly expert Dr. Lincoln Brower worries that resident *Oe*-infested monarchs will breed with migrating populations and seriously jeopardize the migration. He recommends limiting tropical milkweed to inside demonstration projects and keeping it inaccessible to wild monarchs. Dr. Jaret Daniels of the University of Florida says that planting tropical milkweed is better than no milkweed at all. No milkweed, no monarchs. Monarch Watch founder Dr. Chip Taylor neutralizes the argument by hypothesizing that which milkweed is planted is of little importance. More important is the fact that more habitat per day is

being lost than can be replaced by gardeners everywhere planting tropical milkweed.

North America supports three main populations of monarchs. The California group migrates only as far as the California Coast each winter. The largest group breeds east of the Rocky Mountains and migrates to central Mexico. The third group is non-migratory and stays and breeds year round in southern Florida, Coastal Texas, Hawaii, and other tropical and subtropical areas. In these regions, monarchs have no need to migrate. Temperatures are warmer, so butterflies remain reproductive. Besides, plentiful tropical milkweed keeps them well nourished.

Researchers at the University of Georgia have found that *Oe* (*Ophryocystis elektroscirrha*) is much more widespread in the non-migratory monarchs. According to their findings, in the eastern migratory group less than 8% of the monarchs are infected. About 30% of the California monarchs are heavily infected, and a whopping 70% of the non-migratory monarchs of South Florida are infected.

Such statistics leave little doubt that the non-migratory populations are not as healthy as the migrating populations. Some monarchs heavily infected with *Oe* die before emerging from the chrysalis. Those that manage to emerge are often too weak to hang onto their larval cases, so they fall to the ground before their wings are expanded. These severely deformed butterflies live for a very short time.

In tropical regions, gardeners are encouraged to cut their scarlet milkweed twice each year; once in the fall and again in the spring. The rationalization here is that if monarchs find no milkweed, they will not stop but will continue their migration. This would be helpful if gardens were the only places where tropical milkweed is found. The fallacy of this thinking is that since it has naturalized, it can be found everywhere. Most likely legions of people are not scouting the area and removing or cutting down tropical milkweed that has escaped.

Consequently the monarch will always find a plentiful supply in waste places and fields where tropical milkweed has become well established.

Still, after all this, I have not answered the question about whether or not scarlet milkweed is good for monarch butterflies. It seems that the jury is still out, and there is no conclusive evidence to answer this question. We will all have to make up our own minds and decide for ourselves whether or not to plant tropical milkweed. It remains an important part of my own garden mainly because it is the only milkweed commonly available.

Thanks to floridan for the photo of tropical milkweed and to htop for the image of the caterpillar on milkweed.

By Marie Harrison (can2grow) April 28, 2014



Butterfly Plant Tag Order Form

These durable and waterproof plant tags will inform you and your visitors about the link between habitat and our beautiful butterflies.

Please select your cards and fillout out the form on both sides and email to: info@butterflygardening.net.au

Skippers (Hesperiidae)		Swallowtails (Papilionidae)	Whites and Yellows (Pieridae)	Brushfoots (Nymphalidae)		Blues and Coppers (Lycaenidae)		
								
BPT.Hesperiidae01	BPT.Hesperiidae02	BPT.Papilionidae01	BPT.Pieridae01	BPT.Nymphalidae01	BPT.Nymphalidae02	BPT.Lycaenidae01	BPT.Lycaenidae02	BPT.Lycaenidae03
								
BPT.Hesperiidae03	BPT.Hesperiidae04	BPT.Papilionidae02		BPT.Nymphalidae03	BPT.Nymphalidae04	BPT.Lycaenidae04	BPT.Lycaenidae05	BPT.Lycaenidae06
								
BPT.Hesperiidae05	BPT.Hesperiidae06			BPT.Nymphalidae05	BPT.Nymphalidae06	BPT.Lycaenidae07	BPT.Lycaenidae08	BPT.Lycaenidae09
								
						BPT.Lycaenidae10		BPT.NFSCARD01

FREE POSTAGE to SA addresses. \$5 elsewhere.

\$ 2 per tag (includes plastic stake)

Your details

Contact person name: Contact phone number:

School/organisation (if applicable):

Email:

Postal address for delivery: POSTCODE

No. of TAGS ORDERED @ \$2 per TAG. SUB TOTAL \$

Postage outside South Australia add \$5.00.

TOTAL \$ Payment method made (please tick): EFT CHEQUE

Butterfly Conservation SA is a not-for-profit organisation and as such we are not registered for GST. We have already paid GST as an end user.

Payment

Payment can be made by EFT or by Cheque made out to: Butterfly Conservation SA Inc.

Post to:
Butterfly Conservation SA Inc.
 C/- South Australian Museum,
 North Terrace, ADELAIDE, 5000
 SOUTH AUSTRALIA

EFT Payment:
 BSB: 633000
 Account No: 152785838
 Account Name:
 Butterfly Conservation SA Inc.
 Bank: Bendigo Bank



BUTTERFLY GROUP	COMMON NAME	SCIENTIFIC NAME	HOST PLANTS	HOST PLANT COMMON NAME	PLANT TAG CODE	NUMBER REQUIRED:
Skippers (Hesperiidae)	Mottled Grass-skipper	<i>Anisynta cynone cynone</i>	<i>Austrostipa</i> spp. <i>Poa poiformis</i> var. <i>poiformis</i>	Spear Grass Tussock Grass	BPT.Hesperiidae01	#
	Golden-haired Sedge-skipper	<i>Hesperilla chrysotricha cyclospila</i>	<i>Gahnia filum</i>	Thatching Grass	BPT.Hesperiidae02	#
			<i>Gahnia sieberiana</i>	Red-fruit Cutting-grass		
			<i>Gahnia trifida</i>	Cutting Grass		
	Donnysa Sedge-skipper	<i>Hesperilla donnysa</i>	<i>Gahnia</i> spp.	Cutting Grass	BPT.Hesperiidae03	#
	Southern Grass-dart	<i>Ocybadistes walkeri</i>	<i>Themeda triandra</i>	Kangaroo Grass	BPT.Hesperiidae04	#
			<i>Cyperus vaginatus</i>	Flat-sedge		
			<i>Austrostipa</i> spp.	Spear Grass		
			<i>Enteropogon</i> spp.	Umbrella Grass		
	White-banded Grass-dart	<i>Taractrocera papyria papyria</i>	<i>Rytidosperma</i> spp. (<i>Austrodanthonia</i> spp.)	Wallaby Grass	BPT.Hesperiidae05	#
			<i>Austrostipa</i> spp.	Spear Grass		
			<i>Microlaena stipoides</i> var. <i>stipoides</i>	Meadow Rice Grass		
<i>Poa</i> spp.			Tussock Grass			
<i>Imperata cylindrica</i>			Blady Grass			
Phigalia Skipper	<i>Trapezites phigalia</i>	<i>Lomandra densiflora</i>	Soft Tussock Mat-rush	BPT.Hesperiidae06	#	
		<i>Lomandra fibrata</i>	Mount Lofty Mat-rush			
		<i>Lomandra multiflora</i> spp. <i>dura</i>	Hard Mat-rush			
		<i>Lomandra nana</i>	Small Mat-rush			
Swallowtails (Papilionidae)	Dainty Swallowtail	<i>Papilio anactus</i>	<i>Citrus glauca</i>	Desert Lime	BPT.Papilionidae01	#
	Chequered Swallowtail	<i>Papilio demoleus sthenelus</i>	<i>Cullen australasicum</i>	Tall Scurf-pea	BPT.Papilionidae02	#
Whites and Yellows (Pieridae)	Small Grass-yellow	<i>Eurema smilax</i>	<i>Senna artemisioides</i> spp. <i>coriacea</i>	Cassia	BPT.Pieridae01	#
Brushfoots (Nymphalidae)	Ringed Xenica	<i>Geitoneura acantha ocrea</i>	<i>Poa</i> spp.	Tussock Grass	BPT.Nymphalidae01	#
			<i>Microlaena stipoides</i> var. <i>stipoides</i>	Meadow Rice Grass		
			<i>Themeda triandra</i>	Kangaroo Grass		
	Marbled Xenica	<i>Geitoneura klugii</i>	<i>Rytidosperma</i> spp. (<i>Austrodanthonia</i> spp.)	Wallaby Grass	BPT.Nymphalidae02	#
			<i>Austrostipa</i> spp.	Spear Grass		
			<i>Poa</i> spp.	Tussock Grass		
			<i>Themeda triandra</i>	Kangaroo Grass		
	Common Brown	<i>Heteronympha merope merope</i>	<i>Microlaena stipoides</i> var. <i>stipoides</i>	Meadow Rice Grass	BPT.Nymphalidae03	#
			<i>Austrostipa</i> spp.	Spear Grass		
			<i>Poa</i> spp.	Tussock Grass		
	Meadow Argus	<i>Junonia villida calybe</i>	<i>Themeda triandra</i>	Kangaroo Grass	BPT.Nymphalidae04	#
			<i>Scaevola</i> spp.	Fan Flower		
			<i>Goodenia</i> spp.	Goodenia		
			<i>Portulaca oleracea</i>	Common Purslane		
	Tailed Emperor	<i>Polyura sempronius</i>	<i>Acacia</i> spp.	Wattles	BPT.Nymphalidae05	#
<i>Brachychiton</i> spp.			Flame trees			
Australian Painted Lady	<i>Vanessa kershawi</i>	<i>Asteridea athrixoides</i>	Wirewort	BPT.Nymphalidae06	#	
		<i>Chrysocephalum</i> spp.	Everlasting spp.			
		<i>Helichrysum scorpioides</i>	Button Everlasting			
		<i>Rhodanthe chlorocephalum</i>	Everlasting Daisy			
		<i>Calocephalus citreus</i>	Lemon Beauty-heads			
Blues and Coppers (Lycaenidae)	Rayed Blue	<i>Candalides heathi heathi</i>	<i>Eremophila longifolia</i>	Weeping Emubush	BPT.Lycaenidae01	#
			<i>Stemodia florulenta</i>	Blue Rod		
	Icilius Blue	<i>Jalmenus icilius</i>	<i>Acacia</i> spp.	Wattles	BPT.Lycaenidae02	#
			<i>Senna artemisioides</i> spp.	Desert Senna		
	Long-tailed Pea-blue	<i>Lampides boeticus</i>	<i>Templetonia retusa</i>	Cockies Tongue	BPT.Lycaenidae03	#
			<i>Cullen australasicum</i>	Tall Scurf-pea		
			<i>Kennedia prostrata</i>	Running Postman		
			<i>Lotus australis</i>	Austral Trefoil		
	Chequered Copper	<i>Lucia limbaria</i>	<i>Oxalis perennans</i>	Native Sorrel	BPT.Lycaenidae04	#
	Two-spotted Line-blue	<i>Nacaduba biocellata biocellata</i>	<i>Acacia</i> spp.	Wattles	BPT.Lycaenidae05	#
	Fringed Heath-blue	<i>Neolucia agricola agricola</i>	<i>Dillwynia sericea</i>	Showy Parrot-pea	BPT.Lycaenidae06	#
			<i>Eutaxia microphylla</i>	Mallee bush pea		
			<i>Pultenaea</i> spp.	Bush-peas		
	Bitter-bush Blue	<i>Theclinesstes albocincta</i>	<i>Adriana quadripartita</i> spp. <i>klotzschii</i>	Coast Bitter-bush	BPT.Lycaenidae07	#
	Wattle Blue	<i>Theclinesstes miskini miskini</i>	<i>Acacia pycnantha</i>	Golden Wattle	BPT.Lycaenidae08	#
	Saltbush Blue	<i>Theclinesstes serpentata serpentata</i>	<i>Atriplex</i> spp.	Saltbush	BPT.Lycaenidae09	#
			<i>Einadia nutans</i> ssp. <i>Rhagodia</i> spp.	Climbing Saltbush Native Saltbush		
Common Grass-blue	<i>Zizina labradus labradus</i>	<i>Cullen australasicum</i>	Tall Scurf-pea	BPT.Lycaenidae10	#	
		<i>Hardenbergia violacea</i>	Native Lilac			
		<i>Kennedia prostrata</i>	Running Postman			
		<i>Lotus australis</i>	Austral Trefoil			
Butterfly nectar food source card					BPT.NFSCARD01	#
					TOTAL TAGS	#

OFFICE ONLY	Date payment received:	Payment method:
	Receipt No.:	Date posted:

Butterfly Conservation South Australia Inc.

presents

a PUBLIC TALKS PROGRAM

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).

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.

Photo Robert H Fisher: Common Brown *Heteronympha merope*

BUTTERFLY CONSERVATION SA INC.
c/- South Australian Museum, North Terrace, ADELAIDE
Further Information Secretary: Jan Forrest 8297 8230
Membership is \$10pa (email) \$20pa (postal).

Websites: Butterfly Gardening -
www.butterflygardening.net.au

Resources for sale:
Our book "Attracting butterflies to your garden, what to grow
and conserve in the Adelaide region" is available from the
secretary. RRP \$29.95 (at the talks program - \$25ea).

The Book 'Making of a Monarch' is available for \$20.

Posters (sets of two) "Moths of the Adelaide Region" and
"Spiders and their allies of the Adelaide Region" \$10 each
set. Other posters: Bats of SE South Australia and The
Bilby, threatened species.

A 'Butterfly Gardening' DVD will also be available as well as
plant tags and site signs.



PHOTOS STILL REQUIRED

Images of moth caterpillars and adults are still required for the
new moth book. We are still missing images of a number of the
more common species. Please make your photos available,
even if you do not have an identification.

If you can assist please contact Secretary Jan Forrest.

PUBLIC TALKS PROGRAM 2015

3rd March: "Seeds" Dan Duval will provide an overview of the
S.A. Seed Conservation Centre, then highlight some related
projects, including the Schools Threatened Plant Custodian
Project, the study and propagation of threatened species and
regional reintroduction.

**7th April: "South Australia"- Climate-What's Happening and
Why"** Darren Ray, Senior Climatologist with the Bureau of
Meteorology in S.A. looks at trends, changes and variability in
climate from global to local levels and how climate impacts on
ecological systems in SA and elsewhere.

**5th May: "Restoring Wetlands in S.E. of S.A. and Western
Victoria"** Hear Mark Bachmann, Manager of Nature Glenelg
Trust, his personal journey and motivation, the range of methods
of restoration and examples of spectacular results including
habitats for a range of important species, including butterflies.

**2nd June: "Woodland recovery initiative: Restoring habitat
for Woodland birds"** Associate Professor David Paton AM
from the University of Adelaide is the leader of the Woodland
Recovery Initiative project and team. Hear about this important
project and work being undertaken to secure biodiversity in the
Mt Lofty region.

7th July: "Mawson of the Antarctic" Professor Douglas
Mawson led and organised 2 of his 3 expeditions to the Antarc-
tic. But his widespread fame tended to overshadow his other
previous interests in Australia. Mark Pharaoh from S.A. Museum
will balance these exploits with an overview of his geological
interest and related natural history pursuits.

4th Aug: "Flora of Golden Grove 50 million years ago" Fossil
leaves found in a sand mine at Golden Grove tell the story of
an ancient river bed which once ran from Port Augusta to Victor
Harbor. This talk by David Keane will commence at **7.00pm**
following a short BCSA AGM at **6.30pm**.

**1st Sept: "Frogs of the Adelaide Plains and Mt. Lofty
Ranges"** Frogs are commonly recognised as indicators of envi-
ronmental health. Co-author of "Frogs of South Australia", Steve
Walker will teach you how to recognise our local native frogs,
both visually and audibly and learn about some of their interest-
ing characteristics. Bring along paper and pen/pencil, a fun test
will be undertaken!..

6th Oct: "Torrens Island - history and conservation" The
old Quarantine Station on Torrens Island has an interesting
history and the adjacent Conservation Park is home to popula-
tions of the Bitter-bush Blue butterfly. Friends of Torrens Island
Chairman Andrew Winkler will trace the history of the Island and
future plans.

3rd Nov: "Rain Moths" Mike Moore has had a lifelong inter-
est in butterflies and moths. His talk will provide a fascinating
insight into one of the largest moths, the Hepialids, commonly
called rain moths.

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

WEBSITE

The committee has decided to combine the content of the original
BCSA website with the butterfly gardening website and also to
include information for members.

If you have any suggestions for any new additions to our website
www.butterflygardening.net.au or ideas on how it can be improved,
please email Secretary Jan Forrest janforrest@hotmail.com. 10

WHAT'S FOR SALE?

BOOKS "Attracting butterflies to your garden, what to grow and conserve in the Adelaide Region" Published by BCSA 2007 - Our price \$25 (members may purchase one book for \$20). Postage \$7.

"the Making of a Monarch" Published Linda Shmith 2013 - BCSA members price \$20 plus postage \$7.

DVD "Butterfly Garden" produced by Tracy Baron and Carolyn Herbert - BCSA members price \$15, postage and packaging \$7 One book plus one DVD postage \$12.

POSTERS "Spiders and their allies of the Adelaide Region" Published by BCSA 2014 and "Common Moths of the Adelaide Region" Published by BCSA 2012 - sets of two \$10 for each set, plus postage \$12. (available FREE to schools - all they need pay is postage costs, contact Secretary for an order form). Single posters: Bats of SE South Australia and The Bilby - Endangered Species are available for \$5 each, plus postage above.

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

POLO-SHIRTS with Butterfly Conservation logo. Prices between \$35 and \$40. Includes postage. A wide range of colours are available.

If you would like to order any of our merchandise or would like an order form for a site sign, polo-shirt or schools poster set, please email: info@butterflygardening.net.au or write to the Secretary C/- SAMuseum, North Terrace, ADELAIDE. 5000.



KONICA MINOLTA

Thanks to Chris Lane and Konica Minolta for their generosity in printing the BCSA newsletter

BANKING DETAILS

BCSA has changed its bank to enable electronic signatories. Below are the new details for any future payments for books, posters, membership etc.

Cheque or Money Order : Please make cheques payable to: Butterfly Conservation SA Inc. Mail your details with payment to: Treasurer, Butterfly Conservation SA Inc., C/- 12 George St, Hawthorn SA 5062.

Direct Debit : Bank: Bendigo Bank, BSB: 633-000, Account No: 152785838, Account Name: Butterfly Conservation SA Inc. If using this method please put your name in the description and email the treasurer, John Wilson, at j.and.m.wilson@internode.on.net to advise payment.

BUTTERFLY CONSERVATION SA Inc.

C/- South Australian Museum, North Terrace, ADELAIDE, 5000
 Email: info@butterflygardening.net.au
 Chairman: Mike Moore, 5 Oakleigh Road, MARION. 5043 S.AUST.
 Secretary and Newsletter editor: Jan Forrest OAM, ph H (08) 8297 8230.
 email <janforrest@hotmail.com>
 Treasurer and membership officer: John Wilson
 Committee: Andrew Lines; Gerry Butler (Publications Project Manager), Jill Davy, David Keane, Gil Hollamby, Lorraine Woodcock (Public Talks Program), Bernadette Johson, Linda Shmith and Bryan Harwood (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 Secretary, Jan Forrest.

PUBLIC TALKS PROGRAM 2015: first Tuesday March - November, Clarence Park Community Centre 6.15pm for a 6.30pm start to 8.30pm.
Next talk: 7th April: Speaker - Darren Ray, Senior Climatologist with the Bureau of Meteorology in S.A. "South Australia" - Climate - What's Happening and Why"

WEB SITES

Butterfly Gardening - www.butterflygardening.net.au
South Australian Butterflies (R Grund private site) - <http://www.sabutterflies.org.au>
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.

WELCOME TO NEW MEMBERS:

Melissa Pettigrew
 Michelle Wood
 Heath Hunter
 Mark Hura
 Erica Boyington
 Andreas Alexandrou
 Michelle Lensink
 Tina and Wayne Gallasch
 Ornella Piva
 Adrian Uren
 Lyn Wood
 Lucy Cahill

