

# The Botanic Garden

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**A Newsletter for the Botanic Gardens of Australia and New Zealand**  
**Issue no. 2 - March 2002**

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## *From the Editors*

Welcome to our second edition of the Botanic Garden. Our first edition last November was very well received across Australia, New Zealand and internationally. Indeed, some friends in Argentina have asked us for the next edition.

We have also been grateful for some feedback, which we have tried to incorporate into this edition. Of course, our major gap is that we can only be distributed via the internet, but our resources do not permit any printed publication. One advantage with the electronic format is that we have been able to reach a very wide audience very quickly, especially due the efforts of some people in passing it to their own mailing lists. This has also helped Virginia Berger, CHABG Secretary, who has discovered just how changeable people's e-mail addresses can become over a short period of time.

The current issue has one new feature; the use of a wider editorial committee made up of people from several Botanic Garden across Australia. The Editorial Committee is:

### **Managing Editor:**

Virginia Berger, Secretary CHABG

### **Committee:**

Robin Nielsen, Director ANBG

Frank Howarth, Executive Director, RBG Sydney

Kingsley Dixon, Botanic Gardens and Parks Authority, WA

Mark Richardson, Alice Springs Desert Park

Rob Small, Geelong City Council

John Sandham, Botanic Gardens of Adelaide

Dave Warmington, Flecker Botanic Gardens

This issue has a wide range of articles, reflecting the diversity of our readership. All the articles in this edition reflect the very diverse nature of Botanic Gardens and their roles. As we discussed at the Congress last April, Botanic Gardens contribute to many aspects of human existence and the natural environment, ranging from our role in recording and researching plants to presenting for display to a wide and growing audience.

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### What's Happening with BGANZ?

Well, not a lot has happened since the last newsletter! The BGANZ working party really wants to see how this newsletter is received. If it is fulfilling a useful function (and I certainly think it is), then we should build on the communication mechanism that this establishes.

At the next meeting of CHABG in Hobart in late April, the Council will be discussing the status of BGANZ. This will be done particularly in light of the growth of the regional networks in both Victoria and NSW.

The next CHABG meeting will include as guests the chair of ANPC, plus a representative of regional botanic gardens and a representative from New Zealand, so that it more accurately reflects the diversity of botanic gardens in Australia.

We are interested in your views of this newsletter and in the next one will be asking for more detailed feedback from you about how successful or otherwise the newsletter is, and how it can be built on to serve the needs of botanic gardens and related organisation in Australia and New Zealand. Meanwhile, if there is any current feedback you would like

to make, please contact the editorial committee via Virginia Berger in Canberra (contact details page 2).

Frank Howarth

Director and Chief Executive

Royal Botanic Gardens Sydney

### People

- **Stephen Corbett** has been appointed the new Director, Royal Tasmanian Botanical Gardens. Stephen has extensive experience in garden and park management. For much of his career, he has specialised in botanic gardens' operations and management at gardens which include the Australian National Botanic Gardens and the Royal Botanic Gardens Sydney. He has also been involved in the development of the native plant annex at Mount Annan Botanic Garden.

Steve's experience has included a senior management role with the Olympic Coordination Authority in NSW. In that capacity he was responsible for managing parklands and landscapes at the Olympic venues, developing management plans and providing operational support for the Olympic and Paralympic Games. More recently, Steve has worked as a senior consultant providing expert advice and project management to garden and park authorities.

- **Brendan Lepschi** has been appointed the new Curator of the Australian National Herbarium from 10 January 2002. The ANH is part of the Centre for Plant Biodiversity Research in Canberra. Brendan has worked at the Australian National Herbarium between 1992 and 1995 and then from 1998 until this appointment. His main research interests are in Australasian Santalaceae, Solanaceae, Goodeniaceae and Melaleuca.
- **Stig Pedersen** has been appointed Collections Officer at Booderee Botanic Gardens. This position takes in public herbarium, nursery, plant records and collections management. From 1990-94 Stig had a period of short term contracts with

ANBG working in the nursery and with plant records. He was permanently with plant records from 1994 until early 2002.

## Up-coming Meetings and Conferences

### Victoria's Plants First Revealed: Robert Brown In Port Phillip 1802

A symposium celebrating the bicentenary of the voyage of Matthew Flinders to new Holland in 1801-1803 and the visit to Port Phillip by Robert Brown and Ferdinand Bauer in April 1802.

**18 April 2002**  
**KPMG Conference Room, Level 5,**  
**161 Collins Street, Melbourne**

Amongst those on board the HMS *Investigator*, commanded by Captain Matthew Flinders, were the botanist Robert Brown, gardener Peter Good, and natural history artist Ferdinand Bauer.

The symposium, celebrating Brown's time in Victoria 200 years ago and his lasting scientific contributions, will be held under the auspices of the Royal Botanic Gardens Melbourne, The School of Botany, The University of Melbourne, and the Australian Systematic Botany Society.

The symposium will include talks on three broad themes:

- Brown's lasting influence on botanical systematics
- Changes in the vegetation of the southern Mornington Peninsula since Brown's visit, and challenges for biodiversity research and conservation.
- Ferdinand Bauer's contribution to botanical art and the role of botanic art.

#### For further information please contact:

Karen Lockyer (03) 9252 2355 or

e-mail: [karen.lockyer@rbg.vic.gov.au](mailto:karen.lockyer@rbg.vic.gov.au)

### Robert Brown 200

An international conference celebrating Robert Brown's time in NSW and his contribution to science.

Royal Botanic Gardens Sydney, 8 – 10 May 2002.

In May 1802, Robert Brown first set foot in Sydney as surgeon-naturalist on Matthew Flinders' expedition. He returned several times over the next three years, making a pre-eminent contribution to knowledge of our local flora. A three-day conference celebrating his time in this region and his lasting scientific contributions will be held under the auspices of the Royal Botanic Gardens Sydney, Greening Australia (NSW) Inc., the Linnean Society of London and the Australian Systematic Botany Society.

The conference will include invited talks, and posters, on two broad themes:

- Brown's lasting influence on botanical systematics
- Changes in the vegetation of the Sydney region since his visit" current conservation and land management issues.

Further information:

<http://plantnet.rbg Syd.nsw.gov.au/brown200>

or contact Professor David Mabberley (chair of the organising committee):

[dmabberley@ga.org.au](mailto:dmabberley@ga.org.au),

phone 02 9231 8111

fax 02 9251 7231.

### Council of Heads of Australian Botanic Gardens (CHABG) meeting:

Hobart, April 23-24, 2002

### American Association of Botanical Gardens and Arboreta (AABGA) Annual Conference:

2002 – August 7-10, Royal Botanic Garden, Hamilton/Burlington (Greater Toronto Area)

2003 – June 29-July 2, Gardens of Greater Boston, Boston, Massachusetts

## **BGCI 5<sup>th</sup> International Congress on Education in Botanic Gardens**

### **‘Connecting with Plants – Lessons for Life’:**

29 September – 4 October 2002

Further information – [www.rbg Syd.nsw.gov.au](http://www.rbg Syd.nsw.gov.au)

## **International Plant Propagators Society 30<sup>th</sup> Annual Conference**

11-14 April 2002

Rydges Carlton, Melbourne

For further information – [www.ipps.org.au](http://www.ipps.org.au)

## **National Conference of Volunteer Guides in Botanic Gardens –**

2003 - Kings Park and Botanic Garden, Perth

Further information in future issues.

### **An Italian Proposal**

CHABG has received an e-mail from Sergio Zerbini, Past President of Isa (International Society of Arboriculture) – Italy Chapter. Mr Zerbini is currently the Principal of an Italian vocational training centre specializing in arboriculture and gardening and is also responsible for the Treeworker certification program in Italy. He is interested in travelling the world looking at natural, arboricultural and horticultural attractions.

Mr Zerbini seeks to organise an “exchange of hospitality” with an Australian family. He and his wife (both 45 years old), together with their two daughters (5 and 7 years old) would like to come to Australia for March and April 2003 and live with an Australian family with similar interests. In return, they would host that family in Monza, Italy in August and September. Monza is close to Milan, very close to Switzerland, and not far from Venice and Florence (and home of the well known Autodrome).

If anyone is interested in this proposal, please contact Virginia Berger (contact details Page 2 who can give further information and Mr Zerbini’s contact details.

## **Errata**

In the first issue of the newsletter, John Sandham’s name was omitted from a listing of members of the working party formed to look at setting up a Botanic Gardens Association of Australia and New Zealand. We apologise.

## **Darwin Botanic Gardens to be Renamed in Honour of George Brown**

The Chief Minister of the Northern Territory has announced that the Northern Territory Government will re-name the Darwin Botanic Gardens in honour of the late Lord Mayor of Darwin, George Brown. The Gardens will now be known as the George Brown Darwin Botanic Gardens.

Ms Martin said the move pays tribute to Darwin’s longest-serving Lord Mayor, whose deep and abiding love for the Botanic Gardens is well known, making it appropriate that such a landmark and important public place be named after him.

Ms Martin noted that the move was done in consultation with the Darwin City Council, the Friends of the Botanic Gardens, the Parks and Wildlife Department and George Brown’s widow.

## **Threatened Native Plant Garden opens at the Auckland Regional Botanic Gardens, New Zealand**

One of the most significant events in the 25 year history of the Auckland Regional Botanic Gardens (ARBG) was the opening of a major new collection – the Threatened Native Plant Garden (TNPG) on the 29<sup>th</sup> September 2001. One hundred and ten invited guests attended on a glorious spring day.

Administered by the Auckland Regional Council / Te Rauhitanga Taiao, ARBG is New Zealand’s most northerly botanic garden and located just south of Auckland City. Development of the Gardens began in the mid 1970s and they were officially opened in 1982. The Gardens cover 67 hectares, including 12 hectares of native forest and a diverse range of plant collections. From the beginning there has been a strong focus on native plants of northern

New Zealand, with plant conservation taking on a significant role in 1994. This work has steadily increased over the last seven years to include ex-situ collections of threatened plants, education and public awareness about these plants and the provision of plant material for re-introductions, translocation and scientific research.

In 1995 ARBG formed a working partnership with the Department of Conservation (DoC), local nurseries, Technical Institutes, Auckland University and the Auckland War Memorial Museum herbarium. Together these agencies formed the Auckland Plant Conservation Working Group. In 1997 a special Development Plan working group of educators and scientists gave a strong mandate for the Gardens to become a resource centre for regionally threatened plants, with the establishment of an endangered species collection and seed storage facility.

It is estimated that a significant proportion (20%) of New Zealand's vascular plant flora is under some degree of threat. Approximately 80% of these are endemic. In 2001 the DoC listed more than 119 taxa at risk of extinction in the wild and a further 105 as "in decline". On a more local level the Auckland Threatened Plant Strategy (DoC, 1998) lists 170 regionally/nationally threatened plants as occurring naturally in the Auckland conservancy of DoC. Successive New Zealand Governments have pledged their commitment to conservation of our biodiversity. This is shown firstly by the signing of the 1992 'Convention on Biodiversity', and secondly by the February 2000 publication of The New Zealand Biodiversity Strategy – Our Chance to turn the Tide – Whakakohukihukitia Te Tai Roroku Ki Te Tai Oranga.

At a most opportune time the Auckland Mayoral Forum was approached in November 1999 by the New Zealand Government, and invited to submit a conservation project proposal with the aim of securing a \$100,000 donation from the Government. This was in recognition of Auckland hosting the Asian Pacific Economic Co-operation (APEC) conference earlier in the year. The Auckland

Regional Council / Te Rauhitanga Taiao which is part of that forum put forward on behalf of ARBG, a proposal for a threatened native plant garden and a seed-based genebank for conservation. The bid was successful.

The 4,010 sq. m. site for the garden was chosen in December 1999 and a meeting with the Auckland Plant Conservation Working Group was held the same month to share ideas for this new collection. The landscape plan was completed and ratified in April 2000. On-site development commenced in June 2000 and the first plantings made in May 2001. Completion was planned for September 2001. The overall design is responsive to New Zealand and South Pacific styles, has a sense of enclosure and provides a variety of stimuli to inspire the imagination of both children and adults. Seven thousand school children per annum visit ARBG and a special schools programme for the TNPG is planned.

The TNPG was designed to meet the following objectives:

- create an awareness of Auckland's threatened plants, the reasons they are in decline and what can be done to reverse the decline
- assist in threatened plant identification
- increase and disseminate knowledge of threatened plant propagation and cultivation
- provide a backstop against extinction of threatened plants in the wild
- provide plant material for research, displays and cultivation thereby reducing pressure on wild populations
- provide an aesthetically, well•designed thematic display to entice visitors into the garden and advise them how to take responsibility/action for their environment
- promote the wider use of threatened plants in amenity horticulture where appropriate
- provide plant material for species recovery and translocation programmes
- provide a resource for research of systematics, pathogen control and conservation biology

- increase public awareness of the ARBG role as a scientific and educational resource
- provide voucher specimens to the Auckland War Memorial Museum herbarium

It was decided that this collection would have an emphasis on regionally and nationally threatened plants occurring naturally in the Auckland and Northland regions, and on northern offshore islands. This reflects the garden's geographic location and ARBG Plant Conservation Policy.

Threatened plants have been arranged ecologically, together with associated non-threatened taxa. The presentation of replicated habitats has considerably more value, meaning and interest and provides further interpretative opportunities as opposed to just a collection of labelled threatened plants. Inland and coastal habitats developed include lava field, gumland, sand dune, salt marsh, freshwater swamp, rocky bluff and offshore island. Island plants are particularly vulnerable with small populations adapted to specialised ecological conditions e.g. Kermadec Is., outer Hauraki Gulf Is. and Three Kings group. An area for 'weedy' looking threatened plants was also set aside as these being similar in appearance to exotic weeds tend to be overlooked. It is envisaged breeding populations be established wherever possible, but this will be limited by close proximity of taxonomically related plants.

A list of threatened and non-threatened taxa arranged into ecological habitats was prepared and each one assessed as to its suitability for cultivation. Plant material was collected from cultivated sources where the purity of such germplasm could be assured, so as not to further deplete wild populations. Accessions of known wild origin accompanied by ecological information are of the most value. If plant material could not be sourced in cultivation then collecting from the wild in consultation with DoC and other landowners was the second option. ARBG staff recorded habitat data for all wild collections made. Numerous threatened taxa were sourced from outside the region as they are recorded as being locally extinct.

## Interpretation

A budget of NZ \$15,000 to design and construct the TNPG signs was earmarked. New interpretative signage has recently been developed for ARBG. They are of folded steel construction, screen-printed with vinyl text and images. The first collection to display and trial these is the TNPG. Generic themes appeared as we worked through the various collections: biodiversity is vital to people, everything is interconnected, conservation, sustainability, ethnobotany and threats to biodiversity.

Specific threatened taxa, which could provide interesting stories using these themes were identified. *Euphorbia glauca* (waiuatua) is a plant with such a story. Presumed extinct on Auckland region's mainland, the Botanic Gardens staff are growing plants from seeds and cuttings from 3 cuttings taken from the last remaining plant on Motukorea / Browns Island. The glaucous leaf colour reflects the heat, vital for survival in hot dry places. The Maori name means milk of atua (atua is a supernatural being) used for soothing the skin. The milky sap of this plant was used to relieve skin diseases.

For the purposes of interpretation and visitor experience the signs are arranged evenly through the collection. The seven highlighted taxa include *Hebe bishopiana* (Waitakere rock koromiko), *Clianthus puniceus* (kowhai ngutukaka), *Lepidium oleraceum* (Cook's scurvy grass), *Tecomanthe speciosa* (Three Kings trumpet vine), *Geranium solanderi* "large petals" (matua kumara), *Pomaderris hamiltonii* (pale-flowered kumarahou), and *Euphorbia glauca* (waiuatua).

An open-sided triangular sign at the main entrance takes the form of a nikau (*Rhopalostylis sapida*) frond – with a screenprinted pattern, the collection title, a teaser enticing visitors into the next plant collection and orientation map of plant collections. Another sign shows various habitat positions within the garden.

It was decided to focus on how everyone can make a difference to the environment by practising sustainability, while also creating an awareness of the threats to our biodiversity.

Three revolving cylinders were designed to illustrate particular threats and solutions, namely animal pests, loss of habitat and exotic weed species. The weed threat cylinder is positioned adjacent to the wetland where visitors learn that there are 650 exotic plants naturalised and pose serious threats to native biodiversity in the Auckland region. Auckland's weed record is second only to Hawaii. Animal pests include deer, stoat, ferret, possum, rabbit and feral cat.

A brochure was designed to coincide with the official opening. An introduction by the Department of Conservation is followed by the headings: Looking at the big picture – Global Conservation, New Zealand – a very special place, Auckland's Angle, The long journey for the choice of plants, Exploring the habitats together with a layout sketch, Why has this garden been created?

A Botanic Gardens advisory leaflet 'Growing Auckland's Threatened Plants' has been produced by the ARBG Native Plant Evaluation Panel. This provides the home gardener with information on threatened plants and how to grow them.

### **Curation**

Curation of this collection is expected to be challenging, as it will require a high level of monitoring and maintenance. With limited resources available, an approach using an enthusiastic volunteer group may be established. Several members of the Auckland Botanical Society have shown an interest in forming such a working relationship with the Curator.

### **Official opening**

Invited guests included central and local government politicians, staff from Auckland Regional Council, Department of Conservation and Auckland War Memorial Museum herbarium, Friends of the Gardens committee, members of the Auckland Plant Conservation Working Group and contractors involved with the project. The Rt. Hon. Helen Clark – Prime Minister of New Zealand/Aotearoa unveiled the plaque and spoke on the importance

of biodiversity conservation in New Zealand. The day was a huge success for plant conservation and highlighted botanic gardens' role in conservation. The public opening on the following day included guided walks. A fact sheet was prepared for the Garden guides as a reference source and for the commentary on the Wiri Rambler – the Gardens weekend internal transporter.

### **Future**

Several structural components of the TNPG require further funding for completion. These are:

1. The main entrance Archway will be inspirational and symbolic of New Zealand / Aotearoa's natural heritage.
2. A small pavilion roofed in sailcloth will be a place for gathering, sheltering, presentations and cultural activities.
3. Two large raised garden beds will showcase threatened plants and inspire our visitors to use these in the home garden.

The Friends of the Gardens have undertaken to sponsor the Archway entrance and will work towards raising funds for the other components.

The collection will be used to facilitate the identification of threatened plants, provide plant material for conservation education and display, conservation biology research, to grow those species with recalcitrant seeds that cannot be maintained in a seed store and to produce material for re-introduction, re-enforcement, habitat restoration and management.

A conservation-specific seed storage facility will be a separate and probably shared facility. We are looking to create partnerships with Department of Conservation and Territorial Local Authorities for this project. This will be our 'back room store' for plant conservation whilst the TNPG is the 'shop window'.

This collection is proving to be a popular destination with our visitors and is creating a greater awareness that our native plants are at risk whilst helping visitors understand one of our fundamental roles, namely biodiversity conservation.

Acknowledgement: The authors are grateful for the support given to this project and plant conservation at the Gardens by the Auckland Regional Council.

Steve Benham, Botanical Records/Conservation Officer

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## **The International Agenda for Botanic Gardens in Conservation**

### **– Using the Agenda in Australian Botanic Gardens and Arboreta**

**Kingsley Dixon**

**President, The Australian Network for Plant Conservation**

The International Agenda for Botanic Gardens in Conservation was launched at the World Botanic Gardens Congress on 25 June 2000. The Agenda sets in place the framework for botanic gardens and conservation networks (such as the ANPC) to develop and implement active programs to stem the loss of plant biodiversity. In conjunction with the proposed Global Strategy for Plant Conservation, the Agenda provides an effective means for botanic gardens and networks to become key players in national programs of ex situ and in situ conservation. The Agenda also provides for education and extension programs to ensure that the work of gardens and networks reaches all levels of the community including policy makers.

### **Background**

The first publication of The Botanic Gardens Conservation Strategy in 1989 provided a

valuable framework for botanic gardens and conservation networks world-wide. Australian Botanic Gardens and arboreta variously endorsed the strategy, however a concerted and measurable means for implementation in each institution was not forthcoming. The need for updating the 1989 strategy resulted from the development of new conservation techniques and practices, the identification of changing priorities and with the enactment of important global instruments such as the Convention on Biological Diversity and Agenda 21 and new national laws and strategies to protect biological diversity.

The new and completely revised strategy is an action-based document, outlining priorities and targets for botanic gardens in the implementation of specific tasks, as well as to define general principles in plant conservation. The document addresses the need for botanic gardens to be active participants in the implementation of, for example, the international Convention on Biological Diversity and to contribute to national sustainable development and environmental sustainability.

The new International Agenda reflects a shared vision of global concerns for biological diversity and provides a framework to agreement about the important roles that botanic gardens can play, individually and collectively, in conservation.

For Australian botanic gardens and conservation networks, the document provides a crucial platform for developing priorities in conservation that meet both national and international objectives. The reluctance of Australian botanic gardens to universally and actively adopt the 1989 strategy can now be re-addressed in the context of the new International Agenda. Importantly, Australian botanic gardens now need to embrace the Agenda as a means for national coordination and benchmarking of their conservation activities. The CHABG provides an important means for disseminating and performance managing the implementation of the Agenda and in conjunction with community networks, the delivery of the message of conservation to the broader community.

## **The Main Elements of the Global Mission Relevant to Australian Gardens**

The mission of the new Agenda will require Australian botanic gardens to undertake a broad but closely co-ordinated co-operative strategy in conservation, research and education, of which there are several core elements.

### **Conservation**

- Work within international, national and state-based policies and frameworks for the conservation of biological diversity.
- Set agreed levels and standards in plant diversity conservation, integrating techniques in ex situ and in situ conservation.
- Support the development of a national capacity for conservation through collaborative partnerships at garden-to-garden and garden-to-country level.
- Fully integrate conservation of plant diversity at the ecosystem, species, population and molecular levels.
- Develop, implement and participate in plans and actions aimed at the recovery of species and the restoration of ecosystems and their diversity.
- Maintain genetically diverse and accessible samples of the plant species of Australia.
- Pay special attention to the conservation of plant species that are threatened and/or of direct or potential economic importance to human societies.
- Develop and implement control measures for invasive alien plants that pose great threats to biodiversity.
- Develop and implement best practices in plant conservation for botanic gardens.
- Ensure the fullest community and institutional participation in botanic garden programmes.

### **Research, monitoring, and information management**

- Stimulate and undertake research on plant biology and interactions with social, cultural, and economic factors that impact on

biodiversity, and utilise the results of this research to support conservation action.

- Participate in the documentation of the plant diversity of Australia, including its present distribution in the wild, conservation status and trends, threats, use and preservation in protected areas and ex situ collections.
- Contribute to integrated, distributed, interactive information systems to manage and make accessible information on plant diversity to other gardens in Australia, the community, government and the region.
- Work in partnership with other gardens, research and applied management institutions and the community to develop best practice techniques for research, monitoring and information management.
- Promote botanic gardens as centres of information on plant diversity and conservation.

### **Education and public awareness**

- Undertake public awareness programmes within botanic gardens, and in the community, to raise public awareness of the value of plant diversity and the human impacts that threaten its maintenance.
- Develop partnerships and alliances with government and non-government organisations and community groups to promote awareness and understanding of the value of biodiversity, eg Landcare, WWF, Bushcare, Coastcare, etc.
- Assist in the development of public policies and priorities for environmental protection and biodiversity conservation.
- Work in partnership to incorporate the importance of plants and environmental conservation into formal curricula and informal education programmes.

The full text of the Agenda is available from Botanic Gardens Conservation International and an abridged version for Australian botanic gardens is available from the secretariat of CHABG.

## Feature Garden

### Albury Botanic Gardens

The Albury Botanic Gardens are located on the Murray River plains in the South West Slopes bio-region of NSW. Situated between Melbourne and Canberra, just off the Hume Highway, the Gardens are a well-known landmark in Albury for tourists.

The City of Albury and the community are proud to have one of the best regional botanic gardens in Australia. The gardens are 125 years old this year and festivities have begun to celebrate this great community asset.



*The Main Gate bed ablaze with Sweet Williams*

Our first twilight movie screening of “Grease” was held on the Creek Lawn and 1200 people attended this wonderful, free family event. So popular was the movie in the gardens, plans are already in place for this to become a regular event.

A whirlwind visit by the Royal Botanic Gardens Sydney, Community Education team, was a highlight for 30 Albury Public School students, who were enthralled by the presentation on the Wollemi Pine and the weird and wonderful world of plants. Our staff and Friends members, who are involved in education programs and tours attended and we had a great chinwag over lunch. We certainly gained a lot of tips for our



*A corporate function enjoying the Gardens in bloom*

own presentations and education programs and the visit was greatly appreciated.

Our Spring Festival and Plant Sale is to be extended this year to take in the October long weekend and highlight the many enjoyable features of horticulture and plants. Floral art, necklace and basket making, bonsai and orchid displays, will all be open for the community to participate in for a full week in October. Combined with the Garden competition and the official opening of the Friends \$10,000 Rose



*Caladenia concolor, The Crimson Spider Orchid. Threatened species.*

Arbors, it promises to be a wonderful time for all involved.

The Albury Botanic Gardens continues to be involved in plant conservation, with the NPWS recovery team for *Caladenia concolor*, the Crimson Spider Orchid and support for the Australian Network for Plant Conservation. The Friends of the Albury Botanic Gardens continue to support the Box-Ironbark and the Grassy Box woodlands campaigns, the Newhaven



*Zygopetalum mackayi* from the Friends Orchid collection

Sanctuary in Central Australia and the Greening Australia seedbank hosted at the Gardens.

We are also involved in both the NSW and Victorian Regional Botanic Gardens networks and it is exciting to see the staff development opportunities and tourism possibilities arising. Our many thanks to all the people involved in these endeavours.

Our Albury Botanic Gardens are small, but packed full of great people with enthusiasm. Drop in if you're ever passing by and contact us if we can help in anyway.



*Children enjoying the Ginkgo in full autumn colour*

Paul Scannell  
Botanic Gardens and Natural Areas coordinator  
City of Albury  
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### **Australian Network for Plant Conservation Third Plant Conservation Techniques Course**

**Jeanette Mill & Rosie Smith**

Thirty plant conservation practitioners and enthusiasts from across Australia and the Pacific joined together for an intensive eight days of training in techniques for plant conservation in Lismore, northern NSW in early December 2001. Topics ranged from causes of rarity and threat, assessing rarity, recovery planning and management techniques to partnerships. The Centre for Plant Conservation Genetics (CPCG) at Southern Cross University hosted the course, which was also supported by the NSW Environmental Trust, the Council of Heads of Australian Botanic Gardens (CHABG), and the NSW National Parks and Wildlife Service.

An exciting range of presenters, who are all specialist researchers and practitioners, from international, state and local organisations, included Associate Professor David Given, Chair of the IUCN Species Survival Commission Plant Conservation Program. A hands-on laboratory session on genetic testing was conducted by Dr Maurizio Rossetto and Nicole Rice of the CPCG.

Interest in the course was strong, with representation from a diverse range of groups including state and federal conservation agencies, public authorities, Landcare groups, botanic gardens and agricultural seed stores. A staff development grant from CHABG enabled generous free subsidies to be provided to five botanic gardens participants, from state and regional botanic gardens across Australia. These participants were Phillip Cameron from Brisbane Botanic Gardens, Terry Coates from Royal Botanic Gardens Cranbourne, Paul Scannell from Albury Botanic Gardens, Bob Dixon from Kings Park Botanic Gardens, and Mary Harris from Lismore Rainforest Botanic

Garden. Marika Tuiwawa, Curator of the South Pacific Regional Herbarium, travelled from Fiji to attend, and a good cross-section of people from the Lismore region benefited from the course being held close to home. ANPC rotates the course around different regions, previous courses being held in Canberra and Hobart. This enables community participants in the region to attend without incurring travel and accommodation costs.

Conservation and restoration of the Big Scrub rainforest remnants featured as a significant local issue throughout the course. Inspiring presentations from gifted communicators including Robert Kooyman, provided insights



*Ian Baird, Blue Mountains Conservation Society, learning laboratory skills in genetic testing from Dr Maurizio Rossetto, Senior Scientist, at the Centre for Plant Conservation Genetics, Southern Cross University. Photo by Jeanette Mill, ANPC*



*Ralph Woodford, Big Scrub Rainforest Landcare Group and Rous Water, describing the outstanding work on rainforest rehabilitation conducted over a number of years at Rocky Creek Dam and nearby Big Scrub remnants. Photo by Jeanette Mill, ANPC*

into the complexities of rainforest ecology. Field trips to sites such as Rocky Creek Dam, managed by Rous Water, and Booyong Nature Reserve, enabled participants to witness first hand the tremendous efforts of local groups in restoring these vital remnants.

Important and lasting networks were established between participants and presenters alike. This lasting legacy will further build on the new knowledge gained by the enthusiastic and dedicated people who came together in Lismore for one week last December.

The ANPC plans to further expand its training program by holding three training workshops over the next year, and by producing a manual of plant conservation techniques.

Course reports from participants will be published in the ANPC's quarterly plant conservation journal *Danthonia*. Details of future courses and all other ANPC activities can be obtained by joining the ANPC.

Free sample copies of *Danthonia*, and membership information can be obtained by contacting:

**Australian Network for Plant Conservation Inc**  
GPO Box 1777  
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## Encounters with Naturalists

This year South Australia is holding Encounter 2002 celebrations. The statewide event commemorates the bicentenary of the exploration and mapping of South Australia's coastline by Englishman, Matthew Flinders and Frenchman, Nicolas Baudin. The celebrations provide an ideal opportunity not just to focus on their navigational achievements but also on the wealth of flora and fauna collected and recorded by the naturalists and illustrators who were on board both ships.

With this in mind the Plant Biodiversity Centre (PBC) and Botanic Gardens have set

up a partnership project with Penneshaw Area School and Landcare group on Kangaroo Island. Titled, *Kangaroo Island: Encounters with Naturalists*, the project aims to help students learn about the local flora of their region by following in the footsteps of the naturalists and illustrators who visited their shores nearly 200 years ago. ('Kangaroo' was the way Flinders first spelt the name of our well-known macropod.) Penneshaw is particularly significant because both Baudin and Flinders made collections and illustrations there as well as taking on food, water and firewood.

A field trip to Penneshaw last year set the historical context and trained older students in field collection techniques and plant propagation. A reciprocal visit by students in August taught them how to mount the specimens they collected earlier. They also participated in a Collector's Quiz workshop to gain a better understanding of the role of herbaria in expanding our knowledge of plant biodiversity. Garden scientific staff gave presentations, which gave an insight into the modern role of science in a botanic garden.

The following article outlines the successful completion of stage 3 of the project: a field trip to Kangaroo Island involving the re-enactment of the work of the naturalists and illustrators on board the ships of Flinders and Baudin, the first Europeans to explore the island two hundred years ago.

## The Field Trip

Driving to Kangaroo Island, our team pondered just how different our voyage to the Island was compared to that of Flinders and Baudin two hundred years earlier. We were travelling to the same destination but in climate controlled cars at what would have been unheard of speeds for human travel back then of up to 100km per hour. Our mobile phones were at the ready to communicate with just about anywhere in the world and our GPS satellite navigation gadgetry enabled us to quickly find our way should we become geographically challenged (lost). On the other hand, those on board both Baudin's and Flinders' ships worked under great personal hardship with limited equipment, combating hunger, fatigue, disease, cramped

living quarters and the ever present dangers that inevitably arise from sailing into uncharted waters and landing on unknown territory. Fortunately for us our re-enactment with Penneshaw students of the work of the naturalists and illustrators on board both ships would not be under the same duress and hardship that our predecessors encountered.

On arrival at Penneshaw, Janice Nicholson-Taylor the school's energetic project organizer, had prepared a wonderfully detailed timetable for the following two days. The schedule involved plant and seed collection, botanical illustration and historical research. With 78 students and a team of school staff involved there was good reason for the precise planning.

Our staff initially split into two teams. One to determine collecting sites suitable for large groups of school students and with school bus turning capabilities, the other to work with the younger students on how to become plant collectors or in more student friendly jargon 'plant hunters'.

### **Plant Hunters Workshop**

Three 'Plant Hunters' workshops were conducted with lower primary classes. Activities included specimen collection techniques, recording datasheet information and mounting dried specimens. Modified datasheets were developed for different year and ability levels. We encouraged students to develop their own plant hunter folders both for the project and as an ongoing life-long interest in their local flora and plant biodiversity. Older students had previously learnt these skills in earlier stages of the project.

### **Field Collecting**

We identified three different localities within a 10-minute drive of the school as sites for the students to make their collections. All of the localities were in areas where either Flinders or Baudin's expeditions may well have trodden from their anchorages in the Eastern Cove area of the Island.

Over two days all 78 students made collections. The older students, who had already been exposed to collecting earlier in the year,

acted as scribes for the younger students by filling in the modified collector's labels. These collections once dried and mounted would be used in a number of ways. Some were to begin the students own collectors folders, some for events involving official Encounter 2002 celebrations, some would contribute to a local reference herbarium, and some would be for a special exchange with students in the south of France. And of course at least one will go into the State Herbarium collection, with any extra duplicates available for exchange with other herbaria.

When not working with the students we were able to make an extra 73 collections for the State Herbarium, 16 of these for propagation and planting in the Kangaroo Island beds at Wittunga.

### **Botanical Illustration**

Two hundred years ago the work of illustrators was essential in conveying to the people back in Europe just what was encountered on the voyages of exploration. Both the French and the British expeditions had illustrators who were to earn some renown from their depiction of Australian flora and fauna.

In order to replicate this to some extent, the PBC botanical illustrator, Gilbert Dashorst, presented workshops to students on how to scientifically illustrate the plants they collected in the field and the historical significance of such work.

Over two days each student received instruction in the use of watercolours, beginning with a pencil outline of the plant selected (and collected) from the field. It quickly became evident that there were many budding young illustrators among the ranks. The school is providing further class time to enable students to complete their illustrations. The aim is to have completed illustrations for framing for exhibition in the Penneshaw Community Centre, and possibly on the mainland, during the Encounter 2002 celebrations.

### **Baudin Conservation Park**

Baudin Conservation Park, just outside of Penneshaw, is a newly gazetted conservation park, which will be officially opened as a part

of the Encounter 2002 celebrations next year. Libby Barios the local Landcare representative is working with Penneshaw students to begin a re-vegetation program in the park. The area of the park closest to Penneshaw presently consists of open, weed-infested paddocks. Major vegetation is a mixture of Allocasuarina, Melaleuca and Eucalyptus on the slopes and in the gullies.

Our staff provided introductory talks to students on the basics of revegetation programs and seed collecting techniques. Seed collections were made by all students in order for them to propagate their own seed and raise their own seedlings. Voucher specimens were made for these collections. Libby will coordinate the program as a part of the local Landcare activities for Encounter 2002.

Parks and Wildlife ranger, Daniel Rowly is supporting the project and has secured some funding for tree guards. These are essential to the success of the project due to the grazing pressure exerted by the local wallaby population.

### **Regional Reference Herbarium**

The school and local community Landcare group are keen to develop a regional reference herbarium as an ongoing commemoration of Encounter 2002. Representative collections made by the students will form some of the first specimens in the reference herbarium. Local KI plant expert Bev Overton is assisting with advice on setting up the herbarium and is overseeing the mounting of the plant specimens with the students.

### **In Flinders' Footsteps**

Matthew Flinders and Robert Brown climbed Mt Thisby (named by Flinders as Prospect Hill) on 4<sup>th</sup> April, 1802. Originally we had planned to include it as one of the sites visited by the students for collecting purposes. However, it was too far from the school to be able to complete all of the activities planned for the groups. Five members of our party visited the area and made historical re-collections of specimens from the site. The view from the top of the Mt Thisby takes in Pelican Lagoon to

one side and the Southern Ocean on the other. The panorama vividly brought to life Flinders' journal description of the pelicans encountered while rowing across the lagoon and the surprise on finding the ocean, rather than land, to the south of Mt Thisby.

The field trip successfully provided the students with a greater understanding of their local flora, plant biodiversity and the natural history links of the region to Encounter 2002 celebrations. For the Botanic Gardens and PBC it was an ideal way to extend our expertise and an understanding of our work into the community through a mutually beneficial partnership. Most importantly though, we hope in at least some of the students we may have ignited a long-term passion for plants and the natural environment.

Steve Meredith	Robyn Barker
Education Officer	Honorary Research
Botanic Gardens of	Associate
Adelaide	Plant Biodiversity Centre

## **Prior Knowledge**

### **- An Encounter 2002 Event**

On board the ships of Matthew Flinders and Nicolas Baudin were naturalists who were discovering for western science many new and exotic plants and animals. At this same time, however, there already existed intimate and extensive Aboriginal knowledge of the Australian flora and fauna. This 'Prior Knowledge' was held by over 50 distinct South Australian Aboriginal groups and was the secret to successfully living with the land for thousands of years.

The Prior Knowledge walking trail in the Adelaide Botanic Garden celebrates this part of our Aboriginal history. The stories along the trail highlight just a little of the traditional plant knowledge needed to live in our challenging natural environment.

Ribgna Green, Director of the National Aboriginal Cultural Institute Tandanya, launched the Prior Knowledge walking trail on 27 February 2002 in the Adelaide Botanic Garden.

Prior Knowledge is a collaborative project between the Botanic Gardens of Adelaide and Tauondi Aboriginal College. It has involved students and staff working together to develop the trail. Further support has been received from the Open Access College and Plant Biodiversity Centre.

Director of the Botanic Gardens of Adelaide, Steve Forbes said, "*Prior Knowledge is a practical example of how the Botanic Gardens and cultural and educational organisations like Tauondi College can pool their resources to produce projects of a broad value to our community. It is also good example of the way in which plants stories can provide insights into traditional Aboriginal people, their culture and sustainable use of the Australian environment.*"

Prior Knowledge has been developed as a part of the Encounter 2002 programs of events.

Prior Knowledge interpretive pamphlets are available at all main entrances to the Adelaide Botanic Garden. The walk is available until the end of April 2002 and is available to the general public and schools community.

**For further information please contact:**

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### **An Australian first - a garden designed especially for children**

A garden, which enables children of all ages and physical abilities to explore and discover the wonders of plants and their importance in our lives, will be an exciting development at the Royal Botanic Gardens Melbourne.

Known as *The Ian Potter Foundation Children's Garden*, it will be a safe, interactive and educational environment where everything is scaled specifically for children.

Due to be completed in 2004, *The Ian Potter Foundation Children's Garden* will be a place where children can connect with plants through play and learning, leading them on a journey which inspires, stimulates and invites inquiry about the environment.

The plans for *The Ian Potter Foundation Children's Garden* include:

- a water sculpture which will introduce children to water play
- a hidden gorge, held apart by giant slate plates, which is filled with unusual cascading plants in a mist-filled micro-climate
- A secret ruin garden where the aerial roots of the walking fig will allow children to create their own cubby houses.

The featured plants and concepts have been chosen specifically for their weird and wonderful shapes and their capacity to delight. They will also reflect Melbourne's changing seasons.

The Ian Potter Foundation is the principal supporter of *The Ian Potter Foundation Children's Garden*. In addition, the Royal Botanic Gardens Melbourne has launched a public appeal to assist with further funding for the development and ongoing life of *The Ian Potter Foundation Children's Garden*.

On 8 February 2002 the landscape plan for *The Ian Potter Foundation Children's Garden* was officially launched. Eighty students from Toolangi and St Joseph's Primary Schools helped launch the plan alongside the Minister for Environment and Conservation, the Hon Sherryl Garbutt MP, Mr Charles Goode AC, Chairman, The Ian Potter Foundation, and Dr Philip Moors, Director, Royal Botanic Gardens Melbourne.

Staff at the Royal Botanic Gardens Melbourne developed the landscape plan for *The Ian Potter Foundation Children's Garden*. In identifying design features, advice was sought from a reference panel of educators, landscape designers and artists, as well as children from St Joseph's and Toolangi Primary Schools.

*The Ian Potter Foundation Children's Garden* will be sited through O-Gate, close to the Visitor Centre at the Royal Botanic Gardens Melbourne.

Carmen Greenway  
Coordinator,  
Marketing and Communications  
Royal Botanic Gardens Melbourne

### **I'll Show You My Garden.... If you show me yours!**

The Royal Botanic Gardens, Sydney has initiated a trial to develop a network of staff exchanges throughout Australian national and regional Botanic Gardens.

The aim is to establish a register of interested Gardens who support the concept of exchanging staff to assist in skill and career development as well as target and promote cultural change within their organisation. The Exchange Network register, to be web linked from the CHABG/CHAH sites to specific addresses, will act as a conduit for interested staff to plan and research their application with interested staff of other gardens.

The intention is to generate an interaction between our organisations through "ground level" networking. Management at each participating organisation will retain control of applications and approvals, exchange numbers, targeted skills etc.

For example a garden may be seeking to construct a new exhibit or to improve an aspect of staff safety. By encouraging and selecting staff for targeted skill development, an organisation can introduce new skills via a system that has low costs.

During the exchange period wages and insurance cover would be provided by your

employer. No costs, apart from induction and training costs, will accrue to the host garden. All other costs including travel and accommodation are to be organised and funded by the staff on exchange (individual gardens are free to subsidise costs as they wish).

While this may at first seem insurmountable, the advantages may outweigh these costs. Staff in a competitive work place looking for additional skills, wishing to combine work with a holiday... or seeking to escape the regular routine and be invigorated by new surroundings, may be keen to apply.

While it may initially seem that big city gardens stand to attract most exchanges, it may be that regional gardens can provide opportunities that larger gardens can't match. For example an experienced horticulturist from a major garden may be attracted to a regional garden offering a supervising position (or subsidised accommodation) near friends or relatives. The regional garden may seek to exchange this person during the annual leave of a leading hand/supervisor and benefit again by having the opportunity of sending a horticulturist to a major garden at some stage in the year. This experience can be repeated in areas of administration and finance, scientific and research staff. Exchanges may not need to occur at the same time, so that staff on exchange can actually work together in both sites at a different time of year.

Managers wanting to find out more about the Exchange Network can contact myself or Angus Meilke, Personnel Officer at Royal Botanic Gardens, Sydney. If your garden is not registered as a participant, speak to your manager and encourage them to take part.

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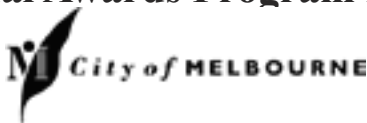


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# World Environment Day Awards 2002

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The Awards aim to recognise businesses, community groups, individuals, local governments, students and the media whose work serves to protect, manage or restore the environment.

### The Major Award Categories are

**City of Melbourne Triple Bottom Line Award** – for the best environmental, social and commercial best practice program for business.

**URS Business Enterprise Awards Category** - for the best specific environmental initiative; and the environmental best practice program.

**Alcoa Community / Individual Awards Category** - for the best community based environmental project or initiative; and the special award for outstanding service to the environment.

**Local Government Awards Category** - for excellence in overall environmental management; best specific environmental initiative.

**Global 500 Education / School Award Category** - for the best school based project exploring environmental themes or issues.

**Media Awards for Environmental Reporting** - for the best print submission; the best radio segment; and the best television segment, which has been published, broadcast or telecast in Australia.

### Nominations close 5pm, Monday 30th April 2002.

Nominations are now open to all members of the community.  
Winners will be announced at an Award Presentation Dinner on May 22<sup>nd</sup> 2002.

The complete guidelines, entry criteria and nomination form can be found at the UNAA website

[www.unaavictoria.com.au](http://www.unaavictoria.com.au)

or telephone (03) 9482 3655, fax (03) 9482 5118, email [UNAA.VIC@bigpond.com](mailto:UNAA.VIC@bigpond.com)