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THE FRIENDS OF THE WAITE ARBORETUM INC.



NEWSLETTER

No. 13
SPRING 1997

Secretary
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GENERAL MEETING

Monday 14 July 1997 at 8 pm

This was the occasion of a joint meeting with the Australian Garden History Society and our President, Tony Whitehill, welcomed their President, Mrs. Margaret Sando and members with a brief summary of the aims and history of each body for the benefit of the other. The AGHS differs from our organisation in being a national body with over 1600 members. It aims to assist in the preservation of historic gardens for posterity and is interested in the early records of gardens and the history of plants used in them. On occasion they seek National Estate funding for associated projects.

Our speaker for this meeting was **Mr Darrell Kraehenbuehl**, a renowned conservationist and collector for the State Herbarium for over 40 years, a founding member of the Nature Conservation Society and of S.G.A.P and a member of the panel appointed to assess South Australia's significant trees. Added to this he is a photographer, collector of books and has interests in football, cricket and birds and still plays tennis but he is not so proud of that skill.

The presence of nearly 50 people on a wintry evening was testimony to the reputation of our speaker, who talked to us about the genesis of his recently and greatly acclaimed book *The Pre-European Vegetation of Adelaide: A Survey from the Gawler River to Hallett Cove*. Mr Kraehenbuehl attributed his devotion to botany to Professor Sir John Cleland whose articles, published from the 1930s onwards, described the flora of the Adelaide Plains. Sir John enumerated about 250 known species on the plains at that time and now there are at least 850 more.

We now know that we have a very diverse flora and this is thanks to our many different plant habitats supporting many different plant associations: reedbeds, sand dunes, creeks that flowed to the sea from the Mount Lofty Ranges and those that formed lagoons, open woodlands, small forests and mallee scrubs. In addition we are the meeting point of north and south, east and west. We have not only 250 endemics; we have a number of species of which the bulk of the population is in South Australia with a few pockets in Western Australia or Victoria. He reminded us that we have no need to denigrate our flora in comparison with that of other states.

Mr. Kraehenbuehl has taken many photographs over 50 years and he used many of them as slides to illustrate his talk. He is an impressive photographer. The collection is a

remarkable record of the flora that remains in parks and other relatively undisturbed places, including quandongs in West Terrace Cemetery. Some records of earlier plants for example *Banksia marginata* at Glenelg and grey box at Government House, came from paintings and sketches. He showed slides of plants now lying under factories and shopping centres and pictures of flowers and fruit hardly to be found these days.

The anecdotes which interspersed the talk underlined his alert observation of the ignorance which threaten our precious remnants of vegetation and we all applauded his work in rescuing and making known our heritage. Some parks have better records than others in retaining their plant families and Hallett Cove is particularly noteworthy in still having 200 out of 250 recorded species. One of the results of the publication of the book has been that the author is receiving letters and calls telling him of sightings of plants in new places. The evening illustrated the importance of documenting and publicising South Australia's flora.

The book may be obtained from good book stores including the North Lodge, administered by the Friends of the Botanic Gardens of Adelaide.

Anna Cox

FROM THE COMMITTEE

Meetings on 13 August and 16 October

- It was agreed that postcards would now cost 50 cents each or five for \$2. They are most attractive and we do ask you to buy them as they are a good way of promoting the Arboretum and its Friends.
- Friends' funds are to assist the TREENET project through a contribution to labels and an aluminium A4 freestanding sign at the most prominent TREENET site. Our logo will be displayed on all items.
- From now on this newsletter will list grants from our funds and the projects undertaken. Charles Greig, member of Woodgroup SA, has agreed to make a case to display items which we have for sale at Urrbrae House. Charles will donate his time and the Friends will fund the materials. The Committee has set aside funds to engage Cielens & Partners, Landscape Planners to prepare a detailed plan for the development of the Mallee Block including some paths, two statements of entrance and a distinct meeting place for guided walks.
- A happy event in our calendar was the 'From the Orient' dinner in July featuring fruit and vegetables from China and convened by Chef Ann Oliver and Botanist David Symon. Ann Oliver has volunteered to arrange another occasion featuring the plants of South America. The event raised \$1,766 profit for the Friends.
- The 'Devil's Own Wood' Exhibition by members of Woodgroup SA was also highly successful and raised \$1,189 for the Friends as well as generating new members and good publicity for the Arboretum.
- The University has underwritten the purchase of the Greg Johns sculpture, *Floating Figures*. Our President, Tony Whitehill, has written of our gratitude for this generosity. We also appreciate the grassing of the road at the eastern end of the Elm Avenue and thanked the Director for this. The Elm Avenue is looking glorious this spring and its health is much enhanced by the removal of vehicles beneath it.



DONATIONS

We are very appreciative of donations totalling \$500 received this year. \$285 of these were from people who were unable to attend the dinner and chose to give a donation rather than have their refund. The remainder accumulated from small donations made by members when they joined or renewed their subscription to the Friends.



THE ARBORETUM BRANCHES OUT

The Waite Arboretum has for many years been recognised by informed gardeners as a wonderful resource, a place where one could see trees growing with no extra water on soils comparable with one's own. Now, under Dr Jennifer Gardner, its present Curator, the Arboretum is being recognised as a resource by a steadily increasing number of organisations.

Some months ago, Jennifer, with the encouragement of her university mentor, arranged a meeting between representatives of various organisations which have an active or potential interest in using the Arboretum. These included local government, State government departments, TAFE, Urrbrae High School, the University and the horticultural and landscaping industries. This led to the formation of TREENET [reported on in this newsletter], under which has been initiated a series of trials on the suitability of trees chosen from the Arboretum for street planting.

The benefits of coordinating these investigations are turning out to be beyond expectation. While the Arboretum doesn't receive direct financial reward, this year as a result of this cooperation, 25 advanced trees have been donated by Lawrys Landscapes & Nurseries, and two new products GreenWell and DRiWATER are being trialed in the Arboretum. 20 GreenWells have been donated and installed around new plantings. Domenic Perre, who is manufacturing DRiWATER in South Australia, not only donated six dozen litres of DRiWATER but also assisted the volunteers in planting 70 seedling trees with this product. DRiWATER, as mentioned in the last newsletter, is a gel containing water which is released by the action of microorganisms in the soil. This should reduce the need for watering new plantings with a water truck (in the past a major cost for the Arboretum).

One of Jennifer's many strengths is her ability to inspire volunteers and a hard-working team perform numerous jobs behind the scenes. They also provide a valuable network of contacts with the wider community.

You might think that Jennifer works so hard that being Curator is more than a full time job but, in fact, this is only half her portfolio; the rest involves management and development of the gardens of the Urrbrae House Historic Precinct, and the management of the 105 hectare Waite Conservation Reserve. The Arboretum, at this stage of its development is very fortunate to be in the care of someone with such energy and enthusiasm, endless good humour and unlimited ideas. Your committee would like to say that we, with all the volunteers, have found our association with Jennifer most rewarding.

Anna Cox

NEW MEMBERS

A warm welcome is extended to Ms Lyne George, Eden Hills; Mrs Jacinta Mirams, Woomargama, NSW and Ms Judy Fakes, Burwood, NSW.

<p>Arboretum Website: http://www.waite.adelaide.edu.au/Arboretum/</p>
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NEWS FROM THE CURATOR

TREE PLANTING IN 1997

In addition to the 27 TREENET trees listed below, 100 other trees have been planted this year. These include 21 *Hakea* species generously donated by Max Ewer of Avenue Range, 19 *Eucalyptus* seedlings of known wild origin donated by Dean Nicolle from his Honours degree research, two specimens of the uncommon *Eucalyptus kybeanensis* donated by Werner Kutsche, 25 *Banksia* donated by Tina Maguire a Ph.D. student in the Dept of Horticulture, two *Aesculus californica* from seed sent by Prof. Hannibal in California, four Iranian pears from seed sent by Mehdi Sharifani, Iran and grown by David Symon, and several other species of interest. I am very grateful to all the people who continue to enrich the Arboretum collection by donating suitable uncommon material (especially that of known wild origin), material from research projects and new cultivars to trial. I would also like to record my thanks to all the hard working volunteers who helped to dig the holes and plant the majority of these trees.

TREENET

Two major TREENET (Tree and Roadway Experimental and Educational NETWORK) projects have been initiated. The first is to trial in the Arboretum advanced specimens of species which are new to the Arboretum but which are thought by TREENET members to have potential as street trees in South Australia. The second project is to undertake a series of street tree trials in conjunction with various metropolitan and rural Councils.

TREENET trials in the Arboretum

A TREENET site has been established to the south of the Mallee Block. Species being trialed include: *Acmena hemilampra*, *Buckinghamia celissima*, *Cupaniopsis anacardioides*, *Elaeocarpus eumundi*, *Elaeocarpus grandis*, *Elaeocarpus reticulatus*, *Elaeocarpus reticulatus* cv. Prima Donna, *Eucalyptus leucoxyton* 'Euky Dwarf' *Sapium sebiferum*, *Syzygium francisii*, *Syzygium jambos*, *Syzygium leuhmanii*, *Syzygium tierneyanum*, *Waterhousea unipunctata* and *Xanthostemon chrysanthus* as well as three *Pyrus calleryana* budded from the very fine specimens in the garden of Urrbrae House. Elsewhere in the Arboretum, TREENET is trialing: *Flindersia brayleyana*, *Fraxinus griffithii*, *Grevillea baileyana*, *Melaleuca leucadendra* (broad and narrow leaved forms) *Caesalpinia ferrea*, *Ficus microcarpa* var. *hillii* and *Tipuana tipu*. The *Pyrus* were budded by David Symon, all the rest were very generously donated by Lawrys Landscapes and Nurseries.

TREENET street trials

The **City of Happy Valley** is trialing 16 *Eucalyptus eximia* and 44 *Eucalyptus leucoxyton* 'Euky Dwarf' at the intersection of Chandlers Hill Road and Happy Valley Drive. This planting was sponsored by the Department of Road Transport and overseen by the Department's Landscape Architect, **Henry Polec**.

The **City of Charles Sturt** is trialing 30 specimens of *Celtis tournefortii* in Coglein Street, Brompton. These specimens were all raised by **Gail Barth** at SARDI on the Waite Campus from seed collected from the Arboretum tree. The trees, which were about 1.5 m high, were all donated to the City of Charles Sturt, and I collected soil samples and photographed soil profiles at the first three plantings. Council Parks and Gardens staff, supervised by arborist, **Janet Willoughby**, will record data such as calliper, height and canopy size at the time of planting as well as taking annual measurements.

The **District Council of Alexandrina** are trialing a small number of *Cupaniopsis anacardioides* at two sites: Goolwa and Pt Elliott. **Callum Dennis** is the Parks and Gardens Manager there. The trees for the trial were donated by **Lawrys Landscapes and Nurseries**.

A community meeting at Devereux Road, Beaumont has endorsed the first TREENET trial in the **City of Burnside**. The species to be trialed is *Zelkova serrata*. The recommendation for this species was based on the two very fine specimens in the Arboretum and I prepared an information sheet on the species for circulation to residents. **Phillip Green**, Manager of Parks and Gardens City of Burnside, **David Lawry**, Director of Lawrys Landscapes and Nurseries and Convenor of TREENET, **Cr Barbara Crompton** and I met with residents on 13 October. David Lawry, who will supply the trees at cost, brought a very fine specimen of *Zelkova serrata* as a demonstration. It was 4 metres tall and it will soon be in place along with 39 others. If any Friend who lives in this area would like to assist in recording initial data, or be involved in ongoing monitoring of the trees, I would be pleased to hear from them. It would be a way to make a very worthwhile contribution to this trial and thus to the Arboretum.

The **City of Adelaide** has expressed interest in trialing *Flindersia australis* and *F. xanthoxylon*. There are very good specimens of these in the Arboretum. As word of our activities spreads, other Councils have also expressed interest in participating in TREENET street trials. There is certainly support in the Councils for broadening the palette of species used to enhance our urban environment.

Other TREENET links

One of prime initiators of TREENET is Landscape Architect **Geoff Sanderson**. Through his involvement links have been formed with the Burnley Campus of the University of Melbourne which is assisting Geoff with his Ph.D. **Dr Greg Moore** at Burnley is also keen to participate in and contribute his knowledge to the TREENET projects. We are also fortunate to have in the group **Gail Barth** from South Australian Research and Development Institute (SARDI). Gail has considerable knowledge and experience in horticulture and in the selection and trialing of suitable species of trees.

David Lawry recently attended a **National Urban Tree Seminar** in Brisbane where he spoke to other delegates about our TREENET programs. Again there was widespread interest and support, and the agreement that there would be great benefit in establishing a national database to share the results of research and tree trials from all over Australia.

DRIWATER® TRIALS

In the last Newsletter, I noted that a new product called DRIWATER would be trialed in the Arboretum this year. 70 trees were planted on 5, 12 and 19 August, 63 small ones with one litre of DRIWATER, and eleven large specimens with two litres. All were donated by **Domenic Perre** of DRIWATER Australia who also helped to plant the trees.

On 20 October each tree and its DRIWATER were inspected. The results to date are very encouraging. After 9 - 11 weeks, the majority of trees had a third or more of their DRIWATER left. Cartons which had been stolen or damaged and had less than a third left were replaced so that all the plants should be well watered until the next inspection in early December. Many of the most recently planted specimens had 3/4 of their DRIWATER left. It was quite convincing to see high moisture levels at the root ball where the DRIWATER was placed, yet the surrounding soil was dry and rock hard. Unlike surface watering, DRIWATER delivers moisture where it is needed without encouraging the growth of weeds.

GreenWell® TRIALS

Another new product being trialed in the Arboretum this year is GreenWell. This multi-use 'pot in the ground' was developed by Torrens Park accountant Brian Measday and it is manufactured locally. The idea is to concentrate the watering around trees by providing a well which holds about 22 litres of water when 20% full of soil. It also holds the mulch in place and prevents damage from mowers or brush cutters. The product has been placed around about 20 trees in the Arboretum and all have been donated by GreenWell.

SUCCESS AT THE ROYAL SHOW

The Waite Arboretum and Urrbrae Agricultural High School successfully collaborated to win 9 First Prizes and 12 Second Prizes in the Horticultural Section of the Royal Adelaide Show. Year 11 students, together with their Horticulture teacher Ed Tylkowski and I, selected, collected and displayed specimens from the Arboretum in a variety of classes. The banksia blooms were especially admired. These were from shrubs growing around the dam and donated to the Arboretum from Ph.D. research projects in the Horticulture Department at the Waite Campus. It is the first time that either the school or the Arboretum has entered the Show. All agreed it was enjoyable and a good learning experience as well as giving positive publicity to the school and the Waite Arboretum. Organisers of the Show expressed delight at the participation of young people and encouraged us to contribute again next year.

PUBLICITY FOR THE ARBORETUM

The Arboretum has received more publicity in the print and electronic media this year. Rob Morrison presented on Channel 10 a segment on TREENET which was filmed in the Arboretum, and our Wood Exhibition was mentioned on Channels 7 and 9. Channel 2 spent a full day filming in the Arboretum for Malcolm Campbell's 'Gardening Australia' program for a two part series on eucalypts. Unfortunately the Arboretum was not acknowledged. Channel 9 has indicated interest in filming in the Arboretum for 'Bourke's Backyard'.

'The Devil's Own Wood' Exhibition and the Arboretum were also mentioned on Radio 5AN and 5UV. The Exhibition was featured in articles in *The Advertiser* (24/6/97) and *Eastern Courier Messenger* (25/6/97) and *The Advertiser* (11.7.97) printed a substantial illustrated article on the Arboretum by Scott Monk entitled: "A little piece of Eden". The Arboretum also had good coverage in an article by Jason Summers entitled: "Arboreta in Australia" published in *The Australian Arbor Age* (Vol 2, No.2, 1997).



THANKS TO THE VOLUNTEERS

The efforts of the Arboretum and Urrbrae House Garden volunteers are much appreciated. This year the volunteers have been engaged in a variety of tasks including: planting, rose pruning, weeding, potting, spreading mulch, watering, flower arranging, clerical and archival work. My sincere thanks go to: Betty Ashton, Cicely Bungey, Colin Bungey, Leon Camens, Margaret Daly, Torban Davidson, Kath Foreman, Thelma Fuss, Joan Kellerher, Lesley Lamb, Jeannie Moffatt, Flo Moseley, Irene Nelson, Lorraine Nettleton, Ray Reynolds, Deidre Skinner, Ralph White and especially Una Wagner who is the Volunteer Coordinator.

Members of The Friends Committee - Robyn Barker, Cicely Bungey, Anna Cox, Barbara Crompton, ~~Cate Paul~~, ~~Isabella Rawnsley~~, Mary Tester and Tony Whitehill - have also given generously of their time to plan and oversee fundraising activities. Mary Tester is especially thanked for the demanding job of Treasurer which she does with a high degree of commitment and ability. I thank all the Committee for their support.

The guides - Jean Bird, Anna Cox, Barbara Radcliffe, Isabella Rawnsley, Tommie Siekmann and David Symon - are the public interface of the Arboretum and they make a valuable contribution by making their walks so informative and enjoyable for visitors. The guides gave 29 guided walks during 1997. Next year the guides would like to develop a school program and they would be pleased to hear from anyone, especially someone with a background in education, who would like to assist in this project.

Jennifer Gardner



IN THE ARBORETUM...

***Alstonia constricta* F. Muell. Quinine Bush [Apocynaceae]**

Alstonia constricta is a medium sized, evergreen tree growing to 12 m and often buttressed. One can be found in the Arboretum at J12, No. 149. The outer bark is thick, corky and deeply fissured, the inner bark is yellow, fibrous and intensely bitter to the taste.

Leaves are long and thin to 12 cm, soft, bright, glossy green above, duller and coated with short hairs underneath. The leaf stalk exudes a milky sap when cut or bruised. This too is very bitter and avoided by most insects.

Flowers are creamy-white, star shaped and small (about 4 mm across) but profuse in spring. They are fragrant, bi-sexual and occur in bunches at the end of branches or in the forks of upper leaves.

Fruit consists of pairs of long, narrow pods; the seeds are ciliate, flat and thin.

In 1811, Robert Brown named the genus *Alstonia* after the Scottish physician and botanist, Dr. Charles Alston (1685-1760). He was Professor of Botany at Edinburgh University from 1716 to 1760.

Alstonia constricta is in the Apocynaceae, a large tropical and sub-tropical family, the best known of which are the oleanders (*Nerium*) and frangipani (*Plumeria*). There are about 50 species of *Alstonia* found in tropical Asia and the south-west Pacific. Of the seven species found in Australia, five or six are endemic.

Alstonia constricta, which was first described by Ferdinand von Mueller, is found in central and southern Queensland and the far north coast and northern and western plains of N.S.W. It grows sometimes on rocky outcrops but also in rainforest clearings, in open scrub and on alluvial ridges along watercourses, preferring sandy and loamy soils.

For many years it has been known that many Australian plants contain substances useful to medicine, particularly alkaloids. The bark of *Alstonia constricta* was exported during World War II to treat malaria, probably because the taste resembles quinine. It has however, little antimalarial activity although other alkaloids are present. The stem bark has been used as a medicine to reduce fever and is particularly useful in treating influenza and the early stages of typhoid fever. The bark contains reserpine which may be used to treat high blood pressure. Yellow dye produced from the bark may be used to dye wool and cotton. Historically, aborigines collected and used the latex to cure infectious sores even though it has a very severe effect upon the skin. Leaves can poison sheep and cattle but no case of human poisoning has been recorded.

It is a useful shade or street tree, tolerating dry areas and most soils and needing only a sunny position to thrive and grow into an attractive tree.

Mary Tester

OTHER ARBORETA

by
Barbara Crompton

A brilliant maple leaf fell from a pile of travel notebooks and I was transported to one of the highlights of a visit to Britain a few years ago. Batsford Arboretum is near Bourton-on-the Hill in the Cotswolds and is a gem. You can cover it in an hour or two of gentle walking with meditative stops by statuary and rest houses. It is small and was created from the remains of a wild garden devised by Lord Redesale, the previous owner, in the 1880s and his love of the Orient is reflected in the unusual statuary, which constantly surprises the visitor. Lord Dulverton bought the property in 1920 and his son was responsible for the planting of this Arboretum, representing most temperate parts of the world and especially the Orient. He formed a charitable trust in 1983 to ensure the survival of the Arboretum as a place of beauty for the public as well as a source of arboricultural knowledge and education.

Batsford is renowned for its collection of magnolias of which there are ninety species, but that is just the start of a great collection of families of trees many of which we rarely see in Adelaide. This collection is infinitely worth seeking out if you are visiting Gloucestershire and the same can be said for Westonbirt.

Westonbirt Arboretum is much better known and I was so happy to make its acquaintance this summer in England. By contrast with Batsford a visitor really could occupy more than a whole day trying to cover its extensive walks and vast collection. It occupies about 240 hectares of woodland and downland and its paths are 27 km in overall length. I actually lost myself because I forgot my compass and I always have trouble with north and south on the other side of the world.

Robert Holford, a rich landowner of Weston Birt near Tetbury, laid the beginnings of the Arboretum on his father's estate 150 years ago. He planted shelter belts for groves of the azaleas, rhododendrons, magnolias and camellias which he collected by supporting plant hunters to China and elsewhere. A series of Drives and Rides with connecting paths made a formal plan, which was gradually extended during the family ownership and finally in the hands of the Forestry Commission, in lieu of death duties. Now there are about 18,000 specimens representing 4000 species, wildflowers and shrubs and a plethora of birds. It is a brilliant place.

Westonbirt has an important role in scientific arboriculture, propagating from authenticated wild material rare and endangered plants in co-operation with national and international institutions. It also provides enormous interest and pleasure to the public and through its Education Officer plays its part in serving young people and students of all ages.



FORTHCOMING EVENTS AND DIARY DATES

2 pm Sunday 2 November - Opening of 'A Remarkable Flora' an exhibition of watercolours of Australian wildflowers and landscapes by **Beryl Martin** and wood sculptures by **Chris Wells**. The exhibition will be open daily 10 am - 4 pm and closes Sunday 23 November.

6 pm Monday 10 November. This meeting will take the form of a **special walk** through the Arboretum led by **David Symon**. At the conclusion of the walk the Committee invites you to join them for a glass of champagne and Christmas cake in Urrbrae House.

10 am - 4 pm Sunday 16 November - Open Day at Urrbrae House Historic Precinct. In addition to the exhibition, there will be stalls, guided tours of the Arboretum, Urrbrae House and the Coach House Museum.

Guided walks on the first Sunday of every month. Meet at Urrbrae House at 11 am.

Booked Walks for 10 or more people are available by telephoning the Curator's Office at 8303 7405.

* * * * * **HELP PLEASE!** * * * * *

Articles on related subjects would be welcomed by the Editor as well as constructive criticism or suggestions.

There are always tasks to be done in connection with exhibitions, rosters or publicity and those tasks bring you into contact with other nice people. Do offer your services to the Curator and you will find a warm welcome.

Donations of plants and produce are needed for our Arboretum stall on Open Day 16 November. *Please deliver by 10 am on the day.* Helpers to serve on the stall for an hour or two are also needed.

Can you spare a few hours to staff the 'Remarkable Flora' Exhibition?. It is not an onerous task. Visitors to the Exhibition appreciate being welcomed and are usually very interested to hear about the Arboretum and our Friends group.

If you can help on either Open Day or during the Exhibition, please contact Jennifer on 8303.7405

EUCALYPTS OF SOUTH AUSTRALIA

by
Dean Nicolle

This beautifully produced book has been designed and written for anyone interested in identifying and growing native trees. 95 different species of eucalypts indigenous to South Australia are fully described and illustrated. The author is a Foundation Friend of the Arboretum and many people will remember the excellent talk he gave to the Friends in February 1995. *Eucalypts of South Australia* would make an ideal Christmas present for yourself or a friend.

**Support the Friends and purchase your copy
from the Arboretum Office for only \$20.**