



BUTTERFLY CONSERVATION SA Inc.

NEWSLETTER

No. 1 June 1999

Welcome from the Chairman Beth Rostron

Dear Members,

Welcome to Butterfly Conservation SA Inc., and to our first Newsletter. This is an exciting time, with many things on the go and 40 members signed up showing their interest and support. We are setting the foundations for larger things in the future.

The group grew out of the enthusiasm for butterflies in the English countryside where David Keane grew up. He is a member of the UK Butterfly Conservation movement, and held the desire for many years to start a similar organisation here. At a social gathering David raised the idea with Terry Reardon of the SA Museum. Thanks to Terry's persuasive charms a meeting of potential members was held, and the group was formed. A core group of 7 people has continued, and become the committee and office bearers of the group.

After setting the organisational framework in place (establishing our objectives, constitution, becoming incorporated, determining our logo etc.) our first major project is the Exhibition in conjunction with the South Australian Museum, "Where Have All the Butterflies gone?"

We need more members! Once we achieve the 50 member milestone we become eligible for registration on the National Register of Environmental Organisations. This means we can set up a trust fund for receiving tax free donations!

We also become eligible for grants to assist in running the organisation, to further our environmental work. So please spread the word, enlist family, friends and other interested folks. If you want supplies of the Membership Brochure, please give us a call!

We have had numerous requests for speakers at meetings, and also for articles in journals and newsletters. This helps with general awareness of butterflies, their lifestyle and needs, as well as promoting Butterfly Conservation SA Inc. Next in our plans are general meetings of the group itself with an information sharing and education focus. There are brilliant slides and photos amongst our members, and a wealth of knowledge.

The other major focus is, of course, the direct conservation activities. We are networking with conservation projects in butterfly related habitats, to make sure that other groups are aware of the habitat and food plant needs of our butterflies. We want to see re-vegetation projects include appropriate food plants, and general biodiversity surveys and brochures including pictures and information on butterflies. We are also applying for grants for specific projects, and are nominating some of our butterflies for listing under the Threatened Species Protection Act.

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Thank you for your support. As with any human endeavour it is the contribution of the individuals which makes the achievements of an organisation possible, and we are set to achieve a great deal.

We look forward to seeing you at upcoming meetings and events, and please call us with information, ideas and queries.

Regards,

Beth Rostron

THE ORDER OF THINGS

CLASS

INSECTA
(Insects)

ORDER

LEPIDOPTERA
(Butterflies & Moths)

FAMILIES (of Butterflies)

HESPERIIDAE
SkippersPAPILIONIDAE
SwallowtailsPIERIDAE
Whites & YellowsNYMPHALIDAE
Browns, Nymphs & DanaidsLYCAENIDAE
Blues & Coppers

MEET THE LEPIDOPTERA Part 1.

Butterflies in South Australia

This article highlights the butterflies present in South Australia and their food sources. Further reference can be made to the book 'Butterflies of South Australia' (1978), by Robert H. Fisher, and more information can be found on the website for "South Australian Butterflies" at <http://www.adelaide.net.au/~reid>.

The insect order Lepidoptera refers to butterflies and moths. In general, butterflies differ from moths in having their wings folded up while at rest, not flat like moths. Butterfly antenna are clubbed at the ends, where moths are feathered or unclubbed, and butterflies fly during the daytime.

In Australia there are about 400 butterfly species and most are located in the tropics. The world number is somewhat uncertain, with estimates ranging from 15,000 to 20,000 species. There have been about fifty new species added to the list in the last two years, although probably the same number have been lost to clearing and change in land use. In SA there are now 74 species recorded, however only one is endemic. Robert Fisher's book describes 64 of the species.

There are 19 **skippers** (family HesperIIDae) in SA. These are small butterflies which have a mix of brown, orange or yellow markings. They have their antennae 'hooked' at the ends and fold their wings like the stored planes on an aircraft carrier, partly folded. The skippers do not 'flutter' their wings when in flight, rather they tend to have a flitty or jerky motion. The foods required by the larval stages (caterpillars) of SA species are obtained from the monocotyledon group of plants such as mat-rushes (*Lomandra* spp, Liliaceae), saw-sedges (*Gahnia* spp, Cyperaceae), and various grasses (Gramineae). Their presence can be used for environmental indicator purposes, especially for the condition of native grasslands and wetlands. If they no longer occur in these environments then it is a sure sign of historic or presently occurring degradation.

There are just 3 **swallowtails** (family Papilionidae) in SA. There is the Dingy Swallowtail (*Papilio anactus*) the larvae of which feed on plants of the citrus family, Rutaceae. This beautiful butterfly can be seen visiting suburban lemon and orange trees, and also throughout the citrus

growing areas of the state. The very large Orchard Swallowtail (*Papilio aegeus aegeus*) breeds in NSW and Qld and is a rare visitor to SA. Its larvae also feed on the citrus family and with luck, the adults might be seen in the vicinity of citrus trees. The magnificent Chequered Swallowtail (*Papilio demoleus sthenelus*) is a fast flying butterfly which is more common in the northern half of SA. The food plants are the scurf-peas (*Psoralea* spp. now called *Cullen* spp.).

Of the **whites and yellows** (family Pieridae), there are 8 in SA. The whites have dark black patches and spots on the upper sides of the wings, sometimes with distinct underside markings which can be brightly coloured. An example is the Wood White (*Delias aganippe*) which feeds on mistletoes (Loranthaceae) and on plants of the Santalaceae family such as quandongs. This large butterfly, (illustrated on this page in the background, courtesy of the famous contemporary butterfly painter Charles McCubbin), has been selected by **Butterfly Conservation S.A. Inc.** as its mascot. This was done so because of its beauty, and also because it now represents the typical plight of most butterflies in SA (which **Butterfly Conservation S.A. Inc.** hopes to rectify), wherein this butterfly used to be seen every spring flying through gardens in Adelaide, but has now disappeared. Larvae of the Caper White (*Belenois java teutonia*) mainly feed on the native orange (*Capparis mitchellii* Capparaceae). The butterfly gathers in large numbers in the Flinders Ranges, and is often seen in the Adelaide Botanic Gardens during its spring migration. The best known of the whites would be the introduced Cabbage White (*Pieris rapae*), often a pest in our vegetable gardens. It was first introduced to Australia in Melbourne in about 1937, and within six years had spread itself throughout non-tropical Australia. The yellows are all strong migrants. The Small Grass-yellow is the common yellow seen migrating in spring. It feeds on *Senna* in the central and northern parts of the state. The larger yellows from the northern tropics with the common names Lemon Migrant or White Migrant are rare migrants to the Adelaide region.

To be continued next issue



Kath Alcock sketch

AIMS AND OBJECTIVES OF BUTTERFLY CONSERVATION SOUTH AUSTRALIA Inc. (BCSA)

AIM The aim of BCSA is the conservation of butterflies (and where appropriate moths) in South Australia.

OBJECTIVES The aim of BCSA shall be achieved by pursuit of the following objects:

- i. To promote the conservation and sound management of areas of ecological significance to butterflies, especially areas of remnant native vegetation.
- ii. To foster interest by government agencies at all levels, voluntary bodies, community groups, educational establishments and the public generally in the conservation of butterflies and their habitats, and the activities which can assist in this conservation.
- iii. To re-introduce butterflies into natural habitats where they previously existed.
- iv. To promote and support scientific study and research into the habits, diseases, life-cycles and factors affecting butterflies and the enhancement of their habitats, and to disseminate the results of such research as widely as possible.
- v. To set up a public gift fund under the constitution and rules of BCSA for the specific purpose of pursuing the aim and objects of BCSA.

DEFINITION of "conservation": Conservation is defined as protection, preservation, restoration, enhancement and careful management of the natural environment.

NOMINATION TO ENDANGERED SPECIES PROTECTION ACT

Butterfly Conservation SA has recently nominated two species of butterflies to the Endangered Species Protection Act.

The Lithochroa Hairstreak *Jalmenus lithochroa* is one of 11 known species of the genus *Jalmenus* in the family Lycaenidae (Blues and Coppers). This species is the only butterfly endemic to South Australia and remaining colonies are only known to occur in the Flinders Ranges where they are totally dependent on *Acacia victoriae* as a larval foodplant and on the large meat ants *Iridomyrmex* spp. as a larval attendant ant.

Both the ant and the foodplant are reasonable common in the plains area of the Flinders region which would make one believe that the butterfly should also be more widespread and stable. However, the low number of active colonies would suggest some other control is either keeping the butterflies at a low population level or is causing a slow decline.

Unfortunately, one of the main habitat areas for the butterfly is the Willochra Plain extending south, which is also the brood area for the locust. The area is occasionally sprayed mainly by aerial means therefore based on the current knowledge of the biology and distribution of the butterfly, and upon the continual agricultural disturbances to its habitat, the butterfly is considered to be vulnerable.



Photo Bob Fisher

The Yellowish Sedge-skipper *Hesperilla flavescens flavia* is one of 13 Australian species of skipper butterflies from the *Hesperilla* genus, family Hesperidae. Its larval host plant is the large saw-edge *Gahnia filum* (Cyperaceae) which occurs in brackish estuary and lagoonal habitats in coastal areas.



Photo Roger Grund

The type locality for the skipper was along the coastal edge of the Adelaide plain. Recent surveys of remaining habitat in the Adelaide plains have failed to locate the butterfly. Populations in the lower Coorong are under continuous pressure from pastoralists due to the clearing and overgrazing of its foodplant and the draining of suitable brackish swamp habitat. It was last recorded from the Coorong in 1937, which means it is probably extinct in this location.

Several small populations of the butterfly still exist in the west half of southern Yorke Peninsula and the west coast of southern Eyre Peninsula. The foodplant is very slow growing and large tussock clumps existing today are likely to be well over 100 years old. This species of butterfly is considered to be endangered.

Roger Grund.

BUTTERFLY CONSERVATION SA Inc.
Membership is just \$5.00 pa
Applications to: David Keane
c/- P.O. INGLEWOOD, 5133 S.A.

PROPOSED RECOVERY

PROGRAM for *Hesperilla flavescens flavia* Yellowish sedge-skipper on Yorke Peninsula.

BCSA recently applied for funds from the Threatened Species Network to lay the ground work for a recovery plan for the Yorke Peninsula populations of this endangered butterfly species. *Hesperilla flavescens flavia* is now restricted to southern Yorke Peninsula and the west coast of southern Eyre Peninsula, from an original population that existed coastally in South Australia in *Gahnia filum* wetlands occurring in estuary and lagoonal habitats.

If the grant application is successful, BCSA will

- survey for all remaining colonies of the butterfly on southern Yorke Peninsula
- estimate population levels
- inform landowners if they have colonies and assess their willingness to cooperate in any subsequent recovery or management plan
- make contact with other local environmental groups to formulate recovery or management plans.

If you would like to take part in this our first project please contact the secretary who will keep you informed of our progress. We are especially keen to hear from people in the southern Yorke Peninsula who may be able to assist in our initial ground work and follow up with members in the local community.

HONORARY MEMBER OF BUTTERFLY CONSERVATION SA Inc.

At the March 1999 meeting of BCSA Robert H. (Bob) Fisher was invited to become an Honorary Member. Bob has been a devoted lepidopterist all his life and is currently an Honorary Associate of the South Australian Museum. In the 1994 Queens Birthday Awards Bob was awarded the Medal of the Order of Australia (OAM) for his work as a lepidopterist. Below is the summary of his achievements as listed in the Order of Australia website.

Fisher OAM, Mr Robert Hilson (QB94)

For service to entomology, particularly through the conservation of endangered species of butterflies in South Australia.

Mr Fisher has contributed to entomology, particularly butterflies, in South Australia for over 40 years. He is the co-discoverer of a new sub-species of *Pseudalmenus chlorinda* butterfly, which has been named after him. He has been a Fellow of the Royal Society of South Australia since 1951, has held executive positions for a period of 14 years and is now an Honorary Life Fellow. He has been a member of the Entomological Society of Victoria since 1970 and was awarded the J.C. Le Souef Award from the Society for contributions by an amateur to Entomology. He was appointed Honorary Research Associate in Entomology at the South Australian Museum in 1986. He has published and written 24 works on butterflies and presented papers to the Royal Society of South Australia.

Wood White or Red-spotted Jezebel *Delias aganippe* (Pieridae)

The Wood White butterfly *Delias aganippe* has been adopted by Butterfly Conservation SA as its logo and we have been fortunate to obtain permission to use Charles McCubbin's drawing of the Wood White as depicted on a stamp in 1983. Assistance is requested from members with an interest in graphic design who may be able to help us to create a logo using this superb artwork.

Interesting Characteristics

One of our prettiest butterflies, with bright colour beneath the wings.

Life History and larval food host plant

Larvae feed on several mistletoes, including *Amyema miquelii* and *A. preissii*, and on native cherry *Exocarpos cupressiformis* and quandong *Santalum acuminatum*. When young the larvae congregate in groups, but tend to disperse over the host plant when older. Pupae are attached either singly or in groups to the host plant.

Flight Period

The species tends to occur throughout the warmer summer months, perhaps from October to March.

Distribution

This is not a common species in most years, and tends to occur in small populations over much of South Australia, and other southern parts of the Australian continent.

Status

Occasionally common in restricted areas, and not usually regarded as rare.

Threats

Destruction of native vegetation throughout the State in areas that include its host plant.

Conservation Strategy

Protection of its native host plants, including mistletoe. Local Government authorities, should be advised of the absurdity of Mistletoe Eradication Programs.



RHFisher

Threatened Azure Butterfly at Bookmark Biosphere Reserve

The Bookmark Biosphere Reserve in eastern South Australia has been the site of recent records of the enigmatic, and as yet unnamed, azure butterfly *Ogyris* sp. aff. *idmo*. An adult was caught on Calperum Station, and another was observed nearby in the reserve. This soon to be officially named species is so far only recorded from the Murray Mallee, and very little is known about its life history, other than that it appears to be very closely associated with the sugar-ant *Camponotus terebrans*. Eggs have been located at the base of mallee vegetation, adjacent to ant nest entrances, and it appears that the entire larval stage is spent in the ant nests. It has been suggested that the larvae are predatory on the immature stages of the ants, although direct evidence of this is lacking.

Sonia Dominelli, a research officer at Bookmark Biosphere, has recently expressed interest in having BCSA mem-

bers visit the area to undertake strategic survey work. According to Sonia, researchers at Bookmark have begun mapping the distribution of *C. terebrans* as a preliminary to proposed translocation efforts aimed at conserving the *Ogyris* butterfly in the long term. The assumption is that areas of highest ant density are likely to represent the best potential habitat for *Ogyris* sp. aff. *idmo*. Meanwhile, BCSA member Mike Moore, who has first-hand knowledge of the butterfly at Waikerie, is preparing a nomination for listing of *Ogyris* sp. aff. *idmo* as Vulnerable on Schedule 1 of the *Endangered Species Protection Act 1992*. This listing should enhance BCSA's ability to secure funding to undertake appropriate on-ground conservation of this butterfly. Hopefully, BCSA members will get to Bookmark Biosphere Reserve later this year, and have a good look around for signs of this special azure butterfly.

Marcus Pickett

BUTTERFLY CONSERVATION SA Inc.

Chairman: Beth Rostron, C/- PO INGLEWOOD 5133 ph 08) 83892352

Secretary and Newsletter Editor: Jan Forrest OAM C/- South Australian Museum, North Terrace, ADELAIDE, 5000 ph 08) 82077503, email <janf@senet.com.au >

Treasurer and Membership Secretary: David Keane, C/- P.O., INGLEWOOD 5133 ph 08) 83892352 email <dkeane@iweb.net.au >

Committee members: Marcus Pickett, Roger Grund, Lindsay Hunt, Mike Moore, Bob Edge

Honorary Member: RH (Bob) Fisher OAM

DIARY DATES

EXHIBITION

Members of Butterfly Conservation SA will receive an invitation to the opening of the exhibition "Where have all the Butterflies Gone" to open at Carrick Hill on Wednesday 1st September at 11.00 am. See you there.

MEETINGS

Meetings of the committee are held on regular intervals and all members are welcome to attend. If you would like further information or receive an agenda please contact the Secretary Jan Forrest C/- South Australian Museum, North Terrace, Adelaide telephone 82077503 (w) or 82978230 (h and message bank) or via email on <janf@senet.com.au >.

BCSA Meeting to Discuss Proposed Nominations of Threatened South Australian Butterflies for Listing on Schedule 1 of the *Endangered Species Protection Act 1992*

A BCSA sub-committee comprising Lindsay Hunt, Roger Grund, Mike Moore, and Marcus Pickett, met on 5 April 1999 to discuss proposed nominations of South Australian butterflies for listing on Schedule 1 of the *Endangered Species Protection Act 1992*. **Ten species were discussed in detail:**

<i>Anisynta cynone cynone</i>	Mottled Grass-skipper
<i>Trapezites lutea</i>	Rare White-spot Skipper
<i>Herimosia albovenata albovenata</i>	White-veined Skipper
<i>Hesperilla flavescens flavia</i>	Yellowish Sedge-skipper
<i>Hesperilla chrysotricha leucosia</i>	Golden-haired Sedge-skipper
<i>Hesperilla chrysotricha naua</i>	Golden-haired Sedge-skipper
<i>Ogyris idmo halmaturia</i>	Large Bronze Azure
<i>Ogyris</i> nsp. aff. <i>idmo</i>	unnamed bronze azure
<i>Ogyris otanes</i>	Small Bronze Azure
<i>Jalmenus lithochroa</i>	Lithochroa Hairstreak

Two taxa, *H. f. flavia* and *O. i. halmaturia*, were considered Endangered (E), and the remainder Vulnerable (V). Proposed extinction risk categories agreed upon at the meeting were based on evaluation of the following criteria: past distribution; present distribution; current population; and, larval host distribution (past and present). IUCN criteria (IUCN SSC 1994) were not applied during the discussion, but will need to be applied when preparing nominations. Priorities for nomination of species were evaluated according to the following: level of proposed extinction risk category; adequacy of available information for satisfying requirements of an ESPA 1992 nomination; adequacy of ecological information regarding the taxon (i.e. as it might relate to implementing recovery actions); and, perceived ease of implementing recovery actions. Accordingly, **four species were selected as being a priority for nomination in the near future: *H. f. flavia* (E), *H. c. leucosia* (V), *O. nsp. aff. idmo* (V), and *J. lithochroa* (V).** Roger Grund is preparing nominations for *H. f. flavia* and *J. lithochroa*, Marcus Pickett the nomination for *H. c. leucosia*, and Mike Moore is preparing a nomination for *O. nsp. aff. idmo*.

Marcus Pickett

References

IUCN SSC (1994). *IUCN red list categories*. International Union for the Conservation of Nature and Natural Resources (Species Survival Commission): Gland, Switzerland.

MEMBERS LIST:

ANDREW
ALLANSON
SAM AQUILINA
SUZIE BALMER
PAT & PETER
CLARK
BOB EDGE
JOANNE EDWARDS
ZANETTE FABIAN
BOB FISHER oam
JAN FORREST oam
ROGER GRUND
ANN HOUGHTON
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KATE HUSBAND
BILL & HEATHER
JONES
D. B. JONES/HANNA
DAVID KEANE
BARBARA LEE
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DAVID MOORE
MIKE MOORE
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MERRYN PICKETT
MARCUS PICKETT
TERRY REARDON
& JOAN GIBBS
JASMIN & DUNCAN
ROSE
BETH ROSTRON
CHRIS SON
BIRGITTE
SORENSEN
PETER TUCKER
LORRAINE TURNER
CHRIS WATTS
SUSIE WEEKS

“Where have all the Butterflies Gone?” An exhibition by the South Australian Museum. *Jan Forrest Project Manager*

Members of BCSA and the South Australian Museum are collaborating on a very special project. An exhibition entitled “Where have all the butterflies gone? The exhibition will open at Carrick Hill on 1st September for six months. It will then be relocated to the South Australian Museum for the reopening of the Museum early in March 2000.

The exhibition features 34 South Australian species grouped under the habitat and special areas of: Coastal, Aridlands, Mallee, Eucalyptus Forest and Open Woodland, Grasslands, Wetlands and specific localities of

Urban, the South East, Migrant and Vagrant. Each

species depicted will include detailed life history photographs provided BCSA members Bob Fisher, Roger Grund and Lindsay Hunt who, along with Marcus Pickett, Mike Moore, Beth Rostron and David Keane have provided detailed notes for text on the panels. The introduction will depict the ecology and morphology of butterflies and information on what can be done to arrest the decline in butterfly numbers around the state.

An ‘outreach’ component will see the exhibition in full or in part available for loan at urban and rural centres in South Australia. If you would like further information about hosting the exhibition please contact Jan Forrest at the SAMuseum.