

The Botanic Garden

ISSN 1446-2044

A Newsletter for the Botanic Gardens of Australia and New Zealand
Issue no. 5 - April 2003

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Editorial

Botanic Gardens and the Global Strategy for Plant Conservation

Few would argue about the need to conserve the world's plant biodiversity. The 1992 Earth Summit in Rio de Janeiro provided a clear call to action, embodied in the Convention on Biological Diversity (CBD). Since Rio, the plant biological capital of the world has continued to be eroded - ecosystems, species and genetic diversity have all been profoundly affected. A new global initiative has been needed specifically to address plant conservation.

Attention was drawn to this situation at the International Botanical Congress in St Louis in 1999, where a resolution was passed calling on governments to act on the impending extinction crisis for plants. In response, Botanic Gardens Conservation International and other agencies proposed to the CBD a new approach to reversing the loss of plant diversity - a Global Strategy for Plant Conservation (GSPC).

The strategy promotes collaboration to strengthen and support plant conservation locally, regionally and internationally. It recognises that effective long-term conservation will involve a wide range of partners - governments, NGOs, and local communities, including of course botanic gardens.

Australia and New Zealand, along with most countries participating in the CBD, agreed to the GSPC in April 2002 - a remarkable achievement for global plant conservation.

Critically, the GSPC sets sixteen practical

targets to be achieved by 2010. These are designed to measure the ability of a country to conserve 'at risk' plants and ecosystems and to ensure sustainable protection of plants having cultural uses.

Four targets are directly relevant to botanic gardens and herbaria. They cover plant taxonomy, floras and identification keys (Target 1); establishment of accessible ex situ collections for threatened plants (Target 8); development of education and public awareness programs about the importance of plant diversity (Target 14); and increased training and capacity-building so that the GSPC targets can be achieved (Target 15).

Achieving the targets will require collaboration by government conservation agencies, research institutions, botanic gardens and herbaria, NGOs and community groups. Local and regional actions will be the foundations on which Australia and New Zealand can deliver their national targets. So, for example, all botanic gardens can contribute, even if their resources and capabilities are strictly local.

The Council of Heads of Australian Botanic Gardens is placing a high priority on advocating and supporting the implementation of the GSPC. Discussions are continuing with Environment Australia about how this can best be achieved in co-operation with State conservation departments. The GSPC was also a major topic at the recent ANPC conference in Geelong, and will be an important focus of the BGANZ Congress in October this year, also in Geelong.

Thinking globally and acting locally will see the GSPC fulfil its objectives by 2010. Make your botanic garden part of this initiative and share the achievements!

Kingsley Dixon, Kings Park and Botanic Garden, and Philip Moors, Royal Botanic Gardens Melbourne.

Editor's note: Information about the GSPC is available on the CBD website at

www.biodiv.org/programmes/cross-cutting/plant

Dates for Your Diary **Second Botanic Gardens Congress**

**Saturday 25 October – Tuesday 28 October
2003**

The second Botanic Gardens Australia – New Zealand Congress will be held in Geelong over four days on 25-28 October 2003.

The Congress will commence with a welcome reception on Friday 24 October. The venue for the two days of plenary sessions of the conference, Saturday 25 and Sunday 26 October, will be the Deakin University Waterfront Campus, situated on the attractive Geelong waterfront precinct which has recently undergone a major redevelopment. A diversity of workshops it will be held at Geelong Botanic Gardens on Monday 27 October, and Field Study trips will take place on Tuesday 28 October.

There will be four streams during the Conference:

- Heritage Planning and Protection
- Conservation and Science
- Horticulture and Arboriculture, and
- Community Networking.

The timetable will be structured to enable attendance at some lectures from each stream.

There will be two options for the Field Study Trip:

1. Visit sites of botanic significance in the world heritage Anglesea heathlands about an hours drive from Geelong. The Anglesea heathlands are renowned for an extraordinary diversity of plant species including over 100 spp of terrestrial orchids. Late October is perhaps the best time of the year for the spring flowering orchids, lilies, peaflowers, heaths and array of wildflowers.
2. Victoria is blessed with numerous regional botanic and public gardens, many of which were founded in the late 1800's. This field trip will focus on the gardens of the Victorian Central goldfields which include some fine examples of heritage landscapes and some interesting case studies.

Geelong is one of Victoria's most progressive

cities and is located only one hour's drive from Melbourne airport, from where an excellent shuttle bus service is available.

Grants will be made available to assist with attendance of delegates from regional and distance Botanic Gardens. Further conference details and grant applications will be circulated separately.

For initial information, contact:

John Arnott

jarnott@geelongcity.vic.gov.au

Put these dates in your diary now, and keep an eye out for the next announcement!

Meetings and Conferences

FUNGIMAP - 2nd National Conference

Rawson, Gippsland, Victoria

Thursday 15-Tuesday 20 May 2003

On Friday 16 May, a series of talks will be presented covering Fungimap and a wide range of fungi topics, which will cater for a general audience. The following three days there will be workshops and forays at various skill levels, to help everyone increase their knowledge of fungi and gain practical experience with identification techniques: from "An Introduction to Fungi" for beginners to specialized workshops on particular groups or techniques for those with more experience.

Speakers and leaders include a wide range of people from across Australia including Tom May, Teresa Lebel, Katrina Syme, Tony Young and Neale Bougher. Renowned fungi photographer Bruce Fuhrer will present a talk on Saturday evening entitled "My Favourite Hectare".

Fully-catered, basic accommodation is available on-site. Transport is available from Melbourne. Cost: \$400 all inclusive, or \$75 for just Friday's talks.

For further information contact:

Fungimap Coordinator, Gudrun Evans

Royal Botanic Gardens Melbourne

Phone: (03) 9252 2374 or

E-mail: fungimap@rbg.vic.gov.au

Website: <http://fungimap.rbg.vic.gov.au>

The Conference is proudly hosted by the Field naturalists Club of Victoria and supported by the Royal Botanic Gardens Melbourne.

Bookings must close 15 March.

National Conference of Volunteer Guides in Botanic Gardens

29 September - 3 October 2003

Kings Park and Botanic Gardens, Perth

People, Plants and Parks - is the theme of this years Conference. It will provide opportunities for Guides and co-coordinators to meet and share ideas, information and skills in a stimulating programme of lectures, workshops and walks.

Starting with the 2003 Wildflower Festival held in the Botanic Gardens overlooking Perth and the Swan River, participants will have a chance to explore much of the Parks 400 ha of gardens, parklands, playgrounds and huge bushland area.

Delegates will visit bush sites and gardens of the Darling Range in a day's tour. Those wishing to take advantage of their stay in Western Australia may book special pre and post conference tours to biodiverse areas north and south of Perth.

For further information please contact:

National Conference of Volunteer Guides
2003

Kings Park and Botanic Gardens
West Perth, WA 6005

Phone: (08) 9480 3669

Fax: (08) 9480 3658

Internet: www.kpg.wa.gov.au

For Sale

The Royal Botanic Gardens Melbourne has a metal embosser machine for sale. It is currently used to produce small aluminium name tags for plant identification. They are upgrading to a computer-generated system. The details are:

GRAPHOTYPE METAL EMBOSSE -
Addressograph

MODEL: 6340

SIZE OF ALUMINIUM TAG (for embossing)
65mm x 25 mm

KEYBOARD 2.4 amps

FREESTANDING

PRICE \$2,000.00

The machine is offered on an "as-is where-is" basis with the purchaser arranging their own transportation. The sale is available for one month from the publication date.

Contact Maggie McNamara (03) 9252 2335 or
Maggie.McNamara@rbg.vic.gov.au

Items of Interest

Council of Heads of Australian Botanic Gardens -

2002-2003 Career Development Grants

The Council of Heads of Australian Botanic Gardens has awarded a Career Development Grant to Brian Cuddy, Assistant Coordinator of The Australian Inland Botanic Gardens at Mildura.

Brian will use the Grant to gain Certificate 4 Production Horticulture accreditation and will attend the course at Sunraysia Institute of Tafe. Brian sees this qualification as being of benefit to both himself and the Australian Inland Botanic Gardens where, as a supervisor, he will continue to train apprentices and Government Funded Community groups, teaching them in areas of soil erosion and management, better watering practices and basic horticulture.

Congratulations

Rob Small, presently General Manager, Environment and Recreation for the City of Greater Geelong has been appointed Chief Executive Officer for Colac Otway Shire. Colac Otway is a diverse Local Government Area that covers the beautiful Great Ocean Road from just west of Lorne to just East of the 12 Apostles, includes the Otway Ranges (shortly to be Victoria's newest National Park) and the wealthy dairy farmland around Lake Colac. Rob has been a prominent figure in organizing the upcoming BGANZ Conference in Geelong. He has been prominent in Parks Conservation and Recreation circles in both New Zealand and Australia. Rob hopes to be able to continue with his involvement with Botanic Gardens in particular, and will continue

his work as Convenor of the organizing committee of the Conference in Geelong in October.

John Nightingale, Curator of Living Collections at ANBG, has announced his resignation to take up a position at the Alice Springs Desert Wildlife Park. John will be missed by his colleagues and the Canberra gardens community. The vacant position will be advertised as soon as possible. Enquiries should be directed to the Director, ANBG, on telephone (02) 62509500.

Iain Dawson, manager of ANBG Collections Development and Records, retired on 7 February after 9 years at ANBG. Iain has made a major contribution to the development of the ANBG Seedbank, work of Access to Genetic Resources Policy, and the administration of the Australian Cultivar Registration Authority.

Bob Woodhams, ANBG Trades Manager, also retired on 12 February after 26 years at ANBG. He was instrumental in managing and developing the ANBG infrastructure over its major development years.

A Conference of Botanic Gardens (NSW) members held at Coffs Harbour Botanic Garden in November provided more than a meeting at which general business and future directions were discussed. An excellent opportunity was also provided for an overview of Coffs Harbour Botanic Garden and for representatives of three northern NSW Botanic Gardens to showcase exciting and innovative developments within their Gardens. Terry Monaghan and Ian Corbett, the Conference Organisers, report:

BOTANIC GARDENS (NSW) Meeting at Coffs Harbour - November 2002

Many apologies were received from south of the Hunter, with only Chairman Neil Bollinger and Warren Lancett from Auburn being represented, highlighting the difficulties the network will continue to experience. The distances involved, and the time away from work required to attend meetings may necessitate a change in thinking in the way future meetings are arranged.

The network was welcomed to the Garden

by Brian Lane, President of the Friends. This was followed by a brief outline by Ian Corbett (Parks Supervisor) on the role of the Council as Corporate Manager, and the duties of his three staff in garden management. The role of the Friends as an active support group was outlined by Terry Monaghan, highlighting the fact that co-operation and communication has achieved results: community pride, awards and reasonable Council budgets.

The aims and objectives are now KISS orientated - 'a place for people and plants'

The morning session was an opportunity to view the way the Garden has been planned and transformed from a garbage and sewerage reserve to its present condition, as a valued community asset, and significant tourist attraction. There was also the opportunity to inspect the Herbarium and Seedbank.

A feature of the morning's activities was the planting of a Nightcap Oak (*Edothis hardeniana*), by Gwen Harden, former Curator of the RBG Herbarium, and editor of *Flora of NSW*. This recently discovered member of the ancient Gondwanan plant community, is the first to be planted in a Botanic Garden, and will form part of the NPWS recovery plan for the species. Protection is provided by a galvanized mesh structure. The planting was featured in *Prime* and *NRTV* news, *Radio National* and local media. Let's hope the interest does not present a challenge to local hoons!



Gwen Harden and Alex Floyd

Lunch was the opportunity for outdoor networking over a delightful quiche and salad, followed by coffee and cake.

An afternoon session followed the network meeting, providing an opportunity for

participants to learn more about three of the exciting Botanic Garden developments in the North of the State.

Don Willis from Tamworth is obviously a man with a passion for their Botanic Garden which was opened in November 2001. As Tamworth City Council's Horticulture and Recreational Services Manager, but without a Council budget, he has over five years organized Skillshare, the Friends of the Garden, Tamworth TAFE, Service Clubs, Work for the Dole and many Business Houses to complete perimeter fencing, nursery, potting shed, bush houses, entrance gardens, electricity and water bush chapel and roads and pathways. What a mouthful of activity that has resulted in local tourism supporting the Garden with a brochure, and a community obviously very proud of their new Botanic Garden.

Stewart Brawley from Tweed is supervising the development of a centralized Lawn Cemetery, and Waste Disposal Facility located approx 15km east of Murwillumbah, NSW and comprising 158 hectares of mostly northern slopes and spurs of the Condong Range. The area has been subjected to both complete and selective clearing followed by pastoral agricultural uses, road construction for the Chinderah by-pass, and some waste disposal. These processes have resulted in a basically botanically degraded site, with some scattered areas of remnant endemic flora, however the EPA restoration requirements within the area will provide optimum conditions for the establishment of a Botanic Gardens that is primarily devoted to the research and interpretation of plant material for ornamental horticulture

Geoff Walker from Lismore is a laid back man - leachates, worm farms and methane gasses present no problem. All these can be turned into positives- maybe a bird hide overlooking the effluent ponds (just how do we get EPA Pollution Control to develop standards that will ensure the effectiveness of the bird hide in all wind directions?) Now the purchase of buffer zones, and the zoning of adjoining lands have broadened the original concept of developing a Botanic Garden on the 43 hectare site at the

Waste Management Facility for agricultural purposes. They see the development of a Botanic Garden as coming closer and closer.

Those present were very appreciative of Tamorth/Tweed/Lismore sharing their progress, and problems with the network, and considered this type of presentation was a positive innovation.

*Terry Monaghan & Ian Corbett
Conference Organisers*

Wollongong Botanic Garden -Natural Environment Award

In late November, Wollongong Botanic Garden was named the Overall Winner of the Natural Environment Award in the NSW Local Government Excellence in the Environment Awards for 2002. Rarely is a Botanic Garden managed by a Local Government Authority recognized for such work. Wollongong Botanic Garden was given this significant award for its work with the Greenplan nursery program. Jason Brown, Curator of the Wollongong Botanic Gardens, outlines the main objectives of this successful project and explains how Greenplan meets the needs of a broad range of customers.

The Greenplan nursery program established in 1987 forms part of the Wollongong Botanic Garden operations managed by Wollongong City Council. Greenplan is responsible for the collection and propagation of sourced plant material throughout the Wollongong City Council area. Today over 50,000 plants are distributed per year. The main objectives of Greenplan are as follows:

- Provide sourced local indigenous plant material to community groups/organisations for rehabilitation and restoration projects,
- Provide sourced local indigenous plant material to residents of Wollongong for planting in home gardens,
- Provide a consultation service to community regarding the identification and conservation of local indigenous plants.

There are three major outreach programs supported by Greenplan each year. These programs are:

- Greenplan Program - Supply of local

indigenous plants to the community for home garden or restoration projects. 19,875 plants provided in 2001-2002.

- Bushcare - Supply of local indigenous plants to Bushcare groups throughout Wollongong Local Government Area. 16,919 plants provided in 2001-2002.
- Landscape - Supply of local indigenous plants to Wollongong City Council landscape projects. 8,906 plants provided in 2001-2002.

Greenplan also provides sourced plant material to other organisations including: RTA, NSW Department of Land and Water Conservation, NSW National Parks and Wildlife Service, University of Wollongong, Sydney Water, Integral Energy, NSW State Rail Authority.

Over the 2001-2002 financial year, numerous conservation and rehabilitation programs/projects have been provided with sourced plant material and/or advice from the Greenplan nursery. On some occasions the plants have been specifically propagated for these projects, however seed/cuttings are sourced from all over the Wollongong Local Government Area and therefore Greenplan is able to meet the needs of a broad range of customers. For further information contact:

*Mr Jason Brown,
Curator Botanic Gardens
jbrown2@wollongong.nsw.gov.au*

Dubbo - Minokamo Sister City Garden "Shoyoen"

The planned establishment of Elizabeth Park in Dubbo as a regional botanic garden has got off to a wonderful start with invaluable assistance from Minokamo, Dubbo's Sister City. Ken Rogers from Dubbo City Council charts the history of the development of an authentic Japanese garden - a testament to cross cultural co-operation and collaboration.

The history of the Dubbo - Minokamo Sister City Garden "Shoyoen" began in 1998, when Dubbo City Council adopted a concept master plan for Elizabeth Park. This plan is for the staged development of a regional botanic garden comprised of a number of elements, a

Japanese garden being one of these elements.

During a Sister City related visit to Minokamo, Mayor Kawai was briefed on the plan by the then Mayor of Dubbo, Anthony McGrane OAM. Then in 1999 Mayor Kawai, Dr Yamada and other officials from Minokamo visited Dubbo to help celebrate Dubbo's 150th anniversary. During an inspection of Elizabeth Park and the site of the proposed Japanese Garden, Mayor Kawai indicated that Minokamo would like to assist in the planning and to give Dubbo a Japanese shelter for the garden.

Not long after this, Minokamo asked Dubbo to provide physical details of the site so that they could prepare designs and plans for the Japanese Garden. Students at the Kamo Agricultural and Forestry High School, Landscape Design Section, under the guidance of Koketsu-sensei, set about developing the designs. In September 2001 the plans were received and officially adopted by Dubbo City Council.

In December 2001 the then Mayor of Dubbo, Councillor Allan Smith and the Director of Parks and Landcare Services, Mr Ken Rogers visited Minokamo with the express purpose of progressing the project. Both mayors exchanged a letter of support and the Dubbo delegation gave Mayor Kawai an undertaking that the Japanese garden would be built to the designs prepared by the Kamon, it would be authentic and that there would be an opening ceremony on 23rd November 2002.

In February 2002, Mr Yoshizumi Fujiyoshi, the chairman of the Dubbo/Minokamo Sister City Committee, made what was to be the first of many visits to Dubbo during this project.

On the 27th February and 27th March, Mr. Rogers briefed the residents of Orana Gardens RSL Retirement Village, adjacent to the garden, on the project, and in the week of the 18th March 2002 excavation work began. On the 25th July the first meeting of the "Friends of the Gardens" was held. This group now regularly meets at Orana Gardens, and gets involved in volunteer work in the garden.

Mr Kimura from Minokamo City Council, and Mr Itazu, the builder arrived on 4th July,

to inspect the foundations for the tea house to ensure that they had been constructed correctly. During this visit Mr Kimura and Mr Rogers met with AQIS and Customs representatives in Sydney.

In the 11 days between 28th July and 10th August the Garden designer, Mr Koketsu and two of his students worked on the garden with staff of the Parks and Landcare Division. At the same time Mrs Tomiko Baba was giving instruction to four Dubbo ladies in the art of the tea ceremony, and all this time, Mr Fujiyoshi was helping with advice and translations.

Three 12 meter shipping containers arrived from Japan on 30th August and between the 1st and 11th September, Mr. Itazu and five of his tradesmen built the tea house. On the 7th September a group of five professional gardeners arrived and spent nine days building the Chanawa or tea garden.

The wonderful support of Minokamo has enabled Dubbo's Parks and Landcare staff to create this beautiful garden, which will now continue to grow and develop for the citizens of Dubbo and their visitors to enjoy.

*Ken Rogers
Director - Parks and Landcare Services
Dubbo City Council*



News from Royal Botanic Gardens Sydney

Sustainable horticulture enhanced by state-of-the-art composting technology

As part of its new direction towards cleaner, safer gardening techniques, Sydney's Royal Botanic Gardens officially launched a state-of-the-art composting facility in November 2002.

Up to a tonne of green waste per day can be processed in the Vertical Composting Unit (VCU), producing high-grade compost for use around the Gardens. The VCU system is designed around natural composting processes, said Frank Howarth, director and chief executive of the Royal Botanic Gardens and Domain Trust.

"The new technology complements our objective to promote environmentally-friendly, safe, cost-effective and sustainable horticulture," said Mr Howarth. "The VCU system does not use artificial heating, air injection, chemicals or mechanical agitation. This makes it far less capital intensive and much cheaper to run than conventional organic waste processing systems."

Environment Minister Bob Debus joined with Australian of the Year and Clean Up Australia chairman Mr Ian Kiernan, AO, to officially launch the VCU system at a function on 13 November 2002. Mr Kiernan has been involved

in a pilot study at the University of NSW looking at the unique composting technology of the VCU, as well as its first commercial installation on Lord Howe Island.

"This is the first time the VCU technology has been used in a botanic garden anyway in the world," said Mr Debus. "The Gardens used to send ten truckloads of green waste off-site for processing every month. Now they can process the waste right here and utilise the compost to enhance the nutritive and moisture-retention properties of the Gardens' soils."

The single enclosed processing chamber is fed at the top with chopped tree prunings and garden waste. The vertical chamber's design draws air and rising heat up through the composting material, ensuring all seed and pathogens are killed at temperatures of more than 70°C. This process also removes odours and prevents leachate, and the enclosed chamber does not attract vermin. Gravity moves the material down through the chamber, until, after 14 days, compost is drawn from the bottom of the chamber.

Funding from the Environment Protection Authority NSW Waste Fund made the purchase and installation of the unit possible.

Note: The VCU is made in New Zealand by VCU Technology Ltd. For more information, please visit their website www.vcutechology.com.



RGB staff and the NSW Minister for the Environment, Bob Debus

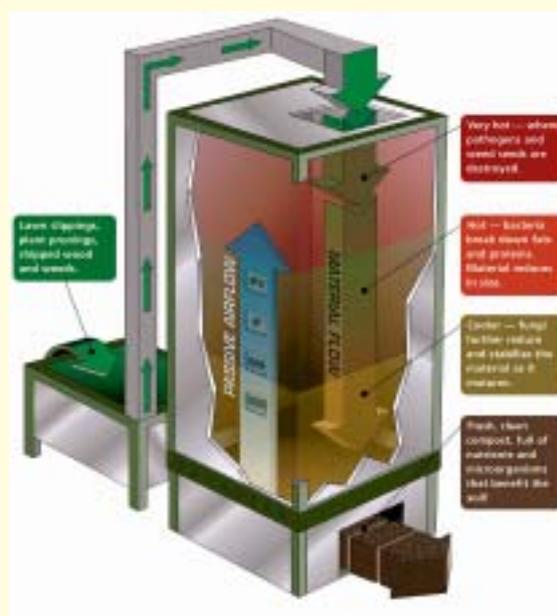


Diagram of VCU unit

Articles

Feature Garden

The Australian Inland Botanic Gardens

The Australian Inland Botanic Gardens, situated on the New South Wales side of the Murray River near Mildura, is one of the few community run botanic gardens. Established in 1989, this garden continues to expand, and some areas of the garden are still in their development stages. This successful garden is a thriving tribute to continuing cooperative support from many volunteers.

The Australian Inland Botanic Gardens showcases a range of Australian natives from both arid & higher rainfall areas as well as exotic plantings grouped in country of origin. Also featured is an area developed with salt tolerant native plants, which have thrived and lowered the water table considerably; a network of walking tracks and a Rose garden displaying in excess of 1600 colour coordinated plants. The initial development is just a small part (49 ha) of the total area of 152 ha.

Planting commenced in 1991; the garden practices world's best irrigation/water management, salinity control and soil conservation. Beds are mulched with waste from local wineries and a local sawmill and every plant is provided with a dripper. As they grow, more drippers are added to satisfy the plants' particular need for water.

With its exotic and native plantings, the Gardens reflect the diversity of our district, an arid zone that has flourished under the extensive irrigation system.

At present we have six staff members. In addition to a Supervisor and two senior male employees, three new apprentices have recently been employed. In conjunction with the local TAFE, four apprentices have previously worked at the Gardens. Three have left at the completion of their apprenticeship to go further afield and one has remained in our employ.

Volunteers play a vital role in the day to day operation of the gardens and give their time and expertise in many different ways. One group 'dead-head' the roses every Wednesday



morning during the flowering season (October to end of June), which helps to maintain a continuous display of flowers. Another group meets every Tuesday morning and maintains the Nature Trail. This is a 400m walk through natural native bushland which has been interplanted with indigenous plants and is a popular area for bird watching.

Volunteers also attend to visitors' needs at weekends, when the historic Homestead is open and light refreshments are available. This building was originally the split-log homestead at Garnpang Station, 153 km from Mildura. Built in 1840, it was relocated with the assistance of the South Mildura Rotary Club and opened as a visitor center, meeting space and library in 1993. Volunteers also do catering for community groups, and many tradesmen give their time in building, plumbing etc. A woolshed, over a hundred years old, has recently been dismantled and transported to the gardens for erection - again all done by volunteers.

A tractor train carries visitors around the site once a month and on booked tours. This is also operated by a volunteer driver/guide.

A group of three lakes has recently been completed. Much of the digging and leveling of this area was done with voluntary labour using volunteers' own appropriate machines. Meandering streams will eventually feed the lakes and some rapids and falls will also be created. The streams, which are still in the process of being built, will be lined with rocks. As there are no rocks in the area, Council supply trucks and drivers and together with our volunteers, go to a number of different places collecting rocks.

The gardens are open every day to the public, and on weekends "Friends of the Gardens" are in attendance at the Visitor Centre - a converted historic Homestead - where you may relax over light refreshments, or browse through a selection of handcrafted gifts and cards featuring flowers blooming in the gardens.

The best way to see over the development is to join a tour. The tractor/train tours the gardens on the first Sunday of each month at 11.30 am. The tour is also complimented with a light



luncheon at the Visitor Centre.

Group tours are available any day by arrangement - maximum 48 people.

Phone 03 5022 0906 for bookings.

There is no entrance fee to the gardens, but donations are welcome.

Our gardens are very much a community project.

Wilma Bowring

(Wilma does not have a title. When asked to provide one she replied “I do odd jobs in an amateurish capacity and get called all sorts of things”. It is obvious she is a highly dedicated volunteer with an abiding love for the Australian Inland Botanic Gardens.)

Alexander’s visit to Australia.

“.... Teachers and School Children of Southern India are inspired to learn about and conserve their forests and endangered medicinal plants. Alex teaches them the values of recycling, composting, removing litter and people power, during an environmental education program and 3 day nature camp. 2,000 students from 40 schools are members in the Eco-club network...”

Alexander Amirtham, an environmental educator from Southern India, attended the BGCI International Education in Botanic Gardens Congress in Sydney, last September, to present a paper on the value of “Eco-clubs” to schoolchildren and their communities.

Alex was able to attend the Congress, following sponsorship provided by the Friends of the Albury Botanic Gardens. Alex spent 3 weeks in Albury as a guest of the FABG, following the Congress, to experience Australia, learn and lecture.

A whirlwind tour included presentations to visitors at the Spring Festival over 3 days, staff of the Australian National Botanic Gardens Canberra and the Royal Botanic Gardens Melbourne and attendance at the Association of Friends of Botanic Gardens Conference in Ballarat, Victoria.

Alex also joined in the 125th Anniversary of



- Alexander at basket weaving workshop
- Alex telling stories of India and its forests
- Alex with Deputy Mayor, Claire Douglas and FABG President, Jeff Gates
- Alex’s Spring Festival favourite, “Balloonatic Bruce”

the Albury Botanic Gardens celebrations and workshops, including bonsai, basket weaving and natural resource management of the Chiltern Box-Ironbark National Park. The Friends bus trip to open gardens around farms and villages near Culcairn, was a real eye opener for Alex.

As a guest of the City of Albury, Alex was able to chat with managers, environmental planners, arborists and strategic planners, to gain background information and formulate a strategic plan for his dream of a Botanic Gardens in Southern India.

The experience for everybody involved was sensational and the Friends have framed Alex's wonderful letter of thanks, for display in the "Fellowes Centre" at the Gardens.

An on-going relationship with BGCI and Southern India, may see a bi-ennial staff exchange established, with the support of the FABG.

*Paul Scannell,
Albury Botanic Gardens,
New South Wales, Australia.*

Environmental Education Through Eco Clubs

In Three Districts of Tamil Nadu India

Alexander. A, John Britto.S, and Arumugam.K

Annai Genetic Garden, Inba Seva Sangam, Sevapur-Po, Tharagampatti-via, Karur-Dt, Tamil Nadu, India. 621311

Inba Seva Sangam is a voluntary organisation that was established in 1969, in the Karur district of Tamil Nadu. It was set up in Annai Genetic Gardens in 1993 to promote the conservation of indigenous flora and fauna of the Ayyalur forest. The environmental education through the establishment of Eco clubs and adjoining rural schools is our goal. Enthusiastic students selected between the ages of 11-15 are exposed to environmental realities and are actively involved in creating a clean environment. To date, thirty-eight eco clubs

with 1,750 students are established members.

Assembling Our Members

These memberships became possible through frequent visits and friendly interaction with the schools and also by conducting several one-day environmental educational programs. Along with Eco clubs, there are strong networks of "Teachers forum" that have emerged through the activities of our Eco club programs. Programs such as: - Green Peace Walks, Environmental Quiz Competitions, Nature camps, Field Trips, Hill trekking, Public Awareness and Keystone Students Training Programs are just some of the activities that are on throughout the year.

Assessing

By regular visits and monitoring, we create a forum for expression of ideas and an avenue for creative activities. A student's publication called *Eco's echo newsletter* is circulated to all Eco clubs. Students maintain their own 'Green school garden' and nursery. They also have special Eco club notice boards to highlight Eco-information.

The Future of the Eco Club

Eco club members will eventually turn out to be role models to their peers and strengthen environmental activities through other Eco clubs, act as liaisons to the public and governmental activities, get involved in networking and start SEA (Senior Eco club students Association) movements in their respective villages.

Inba Seva Sangam, a voluntary organisation was established by Belgian born, Mother Lea Provo in 1969 in Sevapur, Karur dt, Tamil Nadu, South India. In respect to the 'green' work of Mother Lea Provo, we named school club as the Lea Eco club. The organisation is involved in developing rural projects; one of these activities is the conservation of locally threatened flora and medicinal plants in a 5 acre conservation plot called Annai Genetic Garden. In order to involve the local community in the conservation of local biodiversity and natural resources of the area, the department has launched innovative approaches to create awareness of conservation. In 1993 we started

collecting plants from the Ayyalur Reserve Forest range, Eastern Ghats. These plants were then planted in the Annai Genetic Gardens. After a few months of collection we involved school children and village members in the area. During the year of 1997-98 we launched 20 Eco clubs in Karur, Trichy and Dindigal district schools in the foothills forest region. After a few years of hard work, Eco clubs grew into a further 20 schools in the Karur district. Groups of enthusiastic, environmentally concerned and socially committed students studying 6th-7th standard and aged between 11-15yrs are chosen, forming a group called the Eco club. 40-50 students are registered and have become members, as well as interested teachers who have enrolled as Eco club co-ordinators. The teachers are responsible for the Eco clubs in their schools, where they manage green (growing trees and medicinal plants) and clean (collecting rubbish) activities. About 40 Eco clubs have been established in the Karur, Trichy and Dindigal districts, and the schools are divided into 5 eco zones, and each zone has 8 schools.

Students are initially invited to help with our local environmental activities and those who are interested are then selected to enrol. The membership fee is 10 rupees, and they receive a Lea Eco Club notebook.

Cork Oaks

An inquiry from Dave Stewart, Environmental Administrative Officer of Tenterfield Shire Council, seeking information about the pruning of a Heritage Listed Cork Tree, sparked an interesting correspondence between two of Australia's pre-eminent tree experts, Dr Robert Boden and John Hawker.

As some fine examples of cork oaks occur in every major Botanic Garden in Australia except Darwin and commonly occur in regional Botanic Gardens and arboreta, The Botanic Garden asked John Hawker to share some of his extensive knowledge of this historic, attractive and useful tree.

John Hawker is currently Horticulturist with Heritage Victoria.

Cork Oaks in Australia

The Cork Oak (*Quercus suber* L.) occurs naturally in forests of Morocco, Algeria, Tunisia, Greece, Italy, Spain, Portugal, and the south of France. Spain and Portugal are the main suppliers of cork around the world, but high quality cork is now in short supply. Cork is resilient to light, chemically inert, waterproof, elastic, a poor conductor of heat and vibration, and buoyant. These qualities make cork valuable for bottle stoppers, insulating materials, gaskets and many household and industrial items.

Cork has been known since Roman times, being used as stoppers in wine jugs and food vessels. Cork has been by fishermen as floats for nets for over 2000 years and more recently has gained popularity for flooring.

The first harvest of virgin cork comes when the tree is about 25 years old. More reproduction cork can be harvested in the next 9 to 12 years. Then another 9 to 12 years later comes the first harvest suitable for wine bottle corks, a total of more than 40 years. The bark tube is split down the side and carefully peeled away from the branch. The cork layer is dead so its removal does not damage the tree and gradually the tree grows a new layer to replace the removed cork. In Portugal the oldest and most productive tree is over 213 years old and has been producing cork since 1820. Each harvest produces cork for over 100,000 wine bottle corks. The average life span of a tree grown for cork is about 170 years.

During the 1800s when the rustic landscape style became popular, cork was sold for a range of uses. In 1872 the firm London and Lisbon Cockwood Co., London advertised "Virgin Cork for ferneries, rock work, grottos cascades, arbours, baskets, flower stands, edging for garden beds and to cover old walls" to achieve a rusticated appearance. Today cork is often used in conservatories to support epiphytes, orchids, bromeliads, ferns and Spanish moss.

Quercus suber was rarely grown in Australia during the 1850s but became more widely available from the 1860s. The 1845 James Dickinson Hobart nursery catalogue, and the

1852 Catalogue of Plants for the Melbourne Botanic Gardens only lists *Quercus robur*, while the 1857 John Rule Richmond nursery catalogue lists both *Quercus robur* and *Q. patraea*, but neither in the 1855 Rule catalogue. The earliest record of Cork Oak being available from a Victorian nursery was in 1864 when it was offered for sale from the nursery of Law, Somner & Co. of Melbourne, who in 1883 supplied 5 trees to the Wellington Botanic Gardens in New Zealand where it had been grown since 1875. *Quercus suber* (or any other *Quercus*) was not in a list of plants in the Geelong Botanic Gardens compiled by Daniel Bunce and printed in January 1860.

The earliest known record of *Quercus suber* in Australia is in a New South Wales Botanic Gardens Report 1853-54 which shows that Cork Oaks were received from Acton Sillitoe Esq. There is also a suggestion that a Cork Oak at Hambleton Farm, Parramatta, may date from the 1830s.

The next record of *Quercus suber* is in a list of plants published in *Catalogue of Plants in the Royal Society's Gardens* compiled by Francis Newman curator from 1845 to 1857 of the Royal Society Gardens, Queens Park, later Royal Tasmanian Botanical Gardens. This c1857 Cork Oak is planted on the sloping lawn below the 1845 Gatehouse occupied by Newman, and is Australia's oldest Cork Oak and one of the finest cultivated trees. This tree is a prominent landscape feature and of exceptional form with a dense rounded crown.

The 1858 Annual Report of the Government Botanist and Director of the Botanic Gardens by Dr Ferdinand von Mueller, records 1700 plants in the Gardens. Accompanying the Report is a Catalogue of Plants under cultivation in the Melbourne Botanic Gardens, October 1858, and *Quercus suber* (and many other oaks) is a new addition to the Gardens. Mueller reports that; "In importing plants due preference has been given to those of utility and more general interest, and many of practical value are already contained in our collection. Among them ð various spice plants, the Tallow tree, the Litchi tree, and the Chinese Tea, Bananas, the Cork tree, the Giant Pine of

California, the Red Cedar, the Kauri Pines of East Australia, Polynesia and New Zealand."

In the 1861-62 Annual Report of the Melbourne Botanic Gardens, Ferdinand von Mueller reported that; "Amongst these [nursery plants] we find many plants of more general interest, and some importance to our colonial husbandry, of which the following may be deserving of special record; - .. a fair supply of Corkoaks, raised from acorns received from the south of France; other evergreen oaks from the Mediterranean; ...". The Cork oak, "and other species of more than merely ornamental merit have been planted on the lawn between the office building and store house". The planting included more than 30 species of imported oaks, from Europe, Asia and America, and included the Valonia Oak from the Levant, used for leather tanning and is highly marketable for its valuable acorns.

The oak planting location is shown on, *A Plan of the Government House Reserve, Botanic Gardens and its Domain* drawn under the direction of Mueller and published in 1869. The oak planting is south west of the Director's Residence and marked on the plan as "Plantation of *Quercus suber* interspersed with *Quercus cerrris*. Miscellaneous Oaks, *Quercus ilex*, *Quercus aegilopsis* & other oaks". *Quercus suber* were also shown planted as an avenue along a road from Anderson Street to south of the Director's residence.

This area of oak planting was added to the Botanic Gardens reserve in 1875 and part of the area is now known as the Oak Lawn. By 1878, William Guilfoyle had about 40 oak species under cultivation. The 1883 Catalogue of Plants under Cultivation in the Melbourne Botanic Gardens lists *Quercus suber* on the Western Lawn, part of which became the Oak Lawn. However by 1924 there was no record of Cork Oaks in this area where in 1869 Mueller had shown many to have been planted.

In 1876 Baron Ferdinand von Mueller published the first of a number of editions of *Select plants readily eligible for Victorian Industrial Culture, with indications of their native countries and some of their uses*. For *Quercus suber* Mueller wrote, "It attains an age

of fully 200 years. After about twenty years it can be stripped of its bark every six or seven years; but the best bark is obtained from trees over forty years old. Height of tree about forty feet. Acorns a sweetish taste. Mr. Robinson found that young Cork-Oaks, obtained from the writer, made a growth of four feet in a year in the humid Western Port district. The bark of *Q. Pseudo-Suber* (Sant) is inferior for cork, but the closely-allied *Q. Occidentalis* (Gay) which is hardier than *Q. Suber* produces a superior cork-bark.”

Botanic Gardens, Acclimatisation Society's and State owned nurseries distributed and exchanged many exotic and Australian plants, seeds and cuttings with nurseries, land owners and to crown land reserves. In Victoria, Mueller at the Melbourne Botanic Gardens during the period 1859 to 8 July 1867 distributed 355,218 plants from the nursery. The species and destination of these plants is often unknown. One of the few records is a monthly list for 1870 which records that more than 50,000 plants were sent to nearly 700 recipients, but not the species. The only known species list is for the Castlemaine Botanical Gardens which had received 775 plants in May 1870. In December 1871 the *Mount Alexander Mail* published a list of *Umbaginous and useful timber trees growing in the Castlemaine Botanical Gardens, November 1871, all of which are the gift of Baron von Mueller*. Cork Oak, *Quercus suber* and False Cork Oak *Quercus pseudo* [sic] are included in the list along with many other oaks and tree species. Cork Oaks still grow the Gardens but as with many nineteenth century tree plantings it is unknown if they are the same trees as those in the 1871 list but given their maturity and size, and location in the northern arboretum, it is highly probable.

In 1872 the Victoria Government established a State nursery at Macedon. William Ferguson, Inspector of State Forests, oversaw the development of the nursery and an area of 41 acres was fenced and planted with many kinds of trees. In 1875, 8 acres of land was stocked with young trees. In 1888, 40,000 trees were distributed and between 1889 and 1895, some 350,000 plants were issued free of

charge. By 1899 the nursery had increased to 91 acres and included an arboretum where there was an excellent collection of oaks and other deciduous trees and conifers. In 1885 there were “plantations of cork oaks, and the *Valonia* oak, so valuable for tanning and dyeing.” All these trees have been lost to fires, including the devastating Ash Wednesday bush fires in February 1983 which destroyed the nursery.

The earliest record of Cork Oak in the Adelaide Botanic Gardens is in a November 1863 letter from G. Frances, Director, to Sir William Hooker requesting cork oak plants. In August 1864 six cases of cork trees had arrived on the ship ‘Conatta’ and another six cases were expected to arrive on the ‘Orient’. The Gardens Board “directed that after supplying the Government with as many as they required the city should have one case, each governor of the Garden 100 and that the rest as well as those on the ‘Orient’ shall be advertised inviting country applicants for a limited number each, who are to be supplied upon condition that they report at the expiration of a year or before their success in growing them, it being understood that they are to be distributed in distant localities and with those who will give them proper protection.”

The Cork Oak is one of the world's most widely cultivated ornamental trees. Specimens are grown in many botanic gardens and arboreta, parks and gardens. The very thick patterned bark, drought tolerance, olive green leaves, dense canopy and rounded form has trees being grown for display and curiosity value. The tree is very attractive and many botanic gardens grow trees for their educational value. Cork Oaks occur in every major botanic garden in Australia, except Darwin, and commonly occurs in regional botanic gardens and arboreta. Trees can often be found in public parks and gardens and many private gardens planted in the nineteenth century. While it is slow growing a number of Cork Oaks in Australia have grown to a large size.

The oldest, and second largest, Cork Oak in Australia is in the Royal Tasmanian Botanical Gardens, Hobart and was planted in about 1857 by Francis Newman, curator from 1845

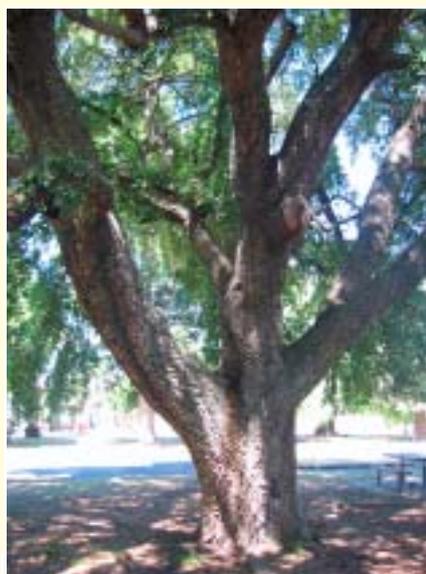
to 1857. This Cork Oak has a girth of 4.3m (4.15m in 1992) at 1.4m, height 12.5m and canopy spread 22.5m (2003).

The largest Cork Oak in Australia is at Tenterfield in northern New South Wales. This tree was brought from England by Edward Parker and planted in his garden in 1861. It has a girth of 4.95m at 1.4m, height of 25m and canopy spread of about 33m (2003).

Other significant Cork Oaks in New South Wales occur at Braidwood, between the two police residences, and at Duntroon where there is a large tree reputed to have been planted by George Campbell in about 1861. This tree has a girth of 2.65m and height of 10m (c1989). There are two trees in the Royal Botanic Gardens Sydney planted in the 1880s, one has a girth of 1.89m, height 10m and canopy spread 12m (lawn 48) and the other, girth 2.5m, height 8m and canopy spread 11m(lawn DL16b), (2003).

In South Australia, there are several old Cork Oaks in the Botanic Gardens and Botanic Park. A large tree which grew in the Gardens was removed for the Bicentennial Conservatory and an old tree once part of the Governor's residence garden in Belair National Park was removed in about 1990 because it had become unsafe. On the National Trust's Significant Tree Register are Cork Oaks at Norwood (Edwards Street) planted in the 1870s, Mt Barker (Mt Barker Road) also planted in the 1870s, has a girth of 3.2m at 1.4m, height 10m and canopy spread 15m. At Mylor (Main Road) there is a stand of six trees planted in the late 1800s. There are two trees in the Waite Arboretum planted in 1952 and 1954 and at Grant Burge Wines in the Barossa Valley there is a row of Cork Oaks planted along the vineyard boundary.

In Western Australia there are 8 Cork Oaks in Kings Park, one planted around 1966-70, another in the early 1980s, and around July 1980 and November 1985, six trees were planted in two groups of three. The Cork Oak in the Brisbane Botanic Gardens & Mt Coot-tha is 15 years old and about 1.4m high and 1m wide, confirming that it's a species not suited to the tropics!



Cork trunk,
St Mary's
Anglican
Church,
Caulfield



Cork tree,
St. Mary's



Cork oak,
Tenterfield



Quercus suber,
Braidwood

There are numerous examples of Cork Oaks in Victoria, with trees occurring in the Melbourne Botanic Gardens, regional botanic gardens, public parks and private gardens. Interestingly in a railway cutting in St Kilda there are several self-seeded cork oaks growing from an adjacent old tree in Alma Park. In Victoria the largest tree grows in a private garden at Stanley in north eastern Victoria. This tree has a girth of 4.25m at 1.4m, height 15.7m and canopy spread 18.8m (1986). At the 1867 Wesley Church in Portland there is a large cork oak recorded as being planted in about 1875 from an acorn brought from Spain by Samuel Winter Cooke of 'Murndal' near Hamilton. This tree now has a girth 3.8m, height 12.3m and canopy spread 17m (1984). One of Victoria's most attractive cork oak trees is at St Mary's Anglican Church in Caulfield. The tree has a dense dome shaped crown and foliage to near ground level. The Church was built in 1871 and the tree was probably planted soon afterwards. The trunk girth is 4.2m at 1.4m (3.55m in 1983), height 15m and canopy spread 21.5m (2003).

In the early nineteenth century cork was being considered as a future industry in Australia. A world wide disruption to the supply of cork caused by the First World War saw plantations being established in Canberra and Victoria. Walter Burley Griffin had encouraged Charles Weston to consider the planting of Cork Oak plantations in Canberra and in May 1916 sent Weston a supply of acorns. The acorns had been collected from the trees growing at Duntroon. In May 1918 Weston reported that an area of 10 acres had been added to the previously planted 10 acres at Green Hills in the Stromlo Forest and that he had planted 100 acorns insitu as a trial planting. Further planting of Cork Oaks was delayed when in June 1918 the SS Boorara which was carrying a shipment of acorns from Spain was torpedoed. In July 1918 Weston reported that he had planted 2815 Cork Oaks in the past year. Between 1817 and 1920, 8,580 plants and 1,006 acorns had been planted in the Green Hills (Glenloch) plantation. In 1921 it was reported that 9590 trees had been established on 20 acres. Other Cork Oak plantings in Canberra occurred at Telopea Park, Fairbairn and near Scrivener Dam.



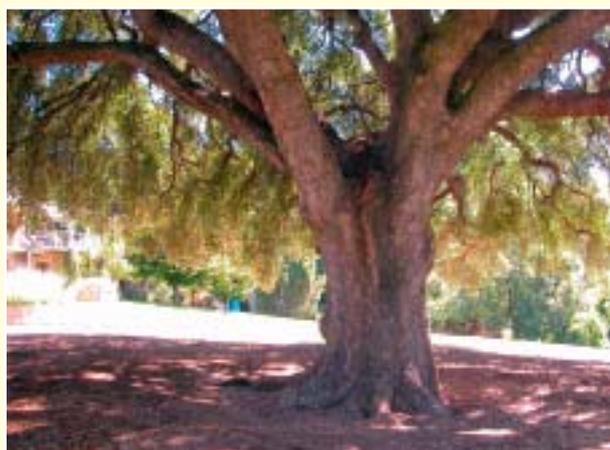
Quercus suber trunk, Braidwood



Cork oak, Royal Tasmanian Botanic



Natural seeding of cork oak in a rail cutting from a nearby tree in Alma Park, St. Kilda



Cork oak trunk, RTBG Gardens

Cork harvesting began in the late 1940s but ceased in 1981. The trees are now maintained for their heritage value and are included on the Register of the National Estate. It was found that the quality of the cork was equal to imported cork. In 2001 cork was again harvested from trees in the Green Hills plantation. The harvest occurred during 1-14 February and was conducted by two Portuguese cork strippers. Fortunately the severe bushfires in January 2003 missed the Green Hills Cork Oak plantation, but came within a few meters.

On the southern slopes of Mt Beckworth near Glendoroul, between Ballarat and Clunes are three cork oak plantations. Planted around the 1920s, the oaks are planted in a grid arrangement and random rows and range in number from about 20 trees to more than 40. The largest plantation is at Maldon along Mt Tarrangower Back Road where there are about 100 trees planted out in a grid arrangement. These trees are thought to have been planted after the Second World War, (c1950) and

range in size from 1.5m to trees over 5 meters high near a gully. None of these plantations have been managed and many trees are low branching and have poor form.

The Cork Oak industry is worth around \$A3 billion and an estimated 13 billion wine bottle corks are used each year, while around 30,000 people are employed world wide. Cork Oak as a plantation tree has only received minor attention in Australia, mainly due to the very long crop harvesting period of about 40 years that is required. There are many areas in temperate Australia suitable for the cultivation of Cork Oak. At a time where we see extensive planting of grapes and olives, it would be nice to think that some consideration was given to Cork Oak plantings which require similar growing conditions. At the moment all that could be supplied is enough cork for that great Australian invention, the “cork hat”.

Acknowledgements

Helen Cohn, Librarian, National Herbarium Melbourne; Thekla Reichstein, Adelaide; Justine Fumic, Perth; Sharon Wilson, Darwin; Ross McKinnon, Brisbane; Jim Cane, Hobart; Roy Cody and David Stewart, Tenterfield, Chris Ward, Sydney and Robert Boden, Canberra.



Cork bark



Cork oak, Tenterfield

Book Review

Oxford Companion to Australian Gardens

Edited by Richard Aitken and Michael Looker

The gestation period of this new Oxford Companion was lengthy - ten years in fact. A study of it reveals why. It is a comprehensive 700-page volume with over 1500 well-researched entries on a great diversity of topics, with entries ranging in length from a few lines to essay-length. The editors have tackled a broad subject and have covered it remarkably comprehensively.

Quite apart from being an excellent library reference book, the Oxford Companion is a delight for browsers, who need not even be particularly interested in gardens to derive interest and pleasure from this book.

The list of contributors is a "Who's Who" of experts from diverse backgrounds. As would be expected, entries relating to botany, gardening and horticulture feature heavily, but perhaps less to be expected are entries on such subjects as spirituality, sport, television and surprisingly, politics. The range of subjects covered is immense and imaginative. Even fowl houses get a mention. There is unexpected humour, with a quirky piece written by James Broadbent on the tyre swan, seen by him to be in danger of extinction, "largely due to the hugely virulent disease of gardening good taste."

All major Australian Botanic Gardens are covered extensively and there are many references to regional and remote Botanic Gardens, some having individual entries. There are 750 biographical entries, covering the lives of significant figures that have contributed to Australia's garden history in some way.

This is a beautifully presented volume, with carefully selected illustrations. The decorative illuminated alphabetical headpieces provided a nice touch and add to the overall elegance. It is an easy-to-use reference work with sensible use of cross-referencing that also encourages browsing.

Every ten years or so a book is published that quickly becomes the definitive work of reference in its field. *The Oxford Companion to Australian Gardens* is such a book and the editors are to be congratulated on so successfully combining knowledge, comment and most enjoyable reading in a handsome volume. The Australian Garden History Society should also be acknowledged for having the foresight to provide financial support and encouragement, enabling this important project to come to fruition.

Virginia Berger

Oxford Companion to Australian Gardens
Edited by Richard Aitken & Michael Looker
Oxford University Press
RRP \$120.00



First Circular

International Botanical Gardens Conference

Bali Botanic Gardens-Indonesia

15th - 18th July 2003

Due to massive scale destruction of plants and wild habitats worldwide, botanic gardens have become the last bastion in efforts to save plant diversity on our planet. In many countries, botanic gardens are amongst the leading institutions in native plant research and conservation. International cooperation between botanic gardens is one of the key factors highlighting the important role that gardens must play in conserving the world's plant diversity.

Following the IABG-Cordoba conference, an international conference will be held by IABG Asia Division, in collaboration with BGCI, in Bali - Indonesia. This International Botanical Gardens Conference is open to all researchers and representatives from any botanical gardens. Participants are strongly urged to contribute papers or posters on the following topics:

Subjects to be Addressed

- Botanic Gardens Management
- Botanic Gardens and Plant Conservation
- Botanic Gardens and Benefit for the Society

Venue

The Conference will be held in Bali Botanic Gardens - Indonesia, on 15th - 18th July 2003

Agenda

- Three days conference (poster session and concurrent presentations will be held in the second and third day), and
- One day post conference tour.

Keynote Speaker

- Dr. Peter Wyse Jackson (from BGCI)
“Botanical Gardens Management”
 - Prof. He Shan-An (from IABG)
“Botanic Gardens in Asia” (to be confirmed)
 - Dr. Prakosa (from Ministry of Forestry, Republic of Indonesia)
“Plant Conservation Strategy and Action Plan in Indonesia” (to be confirmed)
 - Prof. Kunio Iwatsuki (from Japan)
“Botanic Gardens and Benefit for the Society”
- Opening remark will be delivered by LIPI Chairman, Prof. Dr. Umar Anggara Jenie, M.Sc., Apt.

Post Conference Tour

The conference will be followed by a one-day tour to some interesting places in Bali, on 18th July 2003. A minimum of 30 people will be necessary to make the trip. Participants should make the reservation before 17th June 2003 by contacting the organizing committee.

Conference Fee

The conference registration fee will be US \$ 100 per person for the first three days

- Including
 - Materials for workshop
 - Coffee service and afternoon breaks
 - Lunches
 - Official reception
- Not including
 - Accommodation
 - Post-conference tour

The post-conference tour fee will be US \$25

Information about hotels available and their rate will be included in the second circular

Organizing Committee

President of the Organizing Committee

Dr. Dedy Darnaedi

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Sponsored by

- Indonesian Botanic Gardens - LIPI
- IABG Asia Division
- BGCI
- Japanese Government

Organized by

- Indonesian Botanic Gardens
- IABG
- BGCI

IABG

IABG (International Association of Botanic Gardens) was formed in 1954. The aims of IABG are:

- To promote international cooperation between botanic gardens, arboreta and similar institutes maintaining scientific collections of living plants.
- To promote the study of taxonomy of plants to benefit the world community.
- To promote documentation and exchange of information, living plants and specimens between botanic gardens and similar institutes.
- To promote the conservation of plants through cultivation and other means within botanic gardens and similar institutes.
- To promote the introduction to cultivation of appropriate plants of benefit to the community.
- To promote habitat conservation by cooperation between IABG and other relevant bodies.
- To promote horticulture as an art and science.

BGCI

BGCI (Botanic Gardens Conservation International) was founded in 1987 to link botanic gardens as a co-operating global network for effective plant conservation. It now includes over 450 member institutions in 100 countries. It has a wide range of activities and has organized major meetings, workshops and training courses, such as a series of International Botanic Gardens Congresses and training courses. BGCI has helped to create or strengthen national and regional networks of gardens in many parts of the world, such as Australia, Brazil, China, India and Indonesia, to focus their efforts on plant conservation in new co-operative partnerships.

Indonesian Botanic Gardens

Indonesian Botanic Gardens consists of four Gardens, namely Bogor Botanic Gardens, Cibodas Botanic Gardens (both are located in west Java), Purwodadi Botanic Gardens (east Java), and Bali Botanic Gardens (Bali). In 2001, Bogor Botanic Gardens was given a new status as the Center for Plant Conservation.

The missions of Indonesian Botanic Gardens are to:

- Conserve, utilize, and develop plant resources through conservation activities, research, education and recreation
- Enhance public appreciation towards botanic gardens, plants, and the environment to promote sustainable use of plant resources for the benefit of the people

International Botanical Gardens Conference

(tick boxes as appropriate)

- Please send me the second circular & registration form
- I plan to attend the Conference
- I may possibly attend the Conference
- I would like to present a paper (s) or poster (s) (indicate which) on:

- I am interested in attending workshop sessions on:

- I am interested in taking part in post conference tour

Title..... Surname

First name

Organization

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Please address any further enquiries to the secretariat:

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