NEWSLETTER

SUMMER 2012-13

NUMBER 74

FRIENDS OF THE WAITE ARBORETUM INC.

www.waite.adelaide.edu.au/arboretum

FORTHCOMING EVENTS

WHAT'S ON AT URRBRAE HOUSE

Annual General Meeting

7.30 pm Monday 15 April

Urrbrae House drawing room.

Speaker: Dr. K. Hogendoorn: Blue banded native bees.

Guitar and Oboe recital

Jacob Cordover

Monday 13 May in the Urrbrae House drawing room.

ALL ENQUIRIES & BOOKINGS

To Beth Tel. : (08) 8357 1679.

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Angophora hispida. Photo Eileen Harvey

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FROM THE PRESIDENT

With 2013 around the corner we can look back on 2012 and its treatment of the Arboretum and associated events with a good amount of satisfaction.

The recent joint Christmas party concluded the year with its return to Urrbrae House after being held in the garden as a trial last year.

The state of the Arboretum is in good shape with much of the credit due to Andrew Walters our groundsman/treasurer who has been with us for just on a year. His enthusiasm and involvement has been inspiring to us all and especially complements the ongoing work which Jennifer, our Director, so capably performs. The new plantings are establishing well, despite the dry spring, which followed a very wet winter.

With such extensive and significant collections, this year's annual Treenet Symposium was again able to make good use of yet another aspect, this time using the theme "Trees of California".

David Lawry presenting cheque for $4000 to Henry in recognition of the FWA volunteers' help at the 2012 Treenet Symposium. Photo Eileen Harvey

We recently hosted another important group, The Mediterranean Gardens Society Conference (an international organization) when they toured the Urrbrae House garden and the Arboretum. This tour concluded in the north-western section where a koala and her joey were a highlight, especially for the overseas people. In mentioning this often overlooked section of the Arboretum, one cannot ignore the developing under-story plantings along with newer trees, which complement the three old, relic grey box, *Eucalyptus microcarpa.* Impressive also is the gradual spreading of endemic native grasses. This has been assisted by timely mowing of the introduced grasses just before seed set, thus enabling the later seeding natives to have less competition and easier establishment.

Also this year, the construction of the implement shed has meant that the equipment can be safely stored and maintained in a separate facility in the Arboretum. Previously, storage was in the Battery House adjacent to the Volunteers' Room.

At the last Committee meeting the decision was made for the purchase of a Vermeer chipper and also an attachment for an existing machine for mowing under trees. These are expensive outlays; the mulcher will save much double handling as the prunings from trees can be treated on the spot and the resulting mulch distributed where needed. We have been in a position to make these purchases thanks to our fundraising, especially the Gala Truffle Dinner.

Also at the last meeting our best wishes went with Professor Mark Tester who leaves shortly for a significant overseas posting in the Middle East. More detail can be found in this Newsletter. We are indeed sorry to lose Mark's worthwhile and constructive contributions to the Committee over the last year or so.

Coming up in the 2013 we have the AGM scheduled for Monday 15th April with our guest speaker Dr. Katja Hogendoorn giving us an insight into the blue banded bees and their importance in crop pollination.

Then in May, Monday the 13th Jacob Cordover will return to Australia and Urrbrae House this time joined by his wife Laura to present an oboe and guitar recital. Please note both these events in your diaries.

Regarding membership; the letterboxing in nearby streets will be taking place soon and signage placed on strategic gates into the Arboretum will promote the positives of being involved in any way, with this irreplaceable and unique community asset.

I would like to take this opportunity to wish everyone a joyous and happy festive season.

Henry Krichauff

New Members:

We warmly welcome the following new members:

Michelle Harvey and Family

Mr Ian Thomson and Family

Christian Davidson and Family

Dr Phil and Mrs Jo Walters

IN THE ARBORETUM

FROM THE DIRECTOR

The Rose Garden. Photos this page Eileen Harvey

It was a pleasure to welcome the 84 delegates attending the International Conference of the Mediterranean Garden Society to the Arboretum and Gardens on 27th October. The Rose Garden looked stunning and the visitors loved the Garden of Discovery which the South Australian branch of the MGS have adopted as a project.

SAMGS members working in the Garden of Discovery.

SAMGS Branch head, Merilyn Kuchel, sent a lovely thank you note from the MGS which accompanied a cheque to the Friends for $375. Each year the International MGS donates €500 to the host Branch for a garden of their choice and the SAMGS nominated our Garden of Discovery. The funds will be used for signage at the entrance.

Arboretum Guides Bob Boardman, Peter Nicholls, Eileen Harvey, Jenny Birvé, Diarshul Sandhu and Henry Krichauff conducted walks for the highly appreciative audience, highlighting some our more uncommon trees from South Africa, Canary Islands, southern California and other Mediterranean climates.

The walks terminated in the NW Arboretum where volunteers Marilyn Gilbertson, Alan Retallack and Margaret and Ian Oliver have done an excellent job of re-establishing the Black Forest understorey species.

NW Arboretum with Black Forest understorey species.

Our overseas visitors were captivated to see a family of koalas, the female with a little one in her lap. A ringtail possum made an appearance, but there was no sign of the kangaroo which Marilyn spotted one morning amongst the native grasses.

It is wonderful that native fauna are returning to the Arboretum and timely to remind Friends that, to protect wildlife, dogs are not permitted.

Dear Jennifer,

On behalf of all the MGS members who participated in the visit to the Waite Arboretum on October 27th, I want to thank you and all the guides for a delightful afternoon. All the members were excited and inspired by the whole campus, the Garden of Discovery, the rose gardens and the marvellous collection of trees. We have received many appreciative emails and cards. Several mentioned the thrill of seeing a koala – so thank you for organising that too!

Thank you again

Merilyn Kuchel

One of the koalas seen by MGS members in the revegetation area. Photo Merilyn Kuchel

On the 28th November I participated in the Great Koala Count and scoured the Arboretum. I found only the male in the NW corner just one tree away from where he was sitting the month before.

Jennifer Gardner lending a hand with the Palm and Cycad Society working bee.
Photo Christine Froehlingsdorf.

In December, the Palm and Cycad Society held a working bee and carried out weeding and watering of the collection. Despite the very hot weather members prepared planting areas east and west of the watercourse and planted two *Syagrus* species and a *Dypsis* species. The collection is developing very well thanks to all the hard work of the members and Andrew Walters.

Members of the Palm and Cycad Society working in the collection. Photo Christine Froehlingsdorf.

At the last FWA Committee meeting, Professor Mark Tester informed us that he was retiring from the Committee to take up an exciting overseas posting. Henry thanked Mark for his past support of the Arboretum and offered everyone's congratulations and best wishes on his prestigious new appointment at the King Abdullah University of Science and Technology in Thuwal, Saudi Arabia (http://www.kaust.edu.sa). Mark told us briefly about his proposed research there into crop irrigation with partially desalinated water and the long-term benefits of this for world food production, ground water protection and energy saving. He looks forward to the opportunity to work with other world class scientists and apply his research in the fields of the molecular and cellular mechanisms that enable plants to thrive in high salinity or low nitrogen availability.

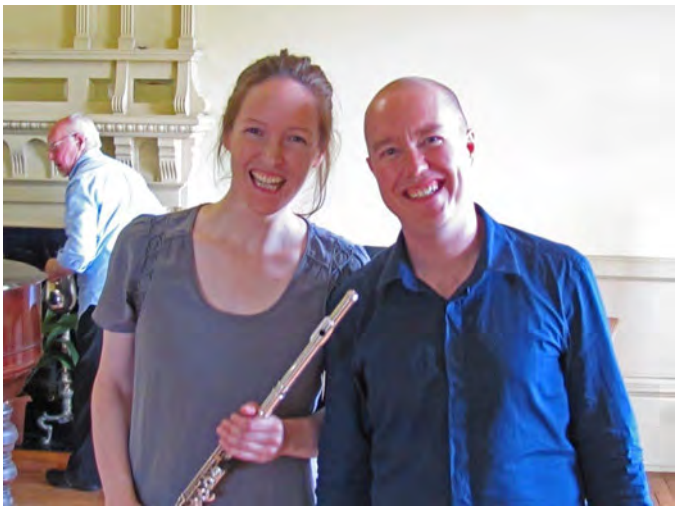
Thanks to recent generous donations from Anna Cox and Judy Symon, and a pledge from the Friends I have just purchased a slasher which will facilitate grass cutting under tree canopies and a custom-made soil injection lance which will enable us to deliver organic nutrients and other treatments to improve tree health. In January I will purchase a chipper which will enable us to promptly process all deadwood and fallen limbs on site, to provide high quality weed-free mulch.

I extend my warmest thanks to all the Friends especially the hard-working Committee, the tireless Tuesday morning garden and Arboretum volunteers, the guides, the donors, David Lawry and the Treenet team, my colleagues in Urrbrae House and Community Engagement and Grounds person Andrew Walters for their support and enthusiasm during the past year. It is greatly appreciated.

Best wishes for the New Year.

Jennifer

FLUTE CONCERT FOR FRIENDS OF WAITE ARBORETUM



Jane MacKenzie, flute, and Leigh Harrold, piano, after the concert. Photo Brian Richards

Members of the Friends of the Waite Arboretum were treated to a spectacularly successful concert during the afternoon of 16 December in the drawing room at Urrbrae House.

Jane MacKenzie, flute, and Leigh Harrold, piano, started playing together in 2000, when they were both studying their respective instruments at the Elder Conservatorium. Jane went on to complete a Bachelor of Music and Licentiate diplomas from the AMEB and the ABRSM, although she now works by day as a physiotherapist. Leigh has recently been awarded a Ph.D. in piano performance by the Elder Conservatorium, and concurrently works for the Victorian College of the Arts and the Australian National Academy of Music.

Jane MacKenzie chatting to members of the Friends in the Urrbrae House drawing room. Photo Brian Richards

Although their lives have taken different paths, Jane and Leigh still enjoy making music together and sharing their enthusiasm for music with audiences. They completely entranced the audience in Urrbrae House with their program of beautiful and complex musical arrangements. The program contained music from Johann Sebastian Bach, Frank Martin, Lowell Liebermann, Olivier Messian and Joseph Jongen. The concert was made even more enjoyable for those present by an erudite and delightful description of the pieces from both Jane and Leigh.

Beth Johnstone

Leigh Harrold, Jennifer Gardner and members of the Friends. Photo Brian Richards.

COMBINED FRIENDS CHRISTMAS PARTY

The practice of having a combined Christmas party with the Friends of Urrbrae House and the Conservation Reserve was continued on 10 December this year. It was noticeable that fewer members attended. Those who were present enjoyed the opportunity provided to renew old friendships and, in some cases, make new ones. Perhaps it might be timely for the groups to have some discussion about future functions.

One of the exciting things noted on the night was the beautiful, newly repolished flooring. Guests were welcomed by Amanda Jackson. Martyn Evans expressed thanks to both staff and volunteers. Both Henry Krichauff (for the Arboretum) and Yvonne Routledge (for the House) gave short speeches. Jennifer Gardner, Director, spoke on behalf of the Friends of the Waite Conservation Reserve and each of these thanked both staff and volunteers for their efforts for the year.

Beth Johnstone

ALERCE - COMMON NAME CONFUSION

Last week, Jennifer advised me of some trees which had died and had been felled. On Thursday December 6th, I took my trailer and collected (salvaged) some material to pass onto fellow "woodies" for future use. Amongst the wood was some from the two *Tetraclinis articulata,* or alerce trees (numbers 1254 and 1278, both planted in 1968*)*.

Tetraclinus articulata, Arboretum specimen #1023, planted 1989. Photo Eileen Harvey

From my experience as a member of the International Wood Collectors Society, I know that alerce is a rare and special wood and therefore a precious tree. So began some confusion with the common name. The alerce that I had read so much about was a completely different tree – *Fitzroya cupressoides.* So began an interesting search into the two trees. I begin with the species grown in the Arboretum.

Alerce – *Tetraclinis articulata*
Widely known as arar, araar or Sictus tree. It is also known as *Thuja articulata (syn)*, citron wood, sandarac, sandarac tree or Barbary thuja. In "Timbers of the World, Part 6" it is named as thuya. On my last visit to London, I visited a craft market near Greenwich, and as usual sought out stalls selling crafted wood. I was attracted to one particular stall which had an impressive display of woodturning, almost all of which was made from a wood unknown to me called 'thuya' burl. The wood itself was very attractive and each piece purchased was accompanied by a statement about the wood, none of which had any botanical reference concerning the tree, its wood or its origins. In the reference cited above, thuya is said to be a valuable craft wood, although the burls only are sought after, because of their intricate, curly grain patterns and varied colours. The same reference states that the plane timber from the trunks and stems is used for constructional purposes, where it is known as alerce or alcerce, but this name should not be confused with the famous alerce from Chile *(Fitzroya cupressoides)*.

Common names can be very confusing. The name thuya has no true connection to the genus *Thuja*, which contains the valuable commercial timber, Western red cedar, *Thuja plicata,* although both *Tetraclinis* and *Thuja* are in the Family Cuppressaceae. Thuya is from the Greek, meaning sacrifice, because they used an oil distilled from it as incense in their religious ceremonies. Some churches still use it and as sandarac oil it is valued for medicinal uses.

Tetraclinus articulata foliage and fruit .

Photo Eileen Harvey

Tetraclinis is monotypic i.e a genus of one species only. It is endemic to the western Mediterranean region, north-western Africa in the Atlas Mountains, Morocco, Algeria and Tunisia, with two small outlying populations on Malta, and near Cartagena in southeast Spain. It grows at relatively low altitudes in a hot, dry subtropical Mediterranean climate. It is an attractive tree, having similar form and foliage to many of the cypresses.

The fruit however are very distinctive. They are four sided cones – thus the *tetraclinis.* The four facets of the cones have beautiful pale but bright blue bracts. The tree in the arboretum is in full colour now. It can be found in the north western corner, close to Fullarton Road. It is the national tree of Malta, where its wild occurrence is restricted to about 100 trees in the northern part of the island of Malta. In Malta it is now being used locally in afforestation projects, where it is known as Għargħar (derived from the Arabic name Araar).

Tetraclinus articulata fruit. Photo Eileen Harvey

Tetraclinis is included on the IUCN (international Union for the Conservation of Nature) Red List, and although the species as a whole is "lower risk, not threatened," the Maltese and Spanish populations are listed as highly threatened. There are a number of web sites which advertise the wood (as Thuya burl) for sale. One such site from the US which trades under "Exotic Wood Group" talks about the difficulty in obtaining the wood, claiming that unfortunately over harvesting has caused the Moroccan government to prohibit the export of Thuya burl wood and then finishes up with the rather glib statement – "So, you may ask, how did we get our stock? Well, we'll never tell!"

The vase showing grain and figuring.
Photo Ron Allen

Thuya Burl: *Tetraclinis* is one of only a small number of conifers able to coppice (re-grow by sprouting from stumps), an adaptation to survive wildfire and moderate levels of browsing by animals. Old trees that have sprouted repeatedly over a long period form large burls at the base, known as lupias. These are often called root burls (or burrs in the UK) which we call lignotubers. One of the problems with the exploitation is that the root burl is the only part with commercial value – so the rest of the tree is wasted. The figure in the root burls is probably caused by the number of small roots which provide the famous 'birds eye figure' like that in bird's-eye maple.
The resin, known as sandarac, is used to make varnish and lacquer; it is particularly valued for preserving paintings.
The wood is naturally resinous and oily, and has a strong but pleasant cedar-like aroma — which is especially noticeable when it's being worked. Although the wood I collected was from a dead tree, it was still very wet – more than 30% according to my moisture meter. However, I could not resist the temptation to put some in the lathe to experience the wood. It is quite beautiful and the aroma emitted is as stated. The photo of the vase amply displays the beauty of the wood. This piece will probably crack as it dries out but serves the purpose as a pictorial representation for this article. The wood has similar colours and aroma to Western Red Cedar, but is heavier, has much finer grain and much more interesting figure.

Alerce (*Fitzroya cupressoides*). Finally, a few comments about the precious Alerce from South America. It is also monotypic and belongs to the Family Cuppressaceae. It is a large slow growing tree from the swamps of southern Chile and has also suffered from over exploitation, so much so that in 1976 the species was declared a National Monument, and the cutting of trees was prohibited. The naturally slow regeneration of this species means that any timber harvest is unsustainable and despite logging bans the species has not shown any sign of recovery. International trade is banned by its listing on Appendix I of the Convention on International Trade in Endangered Species (CITES). It is also on the IUCN red list. The wood is truly beautiful and very much like that of the 'Thuya burls'.

References.
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Timbers of the World 2 – South America
Timbers of the World 6 – Europe
(Timber Research and Development Association, Buckinghamshire, England)
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http://www.conifers.org/cu/Tetraclinis.php
http://www.iucnredlist.org/details/30318/0
http://www.arkive.org/sandarac-gum-tree/tetraclinis-articulata/
http://www.arkive.org/alerce/fitzroya-cupressoides/

Ron Allen

AUSTRALIAN NATIVE CITRUS COLLECTION

Australian native citrus collection. Photos Eileen Harvey

Did you know that Australia has more remaining wild species of the genus *Citrus* than any other part of the world? Australia is not the centre of genetic diversity but it is in the unique position of having wild populations of native species which remain, to some degree, intact. This is in stark contrast to other areas such as Southern China and North East India, close to the centre of origin, where wild species have unfortunately been lost.

Australia has six species of *Citrus.* In most parts of the centres of genetic diversity/origin, namely in China and India, humans have been cultivating citrus plants for thousands of years, selecting varieties that are better yielding, have better flavour or other desirable attributes. This is demonstrated by the ease with which citrus hybridises resulting in a dilution of the wild species. The phenomenon called apomixis (seed production without fertilisation) adds to this loss of diversity. The fruit yields seeds that have within it multiple embryos the vast majority of which are clones of the female parent as opposed to sexual or zygotic embryos. It would need another article to discuss the various effects of this phenomenon.

In the Arboretum we are fortunate to have representatives of five of six the Australian *Citrus* species: *Citrus australasica*, *Citrus garrawayae*, *Citrus australis*, *Citrus inodora* and *Citrus glauca.* The Arboretum is providing valuable conservation of this genetic material *ex situ* (off site). This has come about because of the generous donation made by Paul Coates from his own personal collection over the past few years.

For some time the first four species were separated into the genus *Microcitrus* by the botanist Walter Swingle on account of their very small dimorphic leaves and small flowers and *Citrus glauca was placed* in the genus *Eremocitrus,* meaning 'citrus of the desert'. Thus according to Swingle, *Microcitrus* and *Eremocitrus* amongst others would be considered separate genera within the sub-tribal group C, True Citrus fruit trees in the botanical classification of citrus. Thankfully, recent taxonomic reviews have asserted that these genera be returned to the *Citrus* genus (Mabberley, 1998) and that *Microcitrus* and *Eremocitrus* now be synonymised. For the purpose of this article I will follow this latest development.

The remaining Australian *Citrus* species not in our collection is *Citrus gracilis* which was the subject of Paul Coates' research which is suspended while he has a teaching position. This species is endemic to the Northern Territory in the Darwin area. Paul believes that its conservation maybe under threat because of a change in the way fire has been used since white settlement and development.

Anyone inspecting the Waite Arboretum's Australian Citrus collection will notice some variation within each species. In many cases this variation reflects the variety in the wild populations and in other cases the variation is due to the way these specimens have been propagated by our donor. Some are small seedlings; others have been grown from cuttings, whilst others are grafted onto vigorous citrus rootstocks. There are several other citrus trees in the collection but these are hybrids which space prevents me from discussing.

Citrus australis (syn. *Microcitrus australis*), Australian round lime or dooja is first group of citrus species plants you come across if you approach the citrus collection from along the track from Gate 13 and to the east of the large *Pinus pinea,* stone pine. Elliot and Jones (1993), describe this species as a tall shrub/small tree (4-12m x 2-5m) with a dense thorny form; small elliptical to ovate leaves, dark green on top and paler underneath. The flowers are small white or pink about 1cm in diameter and are solitary in the axils and, like most citrus, fragrant.

Citrus australis, Australian round lime, fruit.

Currently some of the *C. australis* specimens in the collection are carrying fruit which is a small round rough skinned 2-4cm lime. These limes will ripen to a yellow colour and are edible with a strong acidic pulp. *C. australis* is found in the south east of Queensland in lowland rainforests and riparian sites (Elliot and Jones, 1993).

Citrus australasica (syn. *Microcitrus australasica*), Australian finger lime is probably the best known of all our native citrus and the second grouping of plants on the pathway, in our collection. The finger lime is similar in form to the Australian round lime. It is a medium to large shrub (4-8m x 2-5m) displaying considerable variety in its natural habitat. It has small 2-4cm x 0.5-1.5cm ovate to obovate leaves (Elliot and Jones, 1993). The flowers are approx. 1.2cm diameter, white or pink and fragrant, similar with the Australian round lime. The fruit is on display on some of the specimens with oblong obviously finger shaped fruit ranging from 2.5–10cm long by about 0.5 x 1.5cm wide. The skin colour of the fruit ranges from green to greenish-yellow to black as some of the specimens reveal. The finger lime occurs in south-east Queensland in rainforest areas wetter than that of the Australian round lime and as far down as to northern New South Wales, north of the Richmond River. A variety located towards Mount Tamborine has green-reddish fruit with pink to red pulp. This has been classified as *Citrus australasica* var. *sanguinea* (Elliot and Jones, 1993).

Citrus australasica var. *sanguinea* fruit.

Citrus garrawayae (syn. *Microcitrus garrawayae*) Mount White lime is the third group of the Australian citrus species progressing southwards from the finger limes in our collection. These are small to tall rainforest shrubs 2-6m tall x 2-4m wide. They have a dense bushy habit in our collection, are not very thorny and have thick, leathery ovate leaves about 1-2.5cm in size. The flowers are white and fragrant and the fruit is ovoid; 1.5-2.5cm long x 0.5-0.8cm wide (Elliot and Jones, 1993). To my knowledge, no specimen has fruited yet. *Citrus garrawayae* is endemic to the Mount White region near Coen on the Cape York Peninsula.

Citrus inodora (syn. *Microcitrus inodora*), Russell River lime is a species endemic to the high rainfall (2000mm or more) rainforest area between Cairns and Innisfail in northern Queensland much of which has been cleared for banana and sugar cane production (Alexander, 1983). It is a medium to tall shrub 4-6m tall x 2-4m wide with large elliptical leaves approximately. 5-12cm long x 4-8cm wide. The flowers are white or pink about 1cm wide and, unlike most citrus, have no scent, hence its name. The fruit is an edible oval to oblong shaped lime which some specimens in the Arboretum display.

Citrus glauca (syn. *Eremocitrus glauca*), the Australian desert lime is located on the eastern side of the citrus collection. It has the largest distribution of all native citrus occurring from south-west Queensland and western New South Wales to isolated pockets in the north of South Australia around Port Augusta and the Flinders Ranges. All our specimens are grafted onto citrus rootstocks. In the wild these trees range from small thorny, suckering, multi-stemmed shrubs of 2-3m high up to 8-12m tall rounded trees. They have very simple narrowly elliptical leaves with very sunken stomates and with hairs, similar to features found in other arid dwelling plants (Alexander, 1983). This citrus species, according to Alexander (1983), has the shortest time (approximately 2 months) from flowering to fruit maturity of those species within the Subfamily Aurantioideae, the subfamily, in which most cultivated citrus and citrus relatives belong. Fruits are globular to oblate, ripen to a yellow colour are edible mostly seedless and have an intense lime flavour. Look out for them they will be coming soon!

C. glauca flower

Cultural notes

Some of you may have noticed that on many of these young citrus trees in the collection that the stems and some branches (those which have lost their leaves) have been painted with a white water based paint. This is a preventive measure as the young green bark on citrus are susceptible to sunburn. A reasonably hot day on the young green bark of a citrus tree can end its life. Hence the precaution.

So next time you are in the Arboretum have a stroll along the track and see if you can identify the different citrus species in our collection and watch them as they grow.

References

Alexander, D. McE (1983) *Some Citrus Species and Varieties in Australia,* CSIRO.

Coates, P (2012) Rare Fruit Society November Issue Summary of Paul Coates' talk at the September meeting.

Elliot, R and Jones (1993) *Encyclopaedia of Australian Plants* Vol 6 Lothian, 395-396.

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Andrew Walters

NORTH-WEST SECTION REVEGETATION PROJECT

The site of the Waite Arboretum, prior to European settlement, was formerly within an extensive area of *Eucalyptus microcarpa,* grey box, woodland referred to by the early European settlers as the Black Forest. The commencement of grazing in the site in about 1840 prevented the regeneration of indigenous woody plants. The removal of trees and shrubs and introduction of exotic grasses and broad-leaved herbs, (forbs) began to cause local extinction of indigenous species. Grazing of sheep continued until 1991. Subsequent management of the site was regular mowing.

By 1880 the Black Forest had been almost completely cleared and no intact grey box forest remains on the Adelaide Plains. In the NW section of the Arboretum are three remnant grey box which are thought to predate European settlement. In 1998 a vision was developed to reintroduce the native understory species around the remnant grey box and not to replant any of the introduced eucalypts or conifers when they reached the end of their natural lives. In this way the Arboretum would contribute to the survival of one of our original SA habitats.

Part of the revegetation area. Photo Ian Oliver

A Management Plan was prepared in 1998 by Andrew Crompton, biodiversity manager from Burnside City Council, at the request of Dr Jennifer Gardner, Director Waite Arboretum, and the Friends of the Arboretum. Over the past thirteen years, a small band of volunteers has worked towards the revegetation of the site using the plan as a guide. "*Propagation Instructions*" from Trees for Life and "*The Native Plants of Adelaide*" by Bagust and Tout-Smith have also been valuable resources.

The first stages involved the propagation and dense plantings of *Acacia pycnantha,* golden wattle, and *Allocasuarina verticillata*, drooping sheoak. It was hoped that the dense canopy formed would shade out the weeds and help prepare the area for subsequent plantings of shrubs and understorey plants. Following a visit to the area mid 2007, Andrew Crompton recommended that further plantings of *Acacia pycnantha* and *Allocasuarina verticillata* be made in order to thicken the current plantings, preparing the ground for more successful plantings of the understorey in the future.

Remnant grey box tree. Photo Eileen Harvey

Shrubs and understorey plants were the next group to be propagated and planted. Seeds have mainly been sourced from the Waite Conservation Reserve or from existing plants in the North West Arboretum. The smaller species have been clustered in plots for ease of management. Some shrubs have been planted close to the copses of *Acacia acinacea*, gold dust wattle, in an effort to thicken these up to provide habitats for small birds and other small creatures. Some 30 indigenous species now grow on the site. Six *Eucalyptus leucoxylon*, SA blue gum, and three *Xanthorrhoea quadrangulata*, grass trees, have also been planted as there were none on the site and they were known to have been part of the tall woodland habitat. Twenty *Eucalyptus microcarpa,* grey box, have been planted as the four remnant trees are declining in health.

Grasses have been the last group to grow by both propagating and direct seeding. There are currently nine indigenous species of grasses growing on site. The *Austrostipa* spp., spear grass, is now flourishing with *Chloris truncata,* windmill grass, *Austrodanthonia* spp., wallaby grass, and *Aristida behriana,* brush wire grass, beginning to spread.

A major attack on the weeds through spraying (glyphosate), grubbing/digging out and hand weeding has been continuously undertaken. Strategic grass cutting and mowing has also been regularly done. This has stimulated the growth of remnant native grasses. During the dry years the annual weeds were less prolific due to the flourishing of native grasses. In recent years, however, following good winter rains, weeds have grown thickly especially wild oats, cape weed, soursobs and

Acacia acinacea, *Allocasuarina verticillata* and grasses growing well. Photo Eileen Harvey

plantain. There does seem to be less couch and kikuyu, though.

The *Acacia acinacea, Dodonaea viscosa* and *Vittadinia* are self seeding very successfully. Experimentation with direct seeding of *Acacia pycnantha* several years ago seems to have had some success with new seedlings appearing. Volunteers are continuing to collect, propagate and plant seedlings with the aim of improving the diversity of vegetation although the planting of understorey plants and some grasses has had limited success.

A pleasing result of the revegetation efforts are the reappearance of native animals including many birds, koalas, blue-tongue lizards, native insects and most recently a kangaroo!

Marilyn Gilbertson

MEDITERRANEAN SOCIETY VISIT TO GARDEN OF DISCOVERY AND ARBORETUM

In October 33 international and 20 local members of the Mediterranean Garden Society (MGS) visited the Garden of Discovery and the Waite Arboretum as part of their annual meeting. It was the first time their AGM had taken place in the southern hemisphere.

Jennifer Gardner, Virginia Kennet, Mark Barnett and Jane Littleton planting the bottle tree in the Garden of Discovery. Photo Merilyn Kuchel

Two coach loads of members enjoyed a picnic lunch on the lawn by the Garden of Discovery and the Rose Garden. Members of the SA branch of the MGS have been replanting this garden over the past three years at quarterly working bees and with the assistance of Jennifer Gardner and the Tuesday morning Friends group. The garden is now looking nicely established and we were proud to show it to our visitors as an example of how to use native plants in a semiformal garden situation.

Our visitors were delighted to be guided through the Waite Arboretum by the volunteer guides and were

A group of MGS members hearing about *Dracaena draco* from an Arboretum guide. Photo Merilyn Kuchel

amazed to see many trees they recognised growing so well on the natural rainfall. The oak collection was much admired, as was the iconic *Dracaena draco*. An overseas member was so taken by Jennifer's brooch of the *D. draco* that she asked for one to be made and was thrilled when it was delivered to her only three days later. The Arboretum tours finished with great excitement in the grey box revegetation area when an obliging koala allowed itself to be photographed.

The feedback as the weary travellers finally arrived home in their European autumn has been sensational - full of compliments about our SA gardens, our plants, our hospitality, our meticulous organisation and most of all our wonderful volunteers, and your garden guides who generously gave of your time and knowledge.

Merilyn Kuchel
Branch Head, SAMGS

WHAT TO SEE IN JANUARY, FEBRUARY & MARCH IN THE ARBORETUM

Masses of nectar-laden blossom on the dwarf apple, *Angophora hispida* attract colourful beetles and numerous birds. Origin: NSW.

Rainbow lorikeets use their bristle-tipped tongues to feed on the abundant nectar of the weeping boer-bean, *Schotia brachypetala*. In late summer the flat, brown woody seed pods split to reveal large seeds with a conspicuous aril. Origin: South Africa.

The evergreen soapbark, *Quillaja saponaria,* has dense corymbs of white flowers followed by a dry fruit with 5 follicles each with 15-20 seeds. The inner bark can be used as a soap or shampoo and extracts are used in perfumery. Origin Chile.

The tough, needle-like leaves and corky bark allow the corkwood, *Hakea ednieana* to grow in drier parts of Australia. Origin: SA, NSW.

The deciduous desert willow, *Chilopsis linearis*, tolerates dry conditions. The large flowers range in colour from pale lilac to bright pink. Origin: Texas, Nevada.

The fruit of the foambark tree, *Jagera pseudorhus*, is covered with stiff bristles which may cause skin irritation. The fruit splits open to reveal three segments, each with a shiny black seed (see below). Origin: NSW and Queensland.

The Cape chestnut, *Calodendrum capense*, has dense masses of pink blossom (detail below) some of which develop into decorative woody fruits in autumn. Origin: South Africa.

The bella sombra (below) *Phytolacca dioica*, is a wide spreading shade tree often with a swollen base and multiple trunks. The numerous panicles of flowers develop into bunches of inedible yellow fruit (bottom). Origin: South America.

All photos Eileen Harvey.