

Friends of The Australian Arid Lands Botanic Garden

Port Augusta Incorporated

Newsletter

Celebrating
30 Years
February 2014

President's Report



John Zwar, President

HAPPY NEW YEAR TO ALL FRIENDS!

This is a very significant year for us as it is 30 years since the formation of the Friends, back in 1984. We will hear more of our history through the year. Despite extreme heat the Garden is looking good, highlighting the value of growing hardy arid zone native plants which cope well with extreme conditions. Work continues at the Garden, and the extended Eremophila Garden is developing well with very significant input from Friends volunteers, constructing paths, planting and mulching. This month a new solar array will be installed on the Visitor Reception Building which should provide most of the power used at the AALBG. The Friends have loaned the money for this (approx. \$65,000) to the Port Augusta City Council as this work was not included in Council's budget, and it will be paid back to us over 3 years with interest! A win-win situation indeed. Following our December meeting Council hosted a Christmas function for Friends, Garden staff and other volunteers at the Garden as a gesture of thanks for Friends voluntary work and assistance at the Garden in so many ways. It was a very pleasant ending to our year's activities.

I look forward to our meeting on 22 February when I will be speaking about the 5th Global Botanic Gardens Conference I attended in Dunedin New Zealand in October. One of the presenters at the conference, Professor Richard Benfield from The Central Connecticut State University, who is a world authority on garden tourism may be our guest speaker in July. He is likely to be in Australia then and is very keen to visit the AALBG and address both Council's AALBG Reference Group (Advisory Committee) and the Friends. He has been involved in case studies in various countries, showing how a botanic garden in a city benefits the local economy and this information should be of real interest to Council, especially those members who consider the Garden to be a drain on Council's finances and are opposed to Council involvement in the AALBG. In December I was in Canberra for a day and spent the time at the Australian National Botanic Garden and the recently opened National Arboretum. I was ably looked after for the day by Marion Jones, Treasurer of the ANBG Friends, who spoke briefly at our September meeting. She is the mother of Dr Andrea Leigh who is supervising Ellen Curtis in her doctoral research at the AALBG on the heat tolerance of leaves of various arid zone native plants. Marion arranged morning tea and a meeting with some of the Canberra Friends and Garden Guides where they were interested to hear how our Friends operate. This was followed by a Garden tour and they were especially keen to show me the newly completed and very impressive Red Centre Garden. Marion, Warwick and Pat Wright showed me much of the impressive ANBG including the Friends office and herbarium. Besides the magnificent plant collection a highlight was seeing bowerbirds performing in the garden, and their bowers with a scattering of blue trinkets placed around them. My day in the capital concluded with a brief visit to the National Arboretum. The vast, impressive visitor centre commands magnificent views and the block plantings of many of the world's iconic tree species will become wonderful features in the landscape as they grow and mature. The Arboretum also houses the National Bonsai Collection with many amazing specimens on display. If in Canberra make a point of visiting both the ANBG and Arboretum. You will not be disappointed!

Next Meeting

The next meeting of the Friends of the Australian Arid Lands Botanic Garden Port Augusta Inc. will be held on Saturday 22nd February 2014 in the WMC Herbarium Meeting Room at the AALBG Visitors Centre.

Guest speaker will be **John Zwar** President of the Friends of The Australian Arid Lands Botanic Garden. John proposed the development of the Australian Arid Lands Botanic Garden in 1981. Since then he has been closely involved with the Garden in various capacities. He lived and worked in the horticultural and environmental fields in northern South Australia, at Leigh Creek, Port Augusta and Roxby Downs for more than 30 years before moving to Adelaide in 2005 where he lectures in Horticulture, Landscape Design and Conservation and Land Management at TAFE SA Urrbrae Campus and at the Botanic Gardens of Adelaide. In October 2013 he attended the 5th Global Botanic Gardens Conference in Dunedin. The Dunedin Botanic Garden was celebrating its 150th anniversary and is New Zealand's premier botanic garden, so the city was a fitting location for the congress. The presentation will cover the congress, tours and include visits to Dunedin, Auckland and Christchurch Botanic Gardens and the Oamaru Public Gardens. The congress was an amazing opportunity to meet 347 delegates from botanic gardens in 45 countries including some from other arid regions in Oman, Jordan, Mexico and China.

DIARY DATES

WORKING BEE every Wednesday
at AALBG from 8.30am

Wine and Cheese night
at AALBG Thursday 20th March 2014

AFBG Conference hosted by Friends of the
Gold Coast Regional Botanic Gardens
8th - 10th August 2014

AALBG Seed Bank

Eucalyptus Seeds from Dean Nicolle's Collection, December 2013

In September, during the gardening expo held at the AALBG, Dean Nicolle was a guest speaker giving a talk on the Eucalypts of Australia and was also launching his new book, *Native Eucalypts of South Australia*. I was impressed by the area he had travelled over in Australia in his quest for different eucalypt species and their seeds. He had travelled through much of the southern arid zone of the country which is what we are representing in our garden. I thought it would be greatly beneficial if we could access his seed bank, so I asked Dean if I could get seeds for the garden and he kindly agreed.

The seed bank was located in Blyth at the Medika art gallery, where Ian Roberts is germinating different species to be able to paint the seedlings. The seedlings are used to assist with the identification between different eucalypt species, as they have distinct differences in the cotyledons and juvenile leaves. The paintings are then included in Eucalyptus books produced by Dean and others, such as the *Native Eucalypts of South Australia* and *Eucalypts of Western Australia's Wheat Belt*.

I then searched through all the Eucalyptus books I had and updated the list of species suitable for the AALBG. After contacting Ian about permission to go through the seed bank and combining a trip to the Southern Flinders Region to pick up wine for a wine appreciation night to be held at the garden, trainee Ryan Hayward and I spent the afternoon on October 16th sorting through hundreds of small vials of seeds at Medika gallery in Blyth. We had to work our way through tubs of vials and pour a small amount of seed into separate paper packets which had to be marked with species, collection number and provenance first.

We had no hope of getting through the whole seed bank in one afternoon and organized a return trip in the near future. Ian was most helpful and said he would get more seeds he had at home and set up the seed bank in the Blyth theatre next time to give us more space.

A complete list of the seeds and their provenances in the seed bank was passed on to me and I was able to work out which seed vials to access following the numbering system of the seed bank. This would speed up the process next time.

Using the complete seed bank list I was able to compile an updated list of species suitable for the AALBG and this meant there were more species to collect.

On October 24th, Ryan and I travelled to Blyth via Laura, to pick up irrigation parts, and spent the day sorting seeds into packets, this time in the spacious theatre where Ian had set up the seed tubs and tables to work on. We finished collecting the seeds at about five o'clock and thanked Ian for his help and headed off back to Port Augusta.

As soon as I had filed the seed packets into the AALBG seed bank and recorded the seeds collected onto the computer, lists of what we had gathered were sent to Dean and Ian. Soon after Dean sent a revised copy of the list with the latest species name changes and natural hybrids.

Armed with all this fresh information I combed through all my books and came up with a list of the smaller eucalypts in the southern arid zone. Some were not on the list previously and were in Dean's seed bank, so on November 16th, as I was going to be in the Blyth area, I arranged with Ian to collect another seven species of eucalypt seeds.

The final list of species suitable for the AALBG consists of, 5 *Corymbia* species and 153 *Eucalyptus* species. The seeds collected from Dean Nicolle's seed bank and a few from Ian Roberts, added up a total of 3 *Corymbia* species and 127 *Eucalyptus* species, some species in up to three multiple provenances. With the smaller eucalypts there are 10 species under 3m tall and 18 species under 5m tall. These and some others which will fit into our existing garden areas are the plants that will be propagated soon.

By far the most species collected originate from Western Australia and when any of the future regional areas are developed we will have seeds for the *Corymbias* and *Eucalypts* ready to be grown.

I must express my sincere gratitude to Dean and Ian for their kind access to the seed bank and their assistance. I hope you found this article of interest.

Bernie Haase

BOOKS USED TO COMPILE THE SPECIES LIST:

Native Eucalypts of South Australia
by Dean Nicolle

Eucalypts of Western Australia's Wheat Belt
by Malcolm French

The Western Australian Flora
by Grazyna Paczkowska & Alex Chapman

Field guide to Eucalypts, volume 2
by M. Brooker & D. Kleinig

Field guide to Eucalypts, volume 3
by M. Brooker & D. Kleinig



Seed Bank



Ryan Hayward and Ian Roberts - Seed Bank



Eucalyptus oxymitra

Native Plants for Small Gardens

Eremophila macdonnelli



There are a number of native plants that are suitable for small or cottage gardens, three of which are listed below:

Eremophila macdonnelli (small leaf form), grows to around 1 metre by 75cm, has small green leaves and attractive purple flowers. It grows into a mound shape but can be pruned if needed.

Dipteracanthus australasicus



Dipteracanthus australasicus subsp. *australasicus* (the name is bigger than the plant) is a perennial that grows in rocky places in Central Australia, where it grows to about 30cm by 30cm, has pretty pale pink petunia like flowers, and is often called the Desert Petunia.

Goodenia willisiana



Goodenia willisiana is a prostrate perennial and grows in mallee and semi-arid areas (grows on Eyre Peninsula). It has bright yellow flowers and is suitable for rockeries and hanging baskets.

Peter Hall

Bird Talk from the Garden



Weebill about to feed chick

On 15th July 2012 Peter Langdon our resident 'Birdo' sighted the Weebill (*Smicromnis brevirostris*) for the first time in the Australian Arid Lands Botanic Garden. The pair had taken up residence in the Mallee Region of the Garden due to the mallees having reached a suitable height to provide suitable habitat for feeding. The Weebill is the smallest of the Australian birds measuring between 9-10cms in length. Their size makes them difficult to spot as they move amongst the foliage of the mallees. It is usually their call, a high, sharp, repeated 'tiz' that gives them away. The first breeding of this species in the Garden was recorded by Peter in 2012 when two young were raised, and again in late 2013 another breeding event was recorded by Peter and three young were raised.

The nest was suspended in a twig like branch approximately 60cm from the ground (see photograph) and was approximately 10cm in diameter with a slit like entrance approximately 2cm by 1.5cm. The nest was constructed of tightly woven cobweb and plant fibres. It is indeed satisfying to see the number of species recorded in the Garden continue to grow and provide easy observation for all who visit the Garden.

Brian Reichelt

30 years ago

NEWS RELEASE No.1. (10 / 5 / 1984)

FRIENDS OF THE ARID LANDS
BOTANIC GARDEN OF PORT AUGUSTA

A petition has already been signed by over 2500 people in favour of the establishment of an Arid Lands Botanic Garden at Port Augusta, South Australia, and the State Minister of Environment and heads of other Government Departments have already expressed interest. A Government Working Group has been set up to investigate all aspects of the proposed Garden for the State Government.

The proposed Garden is to be developed over a 40 hectare (100 acres) area of land (already set aside for the purpose), some 2 km north of the city proper and having magnificent views of the nearby ranges. That garden will include arid land plants from many areas including a section of native plants from the South Australian region, a section for plants from right throughout Australia, and a third section will be for plants from all over the world. It will be the first of its kind in Australia.

Contacts

President: John Zwar Phone Home: (08) 8338 6658 Work: (08) 8372 6876 Email: jzwar@bigpond.com

Treasurer: Geraldine Davis Phone: (08) 8648 6399 Mobile: 0418 447 020 Email: glgadavis@bigpond.com

Secretary/Editor: Christine Nayda Phone: (08) 8642 4684 Mobile: 0434 717 382 Email: b.nayda@bigpond.com

PO Box 2040, Port Augusta, South Australia 5700 Email: friends@aalbg.sa.gov.au

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New Committee Members



Francene O'Connor

During my first visit to the Australian Arid Lands Botanic Garden last year, I was really inspired by the contemporary feel of the Garden. The AALBG showcases how science, art, history, garden design and technology can be integrated into the natural landscape, and is such a contrast to more traditional European style botanic gardens.

I've always been interested in observing and appreciating the diversity of nature. Since I've become a Friend of the AALBG, I've enjoyed the opportunity to see vegetation types that are typically not so accessible close to town where I work as the Parks Manager for the Port Augusta City Council on open space enhancement projects. I'm originally from Victoria where I studied the Masters of Forest Ecosystem Science at the University of Melbourne's Creswick campus. As part of my Masters research, I completed an investigation across a range of vegetation types in the Otway Ranges National Park, assessing if environmental factors such as fire regime can be used to predict species composition of leaf litter dwelling ant communities. My findings found the elevation above sea level of the study sites to be the best predictor variable for determining ant assemblages. I also have qualifications in education and landscape architecture.



Robyn Place

Having initially grown up in Adelaide, I have been lucky to live in the 'bush' for the past 45 years mainly on sheep properties, and respect and admire the beautiful countryside we live in. With that in mind, on retirement I was happy to volunteer at the AALBG as a guide to share the appreciation and knowledge I have of the Garden with others.

Friends working in the Garden



Eremophila garden extension



Join or Renew Subscription

TO JOIN OR RENEW SUBSCRIPTION

Fill in this form and send with remittance to:

Friends of the Australian Arid Lands

Botanic Garden Port Augusta Inc.

PO Box 2040, Port Augusta SA 5700

www.australian-aridlands-botanic-garden.org

Enclosed is my:

Subscription \$

Donation \$

TOTAL \$

PLEASE TICK: ☐ New Membership ☐ Renewal of Membership

NAME: Dr / Mr / Mrs / Miss / Ms:

Address:

..... Date:

Email Address:

Any donation will be gratefully accepted. Donations of \$2.00 and over are tax deductible. Please make cheques payable to 'Friends of the Australian Arid Lands Botanic Garden Inc.' Receipts will be posted. A SAE would be appreciated but not obligatory.

AridSmart Nursery Christmas Tree

Article by
Tania Danylycha



The Nursery's entry in the 2013 Port Augusta Christmas Tree Festival not only won Best Modern Tree from a club or group but was also much talked about in Port Augusta and created a buzz on social media.

The tree, standing nearly 2 metres tall, comprised 95 individual Old Man Saltbush plants (*Atriplex nummularia*) held in rusty tin cans on a round tiered stand. Staff, volunteers and Friends collected the cans for twelve months, some people even buying food they would not normally eat just to get the correct sized cans. The cans were dipped daily into salty water until they developed the required rusty patina. Square metal tubing was used as the tree trunk onto which nuts were welded. Threaded rods were then screwed into the nuts to support the 5 wooden tiers; this allowed the whole tree to be easily dismantled for transporting.

The tin cans were securely screwed to the wooden boards and the central trunk was held in place with a heavy umbrella base. A spiral of twisted, rusty chook wire emerged from the top of the tree and held a rusty metal star. A dozen of the rusty cans had small holes punched in them from which battery operated tea-light candles twinkled for the evening viewing of the trees.

The Old Man Saltbush plants were propagated from cuttings by the nursery volunteers and grown in small pots which fitted neatly into the rusty cans, they were fertilised and pruned to have them looking their best in time for the festival. After being displayed at the Christmas Tree Festival in Port Augusta's Institute Theatre for 4 days the tree was reassembled at the AALBG Visitor Centre for 3 weeks leading up to Christmas. The Saltbush plants were then offered to visitors and customers for a donation which was forwarded on to the Salvation Army.

DIRECT DEBIT BANKING DETAILS

BSB: 035-065

Account No.: 164 604

Account Name: FAALBG

Reference: 'name of person banking'

Please notify by email to

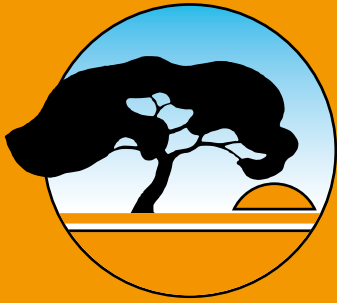
friends@aalbg.sa.gov.au

MEMBERSHIP SUBSCRIPTIONS (annually)

Individual: \$15.00

Family: \$20.00

Institution / Group: \$20.00



Friends of The Australian Arid Lands Botanic Garden, *Port Augusta Incorporated*

Newsletter *Celebrating 30 Years* May 2014

President's Report *by John Zwar*

150TH
NEWSLETTER



Ron Zwar talking with Fay Poole at AFBG National Conference hosted by AALBG in 2012.

This year we celebrate two significant milestones; firstly 30 years since the formation of the Friends of the Australian Arid Lands Botanic Garden, Port Augusta Inc. and secondly this is our 150th Newsletter! We were one of the first Friends groups to be established for any botanic garden in Australia. In fact we were established as a support group for the proposed AALBG before the Garden was even established. It was our efforts and persistence from 1984 onwards that kept the proposal alive, raised funds, lobbied anyone who would listen, and eventually in 1996, with Friends, corporate (WMC Resources Ltd), Council and state and federal funding, Stage One of our Garden was opened! We will celebrate our 30 years with a dinner in the Bluebush Café at the Garden, probably in July.

Friends volunteers have been busy helping with plant sales at Laura Folk Fair, with plant propagation, weeding, pruning, path construction, tour guiding and other tasks. After almost four inches of rain some weeks ago the garden looks great, especially the new *Eremophila* plantings. I attended the recent meeting of the AALBG Reference Group (Advisory Committee) as the Friends representative, and Friends involvement was noted with gratitude by Council. The visitor information building has had new solar panels fitted, funded by a loan provided by the Friends to Council. This will be paid back with interest. The Garden is now almost self sufficient in power production, a very worthwhile environmental and financial outcome.

I look forward to presenting to the Friends at our next meeting on my visit to New Zealand last October, where I attended the Fifth Global Botanic Gardens Congress in Dunedin. It was a wonderful opportunity to meet

400 delegates from botanic gardens from around the world. I hope that our July guest speaker will be Professor Richard Benfield from Connecticut, who is the world authority on garden tourism. It is hoped he will address City Councillors and business community leaders to explain how our Garden benefits the city and wider region. I met Professor Benfield in Dunedin. Details of his visit are tentative but it is likely to be on 19th of July.

Sadly I advise of my Father's death on 16th Feb. He was a long term Friends member and supporter and attended many meetings and two conferences with me. I extend thanks to Friends for messages of condolence and for the beautiful wreath of native flowers from Council and Friends, sent for his funeral. It makes me think of the many other Friends who did so much to promote and work for the AALBG over the years who have died. Our Garden is a wonderful legacy indeed for them all!

I remind you of the Association of Friends of Botanic Gardens biennial conference to be held in the Gold Coast in August. We hosted the last one and I urge you to consider attending if able. These are great opportunities to meet Friends from botanic gardens all over the country. I look forward to seeing all who are able to attend our May meeting. Cheers for now!

DIARY DATES

FAALBG Saturday Meetings at 1pm

17th May: Guest Speaker: Mr. John Zwar. Refer to your February Newsletter for details.

19th July: Guest Speaker: From Connecticut, USA, Professor Richard Benfield, "Garden Tourism".

Friends of AALBG 30th Anniversary Dinner

At AALBG Bluebush Café, Saturday 19th July. Bookings essential.

Australian Friends of Botanic Gardens National Conference

Mercure Gold Coast Resort, QLD.

August 8-10. All Friends are encouraged to attend. For further details, and registration, visit website www.friendsbotanicgardens.org or www.friendsgcrbg.org.au or phone 0449 561 674

VALE RONALD FRANK ZWAR

Ron lived a long and full life of service to others. He was the last SA survivor of the 14 or so POWs held in the same camp known as Stalag IV B (about 100km from the famous Hammelberg of Hogan's Heroes fame!).

On discharge he had 3 ½ years employment with the Repatriation Dept. having been classified as medically unfit to take on other pursuits such as wool classing. Voluntary Welfare and pensions work for POW (and others) became almost an obsessive way of life which continued until recently. The award of an OAM in 1997 resulted from the 59+ years of voluntary service. He was proud of the fact that he and his son John were the only two father/son recipients in the Order of Australia Association. In 1949 Ron commenced 34 years of employment with the Department of Civil Aviation and upon retirement on medical grounds in 1982 was the Director of Aviation Security.

Ron often accompanied John to meetings of the Friends of The Australian Arid Lands Botanic Garden at Port Augusta and to Botanic Garden conferences. The native flowers including Sturt Peas on his coffin were from the Garden at Port Augusta.

Ron made many friends at Port Augusta, and many chats were enjoyed; we shall remember him with great fondness.

By J. Owen & C. Nayda



Arid Festival, "Life on the Edge"

At AALBG, Saturday 13th September – 18th October; sculptures on display.

Arid Smart Spring Gardening Expo

At AALBG, Sunday 14th September

Birdlife Australia Club, Port Augusta Group, Sunday Field Trips

18th May, Horseshoe Range. Meet at Quorn Pool.

15th June, Carriewerloo Station.

Meet at the start of Stuart Highway.

13th July, Mundallio Station.

Meet at Carlton Parade Cemetery.

Meet at 8.00am. For further information contact: 8642 5723 Peter, 8648 6630 Greg, 0419863834 Bernie.

Australian Arid Lands Botanic Garden

Recent inclusions to the naturally occurring species lists.



Amyema miraculosa ssp. boormanii
Photo by B. Haase

PLANTS

Since May 2013, when the last update of the naturally occurring plants list was done, there have been four more plants found on the site. One is a new native species, but unfortunately two of them are introduced weed species and one is a questionably native species.

Amyema miraculosa ssp. Boormanii (FLESHY MISTLETOE) is native mistletoe which grows on host plants from the genera, Santalaceae, Myoporaceae, Casuarinaceae and Loranthaceae. It was found growing along the entrance path on a *Myoporum platycarpum* (SUGAR WOOD).

Dittrichia graveolens (STINK WEED), an introduced weed species which was found along the road side to Red Cliffs Look-Out Car Park.

Solanum nigrum (BLACKBERRY NIGHTSHADE) is an introduced weed which was found in the Eremophila Garden and also where the waste water was being used for irrigation. The blackberries from this plant are regarded as edible in some wild food books and as poisonous in other books. I would play it safe and consider it as poisonous, as with many other *Solanum* species.

Pseudognaphalium luteoalbum (JERSEY CUDWEED) is in the questionably native plant category. It was previously regarded as a native, but is found world wide and could be an introduced plant.

MAMMALS

The last list of mammals on site was in the Friends Newsletter for May 2012. Since then two more species have been confirmed to be in the A.A.L.B.G.

Notomys mitchelli (MITCHELL'S HOPPING MOUSE)
This hopping mouse was expected to be found in the area because it is relatively common and has been found in this region. Unfortunately it was caught in a mouse trap in the nursery and was dead. We have since replaced all the mouse traps with live catching types of traps.

Tachyglossus aculeatus (SHORT BEAKED ECHIDNA) has been seen and photographed by staff and visitors in the garden areas and in the sandhills area. Their diggings are scattered throughout the site, but most commonly in the denser plant growth areas where there are more termites and ants to be found. There have been two released on the site in the past. Several years ago, one from Quorn, which had been run over by a lawn mower and had its spines levelled off on its back; and another last year, which was found in a Pt. Augusta yard and let go on site to protect it from domestic animals and road traffic. There have been others seen on site, younger than the first released one, and sighted before the second one was released.



Tachyglossus aculeatus - Photo by B. Haase



Simoselaps bertholdi - Photo by B. Haase



Rhynchoedura eyrensis - Photo by B. Haase

REPTILES

The last list of reptiles found on the site was in the Friends Newsletter for February 2013. Since then two more species have been found.

Simoselaps bertholdi (SOUTHERN DESERT BANDED SNAKE) is a small, burrowing, poisonous but harmless snake and was found whilst mulch was being spread in the new Eremophila Garden extension. It feeds on small lizards which are common on the site.

Rhynchoedura eyrensis (EYRE BASIN BEAKED GECKO) was found very recently near the main road entrance to the work compound and was a young juvenile; which means they are breeding in the area. They live under ground litter and in spider or insect holes and feed largely on termites.

I hope you find this update of interest.
Bernie Haase

Book Review *by Chris Nayda*



Lysiana exocarpi Harlequin mistletoe - Photo by C. Nayda

MISTLETOES of SOUTHERN AUSTRALIA

A long-awaited book which will dispel all misunderstandings about mistletoe. I found it fascinating and couldn't put it down. Easy to read with excellent photos, and the illustrations by Robyn Hulley were wonderful.

Did you know that Australia is home for 91 species of Mistletoe? The author David Watson has had an interest in mistletoe since he was young and this shows when you read his book.

BOOK AVAILABLE AT AALBG Visitor Centre.
Use your *Friends Card* for discount.



My Old Mate The Mulga *by Des Nelson, Alice Springs - Part 1*

I read this article in the Acacia Study Group Newsletter and thought it was well-worth sharing. We thank Des Nelson for allowing us to include it for you to enjoy. - Chris Nayda.



Mulga - Photo by C. Nayda

Des Nelson has written an account of his association with his all time favourite tree - the Mulga. The paper was too long to reproduce in its entirety in our Newsletter, and the following extract is about the first quarter of the paper. The paper was written in 2008.

An Australian Aboriginal proverb proclaims, "You do not know the country - the country knows you". That describes the relationship between the Mulga country and myself.

A small arid zone tree, Mulga (*Acacia aneura*) is found over the best part of one million square kilometres of inland Australia. In much of this area it occurs in dense thickets through which travel is slow and difficult. Great care is needed when pushing through in a tired-vehicle to avoid punctures from stakes. Mulga trees grow to about four metres in height with straight trunks clothed with thin, upward pointing foliage which allows filtered light to penetrate.

My personal experience with mulga began when, at age eighteen I travelled to Elkedra cattle station, 500km north east of Alice Springs, in 1953. I was a jackaroo, with much to learn. There were many occasions when it was necessary to camp in the bush in connection with station duties. Around the run there was a variety of vegetation types. The one that immediately appealed to me was the mulga country. When entering alone into the dense mulga scrub one becomes enclosed in a secluded, private world. Deep in the mulga on calm, quiet days I experienced a feeling of relaxation and enchantment.

When chances arose I went for longer and longer walks into the fascinating mulga scrub. Although I became good at finding my way in the bush, I found it useful to drag a stick to make a scratch in the ground, making it easy to retrace the way. I learned that the trunks of some mulgas, especially those growing in depressions where some moisture was retained, bore a growth of lichens. These occur on the southern side of the tree and make a handy means of orientation.

Mulga is an asset to a station. The dry wood is a common source of firewood. Thousands of mulgas have fallen to the axe or the saw for use as fence posts. Posts, and timber cut for other purposes were cut from living trees. The mulga sap acts as a deterrent to termites. Mulga posts more than half a century old can be seen, still intact. Mulga was used for wall logs and roof bearers; the grain is attractive, with yellow sapwood and dark brown heartwood. It is used in the manufacture of a multitude of artefacts, book ends, plaques and so forth. Churches in Alice Springs have crosses made from mulga wood. The trees are variable in form. One is known as Christmas-tree mulga and is used for the ceremonial tree due to its neat conical shape. Mulga foliage is grazed by livestock, more so during periods of drought.

Mulga is very important to Aboriginal people. When dry, mulga is a major source of firewood. From the living timber they show much expertise in manufacturing an array of tools, weapons and utensils. Long, straight stems are made into spears, an easy task, but some other items require carving and shaping. Thick, solid branches can produce nulla nullas; thinner ones can be made into digging sticks, used as short crow bars. The manufacture of boomerangs requires great expertise and patience. Two types were made on Elkedra. One has a simple curve while the other is furnished with an upturned spur from its end. It is a formidable weapon, able to be used as a cutlass at close quarters. Boards cut from mulga wood are made into ceremonial items such as churingas with special carvings, and bull roarers that are small, flat broad pieces of wood with pointed ends. When these are spun at the end of a length of string they produce a loud, buzzing sound. Sheets of mulga bark are used to enclose religious artefacts mixed with mulga foliage. The items remain protected in the branches of a tree until required for use.

Another very important facet of mulga and its environs is its source of food items. After good rainfall, mulga trees bear a profusion of pods. Large quantities of the small dark seeds are collected, ground on stone mills, then made into small nutritious cakes. A little parasitic wasp causes small edible green galls known as mulga apples. A scale insect infests some stems, covering them with a red encrustation that is coated with a pleasant tasting honey-like exudation. A popular food in mulga country is honey pot ants. These inhabit underground chambers in which certain ants hang from the roof. They are larders for the ant community, being filled with nectar until their abdomens swell to the size of a small grape. These are tasty, being sweet, with a faint acidic tang. Various plant foods grow in the mulga. One of my favourites is the

bush bean (*Rhynchospora linearis*) which grows on a slender vine that climbs into the trees. It is not very common but when found it is a tasty bonus.

The mulga scrub supports much wildlife - birds, kangaroos, dingoes, reptiles, insects, spiders and other invertebrates. The spiny tailed gecko is a soft skinned lizard which has a unique defence. Once, as I attempted to pick up one of these lizards, it cocked its tail up and then it ejected a white sticky fluid onto my hand. This caused no damage, but was quite a surprise. It is a defence mechanism that would deter an attacker.

Several species of termite are present in the mulga. The most notable one is the mound builder, (*Amitermes* *viridus*) which feeds mainly on dry grass. The mounds provided building material for pioneers who pounded them to powder, and when mixed with water, was used for mortar in wall constructions, as floor surfaces, tennis court surfaces and, from personal experience, to make water proof bottoms for water tanks.

Notable among the ant species is an active little jumping ant which defends itself by cocking its abdomen upwards and exuding an odouriferous fluid.

In the heat of summer a small black cicada calls at about dusk, and after sunset, sounding like a small didgeridoo.

Among the prolific beetle fauna are a large grey weevil, and a species of black scarab with a clever camouflage; it looks like a fresh kangaroo dropping.

A very large spider (*Selenocosma stirlingi*) digs its tunnel in the mulga country. Its home is a vertical tube about 40cm in depth, that then curves upwards a short distance, terminating in a roomy space in which the creature can rest without being cramped; called "Barking Spiders", their "voice" is a chirping sound. They roam about in the night, more so during warm, humid weather, presenting an alarming sight when they appear in the light of a camp fire - but are said to be harmless.

Part 2 continued in our next Newsletter.



Mulga - Photo by C. Nayda

Contacts

President: John Zwar Phone Home: (08) 8338 6658 Work: (08) 8372 6876 Email: jzwar@bigpond.com

Treasurer: Geraldine Davis Phone: (08) 8648 6399 Mobile: 0418 447 020 Email: glgadavis@bigpond.com

Secretary/Editor: Christine Nayda Phone: (08) 8642 4684 Mobile: 0434 717 382 Email: b.nayda@bigpond.com

PO Box 2040, Port Augusta, South Australia 5700 Email: friends@aalbg.sa.gov.au

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Spring Garden Seed Growing *by Deon Schumann*



Spring Flowers in the AALBG Courtyard
Photo by B. Reichstein.

Poached Egg Daisy (*Polycalymma stuartii*)

The Poached Egg Daisy is one of the most abundant and conspicuous plants on the sand plains and dune fields during good seasons. It is a stout, erect herb 10 - 50 cm in height. It flowers in spring and in years of good autumn rainfall preceding a dry summer, the plant is sometimes so abundant that patches appear as a sea of yellow and white.

Golden Everlasting (*Xerochrysum bracteatum*)

The Golden Everlasting has wide distribution in its yellow flowered form. It is found from coastal cliffs to sub alpine regions, wet and dry inland forests and mallee communities, occurring on sands, loams and shales. This wide range of natural environments is responsible for its ease of cultivation. It is an erect annual, growing to 45cm in height, flowering occurs during spring and summer.

Both of the above plants flowers serve as food for various larvae of Lepidopterians (butterflies and moths), hoverflies, native bees, small beetles and grasshoppers.

PLANTING GUIDE: Daisy seed is best germinated by direct sowing in the garden. Seed is to be sown in early autumn, for a spring / summer flower display. Light is a pre requisite for the germination of many of the arid and semi arid region annual species. Sow seed on the soil surface, and immediately water gently with a fine spray. Many daisy seeds develop methods of keeping themselves in close contact with the soil surface when they are wet. (It is best not to mulch the garden bed until after the seeds have germinated and seedlings are actively growing). Water with a fine mist spray every day until germination. Germination takes place in 5 -14 days.

Sturt's Desert Pea - (*Swainsona formosa*)

The Sturt's Desert Pea is one of Australia's best known wild flowers. It is native to the arid regions of central and north-western Australia and its range extends into all mainland states with the exception of Victoria. It is famous for its distinctive blood-red leaf-like flowers, each with a bulbous black centre or 'boss'.

The flowers are about 9cm in length and grow in clusters of around 6 florets on thick vertical stalks, which spring up every 10 -15 cm along the prostrate stems, which may be up to 2 metres in length. Generally considered to be an annual, it has been known to persist as a perennial if conditions are favourable. If the roots are left undisturbed, flowering may resume in the next season.

PLANTING GUIDE: Remove the seed of the Sturt's Desert Pea from the long grey pods. Pods may need to be cut in half to assist in removing the seed. Soak seeds overnight in a cup of hot water (not boiling). Then drain and sow swollen seeds. Leave unswollen seeds in the cup and refill with hot water and leave the seeds to soak for another 12 hours until they swell, or lightly scratch the outer shell with fine sandpaper, on the opposite side of the eye, then soak again until swollen. Seedlings germinate in about 10 days. Plant the seed near the soil surface as too deep a planting can cause the seed to rot.

Once germinated, seedlings quickly establish a deep taproot (vital for desert survival), this means that if domestically grown the seed should either be planted in their intended final location or transplant as soon as possible after germination. They DO NOT tolerate disturbance of their roots. Once established in the garden or in a large pot with a native potting mix, they should be kept moist and fertilized regularly with a slow release low phosphorous native plant fertilizer with fortnightly applications of Seasol or Thrive as they are nutrient hungry whilst growing. Sturt's Desert Peas can be susceptible to fungal attack if they are watered overhead. Prior to planting, place a piece of PVC pipe 30 - 50 cm in length into the soil adjacent to the planting site and regularly fill the pipe with water or liquid fertilizer, so the plants are watered at the root zone. Plants can be watered at ground level but try not to wet the foliage during watering especially in humid conditions. Protect seeds from ants and small seedlings from snails and slugs.



AALBG Plant Stall at the Laura Fair
Photo by B. Haase.



Friends working on the AALBG Plant Stall at the Laura Fair in April - Photo by B. Haase.

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