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Contents

- P1 Contents
- P 2 Editorial
- P 3 President's Report
- P 4 Morella Survey
- P 7 Koonamore History
- P 11 Hiltaba Survey
- P 13 A Morning with the Eucalypts
- P 14 A VGRASP Notice
- P 15 BirdLife Australia

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Cover Photograph:

Shingleback lizard (*Tiliqua rugosa*) at Morella conservation area by Andrew Barr

Editorial

An editorial is an opportunity to raise issues worth considering. I was reading the *New Scientist* and the *Australian* newspaper magazine on March 30th when a phrase struck me, "*humans have taken over evolution from nature*".

The more I thought about that idea, the more I realised that humans have a very large responsibility, since the *"survival of the fittest"* is in our hands as we change or try to repair the ecosystems.

How do we select what species survive? Can we restore ecosytems to their natural state so that nature can evolve as it was meant to? How do we plan for the Australian "Boom and Bust" cycles? One positive/productive method is to do biological surveys to establish the present state of the ecosystems

This issue of SEGMENTS has a focus on what volunteer organisations can contribute to the South Australian biological databases. For the past 29 years the Scientific Expedition Group (SEG) has been conducting biological surveys in remote parts of the state. SEG has contributed flora and fauna specimens and observation records to the databases.

The DENWNR website describes the following:

"The Biological Database of South Australia (BDBSA) is comprised of an integrated collection of corporate databases which meet DEWNR standards for data quality, integrity and maintenance. BDBSA was initially established to hold the data collected by the Biological Survey of South Australia but has evolved into a central access point for all Biological Data within South Australia."

SEG started this year with a biological survey at the Morella Conservation area in March (see the first article).

In conjunction with Nature Foundation South Australia (NFSA) SEG has organised two major expeditions to Hiltaba Station in the Northern Gawler Ranges, which Nature Foundation acquired last year. The first expedition in April will focus mainly on the fauna. Hiltaba station (a new important part of the Australian National Reserves system) has a number of fauna species of significance. For over 150 years, the station has been grazed by sheep and feral goats. In 2012 there has been a start to the feral animal eradication program on the station. Goats, cats and foxes are a constant threat to the ecosystem of this region.

The establishment of the quantity and quality of the existing fauna species is the main purpose of this baseline survey in April. The NFSA will be able to use some of this data to construct proper management plans for the area.

A quote from the NFSA website about Hiltaba states:

"In the future we will fund research projects into the flora and fauna of this landscape, to better understand how we



can save, protect and restore this diverse and unique habitat."

The second expedition to Hiltaba in August 2013 will focus mainly on the flora of the region. If you are interested in participating on this expedition then contact Trent Porter at Trentasarus@bigpond.com

Now that most grazing animals have been removed, some flora recovery will begin to occur. Data and specimens will be submitted to the SA Herbarium and used to construct habitat plans for the endangered flora species of the area.

In this edition, the SEG president, Richard Willing, writes about the Legacy of Warren Bonython for our group.

The recent March Morella expedition is described by John Love. About the middle of 2012, Dr Janice White, of Wetlands and Wildlife, asked SEG to undertake this monitoring project. A party of three scientists and five others, all with previous SEG experience, went to Morella on Monday 18 March and returned on Saturday 23 March.

The next interesting article is by Russ Sinclair who describes the 86 year history of vegetation monitoring in the TGB Osborn reserve at Koonamore, 400km north of Adelaide.

Greg Johnston, the ecologist for NFSA, has written an article about Hiltaba for this edition.

A Morning with the Eucalypts by Richard Willing, describes a visit to the Currency Creek Arboretum.

The VGRASP notice alerts us that the full report can be read on the SEG website.

Finally the *BirdLife Australia* website, with some of the program for 2013 is given a mention. Check the website.

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http://www.australianwildlife.org/AWC-Sanctuaries/Kalamurina-

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President's Report

Warren Bonython, Foundation President of the Scientific Expedition Group (SEG), who died last April, has left SEG a generous gift in his will. This will enable SEG to continue and expand its operations.

Warren agreed to be president when SEG was formed in 1984. For the next 19 years he remained in this position – leading, promoting, advising and nurturing the fledgling organisation. SEG started by having one expedition per year, run on a shoe-string budget, relying on the good graces of organisations which lent it equipment, and expeditioners who lent vehicles and trailers to go bush.

SEG has gradually expanded to its present state. As well as the annual expedition to a remote area, it has ongoing projects, such as the Vulkathunha -Gammon Ranges Project (V-GRaSP), which has been running for 25 years; the Minnawarra Biodiversity Project (MBP), which has been running for 12 years; and the Mallee Fowl monitoring project. Scientific data and reports from these sources enter the SA Biological Data Base. SEG, a not-for profit organisation, now has its own web site, owns a truck, some trailers, camping and cooking gear, and much scientific equipment, instead of having to borrow it. SEG operations and the range of activities of all these projects have increased over the years, largely due to generous gifts from generous donors and prudent financial management.

A gift fund was established many years ago, the Scientific Expedition Foundation (SEF), which enables gifts to be tax-deductible. If you would like to make a gift, however large or small, to help continue the good work of SEG in exploring some of the scientific secrets of our great country, please contact the Treasurer, Graeme Oats, 08 8279 3179, or gdoats@bigpond.net.au.

We hope that you live a long and full life, and if, like Warren, you would like to remember SEG in your will, leaving a legacy that lives on after you, please contact the Treasurer. or the President, Richard Willing, 0408 807 517 rwilling01@gmail.com.



Warren Bonython

John Love



Figure 1: Morella Conservation Wetlands

Description

When Charles Sturt travelled down the Murray River in a whale boat in 1830, he found oyster shells embedded in the cliffs and rightly concluded that, at some time in the past, the land had been under water. This is true, not only of the riverland but of the whole of south-eastern South Australia and a good deal of western Victoria.

As this gently sloping plain rose from the sea, coastal dunes were formed. It was not a steady, continuous process but happened in stages with variations in sea levels. This produced a number of dune lines, more or less parallel with each other and with the present sea coast. The dunes were fixed by the formation of calcrete - hard, limey rock - just below the surface. They survive as low ranges with seasonal swamps between them. Some ridges have been found below the sea, west of the present coast: dunes formed when the sea was lower, and inundated by rising water as ice melted after the last ice age. Meanwhile, new dunes are forming on the present coast. All this has happened in comparatively recent times, geologically speaking, and is still happening.

The property now known as Morella runs along one of the low, gently undulating ranges of loamy sand over calcrete. The western part of Morella includes some small patches of land subject to inundation. To the west is the Coorong, and west of it, the active dunes that form Younghusband Peninsula. To the east is dense melaleuca forest, with patches of eucalyptus, on land sloping down to the Morella basin. This forest would originally have extended into the eastern part of Morella, while remnant vegetation on the range is rather more open mallee.

Aborigines

Aborigines camped and buried their dead among the Coorong sand-hills, where middens and bones are occasionally exposed by wind. No doubt they would have walked through the whole area foraging for food. It is highly unlikely that any traces of their presence remain on Morella.

Europeans

The first Europeans to see this part of Australia were the explorers led by Nicolas Baudin and then Matthew Flinders in 1802. They did not land on this dangerous coast. In response to a need to establish herds in the young colony of South Australia, Charles Bonney overlanded cattle from Victoria to Adelaide in 1839, as did George Hamilton, both keeping close to the coast. This route became more popular than the route used by the first overlanders, along the Murray, and graziers began to settle on the fertile land of the lower South-East in the 1840s.

The infertile upper South-East, with its absence of surface water, was a land to be passed through as quickly as possible. It was not until the middle of the 20^{th} century that the 'ninety-mile desert' was cleared and prepared for soldier settlers after the second world war. The clearing and introduction of exotic grasses on Morella dates from about that time.

The clearing of the original mallee in the upper South-East has brought unforseen problems of rising water tables and increasing salinity, thus threatening the productivity of the land that looked so promising. An engineering solution was adopted: more south-eastern drains. graze cattle. (The cattle left some monumental scats!) One of the drains was to pass through a property owned by a company named Wetlands and Wildlife. By way of compensation, that company was offered 1200 hectares of Morella, with the option of buying the homestead and home paddocks, another 200 ha.

A condition of the transfer of title was revegetation of the land. When the transfer was effected, in 2005, there was serious infestation of horehound, boxthorn and other weeds. The first activity of the new owners had to be destructive! Progressive destocking and seeding were carried on concurrently in 2008 to 2010, beginning in the southern paddocks. It is expected that seeding of indigenous plants will be completed and all internal fences removed by the end of 2013. When revegetated, Morella will provide links between Bonney's Camp Heritage Area and Martin's Washpool Conservation Park to the east, with only the Princes Highway between Morella and the Coorong National Park to the west.

Figure 2: Morella revegetation program in progress

A monitoring program to record birds, mammals and reptiles, was begun in 2006 by students of the Environmental Management Unit within the School of Natural and Built Environments at the University of South Australia. Although good as far as they went, these surveys were not complete. The arrangement with UNISA has fallen through.

About the middle of 2012 Dr Janice White, of Wetlands and Wildlife, asked SEG to undertake this monitoring. A party of three scientists and five others, all with previous SEG experience, went to Morella on Monday 18 March and returned on Saturday 23.

Figure 3: Setting up trap lines site 1

For this survey there were six sites, each with six permanent pitfalls, fifteen Elliott two funnel traps and two cage traps. All traps were open for four nights. Birds were observed but not caught. Hand foraging for reptiles in leaf litter was done at these sites and elsewhere. (Invertebrates were not in our brief: micro pitfalls were not used. Vegetation monitoring is done by Wetlands and Wildlife personnel.)

We ate and slept in the Morella homestead, with hot and cold water, beds with mattresses but no other bedding, and a well appointed kitchen. The stove, refrigerator, toaster and jug worked well. Trent Porter did all the food planning, buying, sorting and packing. He and Andrew Barr did the cooking. Dish washing and cleaning up was done by whoever happened to be there when it had to be done.

Results

We caught a lot of house mice and a number of small lizards. No other small mammals were seen. An eastern brown snake found its way out of a funnel trap and escaped before Peter could get his snake catching gear into action. Birds were present but the greatest concentration of them was near the homestead – swallows and honeyeaters. While travelling, quite a number of kangaroos and emus and a couple of wallabies were seen. In some places, there was evidence that echidnas and wombats are doing well. Statistical reports are being prepared.

Figure 4: Skink (*Hemiergis peronii*) photo: P. Matejcic Scientists

Birds: Duncan Mackenzie is chairman of Gluepot Reserve, a large property owned by Birds

Australia, north of Waikerie. He has been involved in many SEG expeditions. He is a member of the SEG Committee.

Mammals: Graham Medlin, a retired science teacher, is an honorary research associate in the SA Museum's mammal section. He has participated in many field surveys.

Reptiles: Peter Matejcic is President of the SA Herpetology Group.He has extensive training and

experience in fauna surveys.

Figure 5: Skink (Ctenotus robustus) photo: P. Matejcic

The Arms and Legs

Helen Johnson, a member of the SEG Committee and assistant editor of *SEGments*, has been on several expeditions.

Kevin Burrett is a seasoned veteran of many SEG expeditions.

Andrew Barr, a member of the SEG Committee and editor of *SEGments*, has been on several expeditions.

Trent Porter, a Committee member who has been in SEG for longer than anyone cares to remember, was quartermaster and writer of heavenly menus.

John Love, a former secretary of SEG, did most of the preliminary paperwork for this expedition.

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Hiltaba

SEG's second major expeditions for 2013 will be to HILTABA, which is Nature Foundation's new conservation property on northern Eyre Peninsula near Lakes Everard and Acraman. This ancient and spectacular land has been de-stocked and the Foundation has asked SEG to do a baseline study to find out what life is there presently and to assist with future monitoring. Quite a few very uncommon critters and plants have been noticed already!The survey from August 18th. 2013 to August. 31th. 2013. Applications are open for either or both. Accommodation will be available in Shearer's quarters or camping among shady Casuarinas. Costs are not yet set but will be minimal.

Contact Trent now to obtain application forms as numbers will be much lower than usual.

A/H 82789078 or

trentasaurus@bigpond.com

TGB Osborn Vegetation Reserve, Koonamore

Russ Sinclair

Figure 1: Bindy- I cottage 2012

The name "Koonamore" brings back memories for generations of students and staff of the University of Adelaide. The Reserve with its traditions is one of the very valuable research assets of the University.

History

The TGB Osborn Vegetation Reserve at Koonamore (often abbreviated KVR) is located in the middle of Koonamore station, a pastoral lease about 400km northeast of Adelaide, 60km north of Yunta. The country is chenopod shrubland, largely saltbush (*Atriplex* spp), bluebush (*Maireana* spp), with scattered trees including mulga (*Acacia aneura*), false sandalwood (*Myoporum platycarpum*), blackoak (*Casuarina pauper*) and bullock bush (*Alectryon oleifolium*).

Sheep were brought to the area in about 1863, and rabbits arrived in the early 1880's, reaching plague proportions soon afterwards.

TGB Osborn was Professor of Botany in the 1920's, and was very concerned about the problems of serious degradation of soils and vegetation in the pastoral country, which had become clear by then. He was also interested in the new ideas of ecological succession developed by Clements in North America, which were becoming increasingly important in ecological thinking early last century. The question of whether vegetation would return to a "climax state" via a series of stages after disturbance gave the impetus to the setting up of KVR and many similar long-term vegetation studies at that time, particularly in North America.

Osborn arranged with the Koonamore leaseholders at the time to set up a reserve to study the vegetation, and especially its responses to the removal of grazing pressure by introduced animals. In July 1925 a site was chosen in "the worst eaten-out area of [a] paddock" and fenced to exclude sheep and hopefully rabbits. Kangaroos and emus were never excluded; they can jump the fence.

One of Clements' contributions to ecology was the idea of the permanent quadrat; an area, usually square or rectangular, permanently marked out, in which all the plants are mapped, measured and recorded regularly, so that changes and developments in the vegetation can be followed quantitatively. This system was followed on the Reserve. A set of permanent quadrats was pegged out: large, 100mx100m to record trees and large shrubs; medium, 10mx10m for smaller shrubs; and small, 1mx1m for grass and ephemerals.

A small cottage, Bindy-I, was built beside the Reserve for scientific workers. For the first few years a technical officer, TB Paltridge, lived there permanently with his wife and carried out the early intensive measurements. After 1931 the work was continued by parties of students and others travelling up from Adelaide, a strenuous journey in the old days, by train (2 different gauges) and mail-truck north from Yunta. Ding's mail-truck would drop the party and their supplies off at Bindy-I cottage, and pick them up a week later for the return trip south. The tradition of student work-camps has continued to this day, so that now there are 86 years of records of vegetation changes on the Reserve, the longest record of its type in Australia, and one of the longest in the world.

Figure 2: Ding's mail truck and students 1950

Rabbits

Despite the rabbit-proof fence, rabbits were never eradicated completely, and numbers returned to plague proportions by the late 1930's, fluctuating with seasons thereafter. Myxomatosis and later the calicivirus checked them, and in the 1970's a regular program of systematic warren fumigation and fence repair was begun. This has now reduced the numbers to close to zero. Consequently the Reserve has had 50 years without sheep, followed by 36 years without either sheep or significant rabbit numbers. The results have been very striking.

Figure 3: Rabbit fence mending 2004

Results

The early years saw a rapid re-colonization of almost denuded areas by salt-bush, but very little regeneration of trees or larger shrubs. Rabbits would eat off their seedlings, while ignoring the saltbush. The beginning of rabbit control in the 1970's coincided with a series of exceptionally wet years, and thereafter an explosion of tree and shrub seedlings, which survived, since rabbit numbers have been kept low. Interestingly, there were exceptions. The numbers of blackoak trees and bluebush (*M. sedifolia*) have hardly changed. Blackoak does produce viable seed. We have germinated seed and planted seedlings near the house and they are doing well, but no seedlings have been recorded on quadrats. Bluebush will flower and fruit, but not prolifically. We have occasionally found bluebush seedlings, but they are rare on the Reserve. Both blackoak and bluebush are very long-lived, and it may simply be that they depend on rare events to allow seedlings to survive.

The Future

There is a wealth of data in the KVR database now, which can be used to answer many questions about the biology of this arid vegetation, adapted in various ways to the harsh and erratic climate. Very little work has been done on animals on the Reserve. I suspect that the conditions inside now are sufficiently different to the paddocks outside that differences in animal numbers, especially reptiles, may now be significant. It may also be that the vegetation is not returning to a pre-European state, as although rabbits have now been suppressed, the original small marsupials such as bettongs and bilbies have not returned. The absence of these animals may be allowing a denser growth of shrubs than would have been present 200 years ago.

The data are increasingly valuable as a resource for those who study the possible changes to be expected as our climate changes, as computer modellers need very long runs of data to test the validity of their models. The KVR records are seen as potentially most significant for this kind of study. Volunteers are always welcome for the annual work camps in November, whether students or interested friends. If you are interested please contact the author.

Figure 4: Cross fence comparison Photo point 9 1931 (reserve on the right)

Figure 5: Cross fence comparison Photo point 9 2012 (reserve on the right)

Data of Tree Numbers

Figure 6: Trees: Mulga (*Acacia aneura*) and *Myoporum platycarpum* increased dramatically after 1976

Data of Shrub Numbers

Figure 7: Shrubs: *Atriplex* (saltbush) increased early, as rabbits do not usually eat it. Senna shrubs have increased dramatically after the 1970's rains, and rabbit control.

Av Atriplex vesicaia; As A. Stipitata. Sc Senna artemesioides ssp coriacea; Sp S. Ssp petiolaris

Sponsors:

Recent work at the Reserve has been supported by grants from

Nature Foundation

Native Vegetation Council.

Email contact: r.r.sinclair@internode.on.net

Hiltaba Survey

Greg Johnston

Figure 1: Hiltaba Station geological sites

The Nature Foundation of South Australia (NFSA) is a not-for-profit wildlife charity which has worked to "save, protect and restore" South Australia's natural biodiversity since 1982. The Foundation focuses on three key areas:

- purchase and management of <u>land</u> with significant conservation value;
- funding conservation research
- conducting environmental watering projects along the Murray River.

In the past NFSA raised funds that have helped to purchase 21 properties that are now part of the National Reserve System. Many of these properties have been donated to other organisations to manage, including the Gawler Ranges National Park managed by SA DEWNR. Since 2010 NFSA has purchased five properties which it now manages for conservation. The most recent property purchased is Hiltaba Station in the Gawler Ranges, adjacent to the Gawler Ranges National Park. NFSA has a staff of eight.

Hiltaba was one of the first pastoral leases to be taken-up in the Gawler Ranges after initial European exploration by Edward Eyre in 1839 and Stephen Hack in 1857. Sheep have been grazed there over the ensuing 150 years.

In recent decades Hiltaba Station has been managed jointly with Yarna and Lake Everard Stations. In April 2012 Hiltaba was purchased for conservation by the Nature Foundation of South Australia (NFSA). Control of grazers (mainly sheep and goats) and feral predators (foxes and cats) are the focus of activities presently. Most sheep were removed from the property in April and 2900 goats were removed between April and August. Aerial baiting for foxes in July has seen foxes drop from 18/100km of spotlighting to 3/100km.

Hiltaba straddles the boundary between the Mediterranean biome to the south and the desert biome to the north. Many species reach the limits of their distribution there. In addition to being at the edge of occurrence for many broadly distributed species, the peaks and gorges of the Gawler Ranges provide refugia where relictual populations of animals and plants have become isolated and have differentiated. The Gawler Ranges have provided such refugia repeatedly during the arid phases of the Pleistocene glacial cycles. Consequently several endemic species or locally differentiated populations of plants and animals occur there. Thus Hiltaba is an area of high biodiversity and conservation value.

Figure 2: Hiltaba sample survey site biome

Six plant species that are endemic to the Gawler Ranges occur on Hiltaba. These are: *Pterostylis ovata* - Gawler Ranges Greenhood, *Grevillea parrallelinervis* - Gawler Ranges Grevillea, *Dodonaea intricata* - Gawler Ranges Hopbush, *Acacia toondulya* - Toondulya Wattle, *Prostanthera florifera* – Gawler Ranges Mint Bush, *Eucalyptus lansdowneana* - Crimson Mallee, and *Stenanthemum arens* – *Gawler Ranges Stenanthemum*.

The Gawler Ranges short-tailed grasswren (*Amytornis merrotsyi pedleri*) also occurs at Hiltaba. When the Nature Foundation first took over Hiltaba 528 species of vertebrates (136 species) and plants (392 species) had been recorded on Hiltaba Station. Undoubtedly many more occurred there. And so it has turned out to be. As an indication, the number of reptiles now known from Hiltaba has doubled since April.

These reptiles include the spectacularly coloured peninsula dragon (*Ctenophorus fionni*) and a local pygmy form of the Gidgee skink (*Egernia stockesii*), both of which live in the rocky hills of Hiltaba. Recent exciting finds on a reconnoitre of Hiltaba with Trent Porter and Stuart Pillman include a blackheaded goanna (*Varanus tristis*), the nearest record for which was over 300km away at Maralinga. We also found a lovely carpet python (*Morelia spilota*) and Scarlet-chested parrot (*Neophema splendida*).

By providing a home to these species, the creation of Hiltaba Reserve makes a significant contribution to conservation both at the local and regional level. Locally, Hiltabasharesaboundarywith the Gawler Ranges National Park to the south. Hiltaba increases the combined area of contiguous protected areas of Pinkawillinie Conservation Park (1301 km²) and Gawler Ranges National Park (1626 km²) by an additional (770 km²) or 26%.

Regionally, Hiltaba Reserve falls on the edge of the 'East Meet West' Nature Links Corridor (DEWNR 2008). This corridor has been established to assist the species and ecosystems within central and northern Eyre Peninsula and the Far West of South Australia to survive, evolve and adapt to environmental change. It will achieve this by connecting habitats, through a system of protected areas that are buffered and linked by lands which have complementary land management objectives.

Although, Hiltaba Reserve falls on the edge of the corridor it closes the gap between Gawler Ranges National Park to the south and Pureba Conservation Park to the west by 20 kilometres, making the difference between a very large contiguous landscape of protected areas (42,683 km²) only 13kms. This corridor would constitute an unbroken corridor of land set aside for conservation from the Western Australian border to Kimba, a distance of 770km. SEG has agreed to do a biological survey of Hiltaba for the Nature Foundation during 2013. I'm really looking forward to the expeditions in Autumn and Spring.

The scientific approach taken by SEG will help the Foundation establish a basis for monitoring recovery of flora and fauna following reduction of grazing and predation pressure. And, of course, broader exploration of the property is sure to add many more species to the list known to call Hiltaba home.

Email contact: greg.johnston@nfsa.sa.gov.au

Figure 1: Fusia Gum (Eucalyptus forrestiana)

A couple of weeks ago daughter Janet and I spent a pleasant morning walking around the Currency Creek Arboretum with its founder, Dean Nicolle. Some will remember Dean and his father Bob speaking at the 1997 SEG AGM, about walking through the Gibson Desert searching for the rare *Eucalyptus rameliana*, found by Giles in 1876, then "lost" until 1991. Since then Dean has completed a science degree and a doctorate related to his research on eucalypts. With family help he established the arboretum ("a zoo of plants") in 1993, and has continued research into his life-long passion – eucalypts, gaining international recognition in the process. Every year or so he travels to different areas in Australia, returns with seeds and specimens, and plants them in a separate block in the research station.

A walk through the arboretum reflects this, in that there are areas devoted to plants collected from deserts and different rainfall areas, extending back more than 20 years. Each collected species has 4 or 5 separate trees, planted to demonstrate individual variations, which can be quite striking, not only in morphology, but in other properties such as ability to handle climate variations.

Dean is collaborating with many research organisations, some international, on various topics. One of these is investigating the effect of "cold burning" on various species to see how they respond. This is a modified technique in that the leafy branches are trimmed off first, then weighed to assess plant growth before actual burning. This also reduces the risk of fire damaging other parts of the arboretum if it gets away.

Richard Willing

Taxonomically, 3 genera are recognised – Eucalyptus, numbering almost 1000 species; Corymbia, about 100 species, split off from eucalypts in the 1990's, including yellowbloodwood(*C.eximia*), SpottedGum(*C.maculata*), Lemon-scented Gum (*C. citriodora*), and red flowering gum (C. *ficifolia*); and Angophora, about 10 species, including the rose apple, or Sydney red gum (*A. costata.*), the large tree by the entrance gate into Minnawarra. In the arboretum there is strong representation of plants collected from Western Australia as more than half of all eucalypts grow there.

Providing a list of trees that were seen during the morning would be meaningless to many, but suffice it to say that there was considerable interest in seeing the morphology of the different plant species on show, the differences within a species, what was flowering at the time, the research projects being undertaken, and the enthusiasm of Dean, the founder and director. We wish him well in his future endeavours. Further information is available on line at www. dn.com.au/Currency_Creek_Arboretum. Tours of the Arboretum are organised intermittently depending on demand. It crossed our minds that there might be some SEG members who would like to visit the Arboretum.

If there is enough interest we could consider organising a SEG visit some time. If so, please make contact with Janet, 0419 842 667, or me, 0408 807 517, or rwilling01@gmail.com

Figure 2: Eucalyptus lehmanii

A VGRASP Notice

V-GRaSP, which is SEG's Vulkathunha-Gammon Ranges Scientific Project, has been underway for 25 years. It is located in the Vulkathunha-Gammon Ranges National Park and has generated a continuous daily record of rainfall in the project area over this 25 year period. SEG groups have visited the area at least twice every year to maintain the rainfall-recording equipment in good condition and on nearly all these visits photographs were taken at designated photopoints. This has given SEG possession of an unusual (and possibly unique) data set that connect photographs of a remote pristine environment with rainfall recorded close to the photographic sites.

Until recently the V-GRaSP photographic record was held mainly in the form of images on film and the whole record could not be inspected in any meaningful way. Now Garry Trethewey and Ray Hickman have taken the film record and used it to create a set of digital images with each image having a unique name from which the image location and date on which it was taken can be determined.

This makes a comparison of the photographic record with the rainfall record a much more practical proposition than before. It is hoped an expert person will be found who is prepared to look at the SEG data to see if it provides scientifically significant information about the natural history of the project area.

Ray Hickman has taken a non-expert look at the photographic record, and corresponding rainfall data, to produce a report on some interesting observations that he made. The full report can be read on the SEG website.

http://www.gluepot.org/

BirdLife Australia

2013 Course Program at Gluepot

Brochures for individual courses are available on the website for download.

The first course

An Introduction To Nature Photography with Craig Ingram

27th & 28th April 2013 24th & 25th August 2013

Contact details

For additional information, including hard copies of detailed brochures on each course, a location map of Gluepot and Registration and Payment forms, please contact:

Mrs Anne Morphett,

Environmental Centre Administrator

BirdLife Australia Gluepot Reserve

61 Sturdee St, LINDEN PARK SA 5065

Phone:(08) 7070 4766 or 0421 582 710

2013 program

Courses are generally run over two, sometimes three days. Copies of the course brochures (in PDF) and registration forms may be downloaded from the website. http://www.gluepot.org/

Photography Course

Macro Photography Course Birdwatching Course

Botanical Illustration Course

GPS and GIS Course

Mallee Vegetation Course

Painting Nature Course

Reptiles Course

Bird Banding Course

SCIENTIFIC EXPEDITION GROUP INC.

The Scientific Expedition Group (SEG) came into being at a public meeting on 21st August 1984. Members receive regular information on SEG activities and expeditions. Membership is open to any persons, family or organisation interested in the following aims:

- * The promotion and running of expeditions of a scientific, cultural and adventurous nature.
- * The furthering of knowledge, understanding and appreciation of the natural environment.
- * Promotion of the values and philosophy of wilderness.
- * Enabling people to learn the skills required for planning and running expeditions, and to develop sound field techniques.

APPLICATION FOR MEMBERSHIP AND MEMBERSHIP RENEWAL for 2013

SUBSCRIPTIONS rates

| Adult member | \$30.00 |
|---------------------------|---------|
| Concession cards/ student | \$15.00 |
| Family membership | \$35.00 |
| Corporatemembership | \$35.00 |

| Name | | | | | | | | | | | | | | | | | | | | | | | | | • | | |
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| E-mail | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Details of scientific, cultural, and adventuring or other relevant skill or interests you may be prepared to share with the group:

Send a cheque (Scientific Expedition Group Inc.) with a Photocopy of this page to

The Secretary Scientific Expedition Group Inc. P.O. Box 501 Unley S.A. 5061

Some Affiliated Organisations

http://www.naturefoundation.org.au/

SA Herpetology Group Inc.

The SAHG is a group of people dedicated to the study and conservation of reptiles and amphibians through regular meetings, field trips, educational displays, talks and involvement with government and non-government conservation groups.

http://www.swiftpages.com/sahg/index.html

Wetlands & Wildlife

Wetlands & Wildlife is a conservation company that was founded by Mr Tom Brinkworth to hold land of significant conservation value for the benefits of future generations. It is hoped that it will prove a viable model for conservation in the private sector to complement the National Park systems.

http://www.wetlandsandwildlife.org.au/