

The Botanic Garden

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**A Newsletter for the Botanic Gardens of Australia and New Zealand
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From the Editors

The Conservation Role of Living Plant Collections

If we think of the Living Plant Collections held in our botanic gardens, how many of them could actually restore a lost wild population? How many of our collections carry enough genetic diversity to reflect the diversity of the wild population? How many of our living collections could augment a severely depleted and threatened wild collection

The greater focus on the conservation role of botanic gardens, through the Convention on Biodiversity and the leading work undertaken by Botanic Gardens Conservation International (BGCI), is even more under the spotlight. At the most recent Council of Heads of Botanic Gardens (CHABG) meeting we considered a working party report that starts to address these conservation questions. The report, prepared by Kingsley Dixon (Kings Park and Botanic Garden), Murray Fagg (Australian National Botanic Gardens) and Bob Makinson (Royal Botanic Gardens Sydney), probably raises more questions than it answers. Their work suggests that the number of species in botanic gardens living collections in Australia that could actually re-establish a wild population is probably quite small, in the tens rather than hundreds. Less certain is the extent to which our living collections holdings could augment threatened wild populations. These collections may be in the hundreds, perhaps even thousands.

Some of us are more comprehensively adopting seedbanking as a way of holding a large



amount of genetic diversity in a small space. This approach is of course valid, but requires ongoing monitoring of the populations held as seed for continuing viability. World leading research is also being conducted in Australia, particularly at Kings Park and Botanic Garden, about more effective storage regimes for seed.

Our focus on Australian and New Zealand botanic gardens is part of a strategy where BGCI is really leading the world in advocating strong conservation roles for botanic gardens. The CHABG working party is taking BGCI 's "International Agenda for Botanic Gardens in Conservation" and adapting it for Australian and New Zealand botanic gardens. An initial draft, reflecting by far the most comprehensive and thoughtful approach to the conservation role of Australian botanic gardens, was prepared by Kingsley Dixon and presented to the most recent CHABG meeting. The working party will continue to work with that draft to draw out guidelines suiting the full spectrum of Australian and New Zealand botanic gardens, large and small, city based and country based.

CHABG also recognised the crucial work undertaken by the Australian Network for Plant Conservation (ANPC) in this area, and the focus on the conservation role of botanic gardens provides a clear nexus between ANPC and the Australian botanic garden community.

Whether our collections reflect a handful of endangered or rare species from a small geographic area, or the diversity of a large chunk of Australia and New Zealand, it is crucial that we do focus clearly on making those collections as effective as possible in plant conservation. The progress of this working party will be reported on in this newsletter, with the aim to present a comprehensive strategy to the next Australasian Botanic Gardens Congress.

Frank Howarth

Up-coming Meetings and Conferences

BGANZ Inaugural Conference

Planning has begun for a conference to be held in Geelong, with October 2003 being the most likely date. Details will follow in subsequent issues of The Botanic Garden as planning progresses.

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 2nd World Botanic Gardens Congress

18-22 April 2004, Barcelona, Spain

BGCI 5th 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

National Conference of Volunteer Guides in Botanic Gardens

Spring 2003 – Kings Park and Botanic Garden, Perth

More information in future Newsletters.

Items of Interest

Career Development Grant for 2002 awarded.

A CHABG Career Development Grant was awarded in April to Dr Teresa Lebel, a Mycologist at Royal Botanic Gardens Melbourne.

Dr Lebel has been invited to present a paper at the Xth Russulales and Boletales Congress in Italy in November and will take this opportunity to visit several herbaria in

Europe that house some of the most important historical and current collections of truffle-like fungal material. As the only Australian specialist currently conducting research on the truffle-like fungi of Australasia, this is a rare opportunity for Dr Lebel to enhance her skills and broaden her expertise.

Dr Lebel's plans to secure a series of critical working relationships between Australian and overseas mycological institutes and researchers will be strengthened and fostered by this overseas exposure, with obvious mutual benefit for all involved.

Information about Career Development Grants for 2003 and an application form will be included in the February issue of The Botanic Garden.

Access to genetic resources - Australian National Botanic Gardens leads the way

The Australian National Botanic Gardens has joined with 28 botanic gardens from 21 countries to commit to a common policy on global access and sharing of genetic resources. The policy was developed from a pilot project initiated by the Royal Botanic Gardens, Kew, in 2001.

The Australian Botanic Gardens has taken a leading role among Australian botanic gardens by adopting practices that are consistent with the 1992 Convention on Biological Diversity, held in Rio de Janeiro.

"This is an important step towards implementing our commitment to the Rio Convention," said Mr Robin Nielsen, Director of the Australian National Botanic Gardens.

"It will allow us to continue exchanging plant material with other international research organisations without compromising the right of Australians to benefit from our genetic resources" Mr Nielsen added.

The project aimed to develop guidelines for the world's 2000 botanic gardens in the access to genetic resources. It sought a harmonised approach by botanical institutions on the exchange of botanical material and associated knowledge, in keeping with the 1992 Convention on Biological Diversity.

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Kew Gardens may join heritage elite.

An article in the London Weekly Telegraph earlier this year reported that the Royal Botanic Gardens at Kew have been chosen as Britain's nomination for World Heritage Site status.

The site, incorporating a collection of royal kitchen and pleasure gardens from the 18th century, were handed to the nation to become a research institute and opened by Queen Victoria in 1841. Opened to the public in 1899, Kew Gardens are now the world's leading botanical research centre. The herbarium contains between four and five million dried and pressed plants.

The Government chose the gardens for nomination. If accepted, Kew will join sites as diverse as the Great Wall of China, the Great Pyramids, Hadrian's Wall and the mill village of Saltaire in Yorkshire.

News From the Royal Botanic Gardens Melbourne

\$9.5 million boost for the Design Centre

Award Winning Architect to Design Visitor Centre

The Australian Garden, a celebration of Australia's remarkable plant life in an artistic landscape, comes a major step closer to opening in 2005 with two significant announcements from the Minister for Environment and Conservation, the Hon Sherryl Garbutt, MP.

The Minister announced funding of \$9.5 million to construct and landscape the Exhibition Gardens, Sand Garden, Rockpool Waterway, an extensive Eucalypt Walk, and the Visitor Centre for the Australian Garden at the Royal Botanic Gardens Cranbourne. She also revealed that the award-winning, young

architectural practice – Kerstin Thompson Architects – has won the competition to design the \$1.5 million Visitor Centre for the Royal Botanic Gardens Cranbourne.

The winning design emerged during a closely contested competition and was chosen by a panel of judges for its new approach to architectural design, its elegance and ability to reflect the fragility of people’s relationship with the Australian landscape. “This design says everything about the Australian Garden: it is exciting, it is excellent and gives people the chance to experience and explore the world of plants while at the same time protecting the environment,” said Minister Garbutt.

The judging criteria were stringent, focussing on function, environmental and operational efficiency, architectural impact, flexibility and design innovation. This design offers glimpses of the Australian Garden and the bushland to visitors, and at the same time ensures that the existing ecology of the site is retained.

The Visitor Centre will act as the first contact point for visitors to both the existing bushland experience at the Royal Botanic Gardens Cranbourne and the planted botanic garden experience of the Australian Garden.

Set among the tree tops, visitors will walk through the Visitor Centre, which will feature galleries, a shop, an indoor and outdoor café, before descending a dramatic stepped and ramped deckscape into the Australian Garden.

Dr Philip Moors, Director of the Royal Botanic Gardens, said that the Visitor Centre encapsulated everything that the Australian Garden stands for. “The 11 hectares of The Australian Garden encourage speculation, challenge expectations and provoke new ways of seeing and experiencing the plants and landscapes of contemporary Australia. This is a very exciting announcement for the Royal Botanic Gardens Cranbourne indeed,” he said.

This latest funding for the landmark project comes from a partnership between the Department of Natural Resources and Environment (\$5.3 million), the Colonial Foundation (\$2.1million) and the Community Support Fund (\$2.1 million).

Work on the Australian Garden has already started thanks to past funding through the Department of Natural Resources and Environment to complete the landscape design stage, bring documentation to tender ready stage, and undertake horticultural trials of plants to be displayed.

‘Shooting the Stars’ and ‘Transits, Tea and Trigonometry’: new interpretive exhibitions in the Old Melbourne Observatory.

New exhibitions will open soon in the Astrograph, South Equatorial and Photoheliograph telescope houses at the Royal Botanic Gardens Melbourne.

The interpretive exhibitions within these telescope houses are part of the final stage of the restoration of the Old Melbourne Observatory. The restoration of the heritage-listed buildings within the Observatory started back in the early 90s, and to date has included extensive landscaping, the construction of a major new visitor complex, the creation of a gateway to the Royal Botanic Gardens, and relocation and refurbishment of LaTrobe’s Cottage.

In 1863, 17 years after the Royal Botanic Gardens was founded, the Melbourne Observatory opened with the purpose of establishing correct Melbourne time. As the reliability and accuracy of time improved, kept accurate by the stars, the role of the Melbourne Observatory moved to astrophysics and projects, such as mapping the southern sky.

In 1887 the Melbourne Observatory joined an international project to make a photographic record of the whole sky – then an estimated 40 million stars. This was arguably one of the Melbourne Observatory’s and the world’s largest projects to be undertaken by 19th century scientists.

This project has been possible with the generous support of the Helen Macpherson Smith Trust.

Through these exhibitions visitors will have the opportunity to explore the site and discover the history, mystery and objects of

the Old Melbourne Observatory, the essential role it played in the development of our city and its contribution to world-wide scientific knowledge. The exhibitions also share with the community the human stories of the Old Melbourne Observatory, both as a workplace and community.

Horticultural Flora of South-eastern Australia

Volumes 3 and 4 of the Horticultural Flora of South-eastern Australia are now out, completing the conifers, ferns and allies (vol. 1), and dicotyledons (vols 2,3 & 4).

The Horticultural Flora is a five-volume identification guide to the cultivated plants of south-eastern Australia, both native and exotic, and covering South Australia, Tasmania, Victoria, New South Wales and southern Queensland.

The series is unusual among gardening books as the emphasis is on the botanical rather than horticultural aspects of the plants. Apart from being an identification guide the Flora documents and records basic botanical information on all the commonly cultivated garden plants as well as many of the slightly unusual plants encountered in our nurseries, parks and gardens.

In addition to common garden plants the five volumes will cover fruit and nut trees, vegetables, indoor plants and garden weeds. Detail provided includes: the range of available cultivars (with descriptions and details of their origin when known); societies and their journals; the parks, gardens and growers that are holding outstanding collections, and the localities and brief history of outstanding specimen trees.

The book production has taken advantage of all the resources of the Royal Botanic Gardens including the living plant collections, the dried plant collections of the National Herbarium, the fine botanical library, and a wide range of botanical and horticultural expertise.

To identify particular plants readers can work their way from broad plant groupings to

particular species using botanical keys; this process is assisted by the many exquisite line drawings produced by accomplished botanical artists. The colour photographs explore the wide reaches of the plant kingdom and the plant structures used for identification, while the plant descriptions draw special attention to useful simple distinguishing characters.

For the student there are brief notes on plant names, a listing of international cultivar registration authorities, a bibliography of important technical and popular literature, and a comprehensive illustrated glossary of botanical terms.

Emphasis has been given to aspects of the cultivated flora of the region that are of special Australian significance including, for example, mention of Australian growers and breeders who have made additions to particular plant groups or contributed to our knowledge or horticultural heritage in other ways.

The Flora series should become a standard reference work for students of horticulture, landscape architects and designers, nurserymen, botanists and anyone involved with cultivated plants. It is the first comprehensive account of its kind in Australia and has been written in non-technical language with appeal to a wide range of readers.

A New Partnership Blossoms

Mount Lofty Botanic Gardens (situated in the Adelaide Hills and part of The Botanic Gardens of Adelaide) has joined forces with the Native Orchid Society of South Australia (NOSSA) due to a desire to better manage native orchids growing within the Garden.

Meetings between NOSSA members, Garden management, and staff from the Southern section have identified two key aims of the partnership:

- to establish a better understanding of native terrestrial orchids, especially those growing within Mount Lofty Botanic Garden.
- to establish better management strategies and possible restoration of existing populations.

Recent activities have included a workshop conducted by David Pettifor for interested staff on culture and repotting of local orchids for potential use in future restoration projects, a slide presentation by NOSSA to staff, and two field surveys so far (Autumn and Winter) undertaken by NOSSA in conjunction with staff to identify and map existing species growing at Mount Lofty Botanic Gardens.

The results of these surveys have so far identified 7 species, some occurring in the cultivated areas of the Garden and others in the more natural settings.

This partnership is proving to be very beneficial and will go a long way to preserving a delicate piece of our local flora.

Convict-built culvert reopens at Royal Botanic Gardens Sydney after conservation

One of the country's earliest surviving examples of road and drainage construction, a convict-built culvert, has been reopened in the Royal Botanic Gardens Sydney after extensive conservation works.

Director of the Gardens, Frank Howarth, said that the culvert, built almost two centuries ago, was of great historical, scientific and archaeological significance.

"Located close to the popular Palm Grove area in the Royal Botanic Gardens, the sandstock brick, double-arched culvert is the most visible remnant of the original Mrs Macquarie's Road and was completed in 1816 using convict labour," Mr Howarth said.

"The road connected the Governor's Domain to Mrs Macquarie's Point and was designed by Elizabeth Macquarie, who had a strong interest in the development of the Botanic Gardens.

"The culvert clearly displays the fine workmanship of the convicts who built it, and provides us with valuable information about early road and drainage construction in NSW and the development of the Royal Botanic Gardens."

"The heritage team discovered, for example, that the original road was well-built, comprising a number of layers including crushed stone and

a surface of brown, sandy clay."

The conservation works were jointly funded by the Royal Botanic Gardens and the Minister for Public Works and Services' Centenary Stonework Program.

The project involved several phases in close consultation with a team of heritage experts from the Department of Public Works.

Work began back in mid 2001 when the heritage team – comprising a structural engineer, archaeologist, conservation architect and master stonemason – began a test excavation to determine the best approach for the repair process before work commenced in April this year.

"Repair work, cleaning, stabilisation and protection of the culvert have now been successfully achieved on this very significant site," said Mr Howarth.

These conservation works are one of several state-funded projects completed within this historic part of Sydney. The Royal Botanic Gardens Sydney's Conservation Plan has so far included a number of heritage projects, among them:

- the preservation, stabilisation and regilding of the Palace Garden Gates on Macquarie Street;
- the installation of a new hydraulic system for the Governor Arthur Phillip Fountain located in the Palace Gardens bordering Macquarie Street, and the conservation of all its marble and bronze components; and
- the replacement of stonework and the installation of protective capping on the impressive Choragic Monument in the Middle Gardens.

Mr Howarth said: "These heritage projects ensure that we retain a clear picture of how the Sydney Gardens have developed from their earliest beginnings to our own time.

"Whether it be a culvert or an imposing marble fountain, they are signposts to how the Royal Botanic Gardens functioned and were used over their long history."

News from Royal Tasmanian Botanic Gardens

Strategic Conservation and Asset Management Plan

The Royal Tasmanian Botanical Gardens (RTBG) is preparing a combined Strategic Conservation and Asset Management Plan (SCAMP) for the entire RTBG site. As an historic site with considerable heritage and assets, the State Government requires organisations such as RTBG to develop a plan and has provided funding support to engage specialist consultants.

The preparation of a Plan will inform the RTBG of the present management regime and responsibilities, current condition of the facility, future management issues for the site as well as possible uses for areas.

The Plan will also take into account the heritage and cultural significance of specific sites and include a statement of cultural significance, while identifying cultural heritage elements of the RTBG and provide a conservation policy for such. The Plan will provide a management framework for the Gardens over the next five years and beyond and is an important precursor to the preparation of a long term Master Plan for the Gardens in the near future.

A steering group consisting of staff from the Department of Primary Industries Water and Environment and in particular their Tasmanian Heritage Office, the Hobart City Council's Heritage Officer and Jim Cane as Project Manager has been formed. A brief was prepared and the Requests for Proposals from prospective consultants are now being evaluated.

From the time the consultant is appointed the process will take four months to produce the final document.

Jim Cane
Horticultural Development Officer
Royal Tasmanian Botanical Gardens

International Araucariaceae Symposium

In March this year the International Dendrology Society (IDS) held a Symposium dedicated to

the conifer family Araucariaceae in Auckland, New Zealand. This symposium also coincided with the 50th Anniversary of the IDS. I attended as a delegate from the RTBG due to our interest in conifers and in particular southern hemisphere conifers.

The object of the Symposium was to provide a forum for the world's experts on the family Araucariaceae to gather, review and debate the current level of understanding of all aspects of the family, as well as stimulate further interest and research. This enabled the bringing together of much valuable work on the family that lie lost and forgotten in dusty and disparate archives around the world and for all intents and purposes unavailable for general reference.

A publication of the official proceedings is being produced. This will be a comprehensive account of the Symposium as well as a bringing together of most of the known fully refereed scientific papers on the Araucariaceae.

The Symposium had about 107 delegates from around the world. Over sixty papers were presented ranging from topics on palaeobotany, taxonomy, biology, silviculture, history, cultivation and conservation.

As expected it was a great social occasion as well but with most of the time dedicated to the presentation of papers. There was one field day to inspect members of the Araucariaceae family growing in and around Auckland. Great examples of Araucaria and Agathis were seen in such places as Government House, Auckland Domain, St John's Theological College and Monte Cecilia Park.

The Symposium was wrapped up with a visit to the most accessible and visitable of Kauri reserves, the Cascade Kauri Park in the Waitakere Ranges only 25km west of Auckland. Not only were we treated to fantastic Kauri but also magnificent examples of other conifers such as Dacrycarpus, Dacrydium, Podocarpus and Phyllocladus. Many other fine examples of the New Zealand flora were also seen.

In all it was a great symposium thanks to the New Zealand members of the IDS. Much was achieved in the bringing together the world experts in the family Araucariaceae. The

publication later this year of the Symposium proceedings is much anticipated by all the delegates and I am sure by all those who are interested in conifers and in particular the Araucariaceae.

Jim Cane
Horticultural Development Officer.
Royal Tasmanian Botanical Gardens

The Royal Tasmanian Botanical Gardens Easy Access Path Works

The Royal Tasmanian Botanical Gardens (RTBG) is undertaking a major upgrade of the Gardens primary entrance pathway.

Funded by a \$280,000.00 State Government Capital Works Projects grant, work commenced on the 17th of June with the date of practical completion set for the 28th of August. The project will provide Easy Access pathways within the Gardens steep topography, which meet the Australian standards and extend for more than 300 metres from the Gardens' historical Main Gates to the Discovery Centre and Restaurant in the middle of the Gardens.

The assistance of a landscape architect has provided a sensitive design approach to this engineering challenge.

Design details include:

- Paving and edging along the path edge and around the gates to provide a refined entry statement to the Gardens;
- Additional seating bays to take advantage of internal and external viewpoints;
- Discretely located waste stations;
- Sandstone and bluestone retaining walls;
- Better access to a number of the connecting garden pathways;
- Lighting for security and night use, and
- Signage to and at the gardens main entrance.

The August completion date will allow Gardens staff time to prepare and plant out the area prior to the Gardens' Tulip Festival in late September.

Mark Fountain
Manager Gardens Operations
(Project Manager)
Royal Tasmanian Botanical Gardens

Gardens Polar Involvement

The Royal Tasmanian Botanical Gardens (RTBG) is in the unique position of having the only known purpose-built house for plants of the subantarctic in the world. This collection of the flora of Australia's Antarctic territories from Macquarie and Heard Islands gives a fascinating glimpse of the vegetation to visitors but also provides a focus for important scientific research.

As part of the Gardens collaboration with the Australian Antarctic Division (AAD), staff were involved in the recent Regional Sensitivity to Climate Change in Terrestrial Ecosystems (RiSCC) and Heard Island Workshops held in Hobart. RiSCC is an international collaborative research program investigating the impacts of global change on Antarctic and subantarctic terrestrial ecosystems and lakes.

The workshops were attended by researchers from a number of countries running antarctic and subantarctic programs including Spain, Italy, France, England, South Africa and Japan. Participants from both workshops attended a tour of the Gardens lead by RTBG Director, Steve Corbett. The visitors were able to view the RTBG collections including the Gardens historic trees, Tasmanian native plants, Japanese Garden and the Subantarctic Plant House. It was the first time many had seen the plants that form part of their research programs on the islands, growing in cultivation. The house has a magnificent mural of Macquarie Island, which mirrors the community-based plantings below and mist and fan-driven wind mimic the islands' climatic conditions. Participants were also able to view the Gardens' quarantine and nursery facilities for the subantarctic collection, as well as plants currently being used for research.

Horticultural Development Officer, Jim Cane, attended the Heard Island workshop in which likely projects for the 2003-2004 season were considered. One important aspect of

the workshop was to see how each project fitted in with the logistics of the planned voyage. RTBG staff may be involved in the expedition assisting the AAD with climate change evaluation research as well as collecting material for further research and the Gardens' Subantarctic Plant House.

One important facet of the RiSCC workshop was to investigate standardised collection of field data. The aim was for investigators from different countries working in the Antarctic and on subantarctic islands including Heard, Macquarie, Kerguelen, Marion and the Falklands to be able to compare their data in relation to the effects of climate change on the vegetation. Antarctic and subantarctic organisms are living at the edge of their range and can show marked response to climate change.

The RiSCC workshop moved to Cradle Mountain, which was appropriately covered in snow, to work on forming an agreement on standardised collection of data in a field situation. Jim Cane and RTBG Horticultural Botanist, Natalie Papworth, attended this part of the workshop and assisted with the identification of the local flora and fauna. Soil profiles were dug in freezing conditions

and the placement and measurement of quadrats discussed with the aim of achieving standardisation. The workshop was a positive experience and will lead to future collaborative research between many of the participants.

Natalie Papworth

Horticultural Botanist

Royal Tasmanian Botanical Gardens



The Subantarctic Plant House, Royal Tasmanian Botanical Gardens



RiSCC workshop participants discussing the use of quadrats



Cradle Mountain covered in snow

Letters

Peter Syme would be grateful if the following letter could be passed on to all readers' contacts at regional Botanic Gardens.

Dear Colleague

Technical Horticulture Forum – Mailing List

This letter is to introduce you to a proposed Australasian technical forum networked through an email or a mailing list managed by a Listserver based at the Royal Botanic Gardens Melbourne. It is my hope that you will subscribe and support this service by your contributions and responses.

Subscribing to the service is done quickly and easily through email. In working terms, once a person is subscribed they can post a question or issue and gain information from those responding in their fields or subjects of expertise.

The current scope of this forum is intended

to further develop the horticultural network amongst central and regional Botanic Gardens and Arboreta in the horticultural research, curation and management of Living Collections.

It is the aim of this forum to improve knowledge and understanding of plant environments in order to promote excellence in plant curation. Discussion areas would include, but not be limited to, soil science and hydrology; irrigation; pest, pathogen and weed management, plant nutrition, plant selection, pruning and other techniques in plant curation.

Traditional networking usually means one person gains information from a number of individuals without it necessarily being shared with others. This forum would have a broader context, because if an individual raises questions or issues, others within in the network then have the means to learn from the expertise of those responding. This means that technical information is shared with a wide horticultural audience.

It has been the author's experience when subscribing to other Listservers that a significant amount of technical support can be derived from these. For this forum, the following benefits are anticipated:

- Greater technical support for regional botanic gardens
- Improvement in horticultural knowledge
- Assistance in project planning and solving site problems
- Improvement of general plant curation
- Greater access to relevant contacts and information
- Enhancement of the networks and camaraderie amongst Botanic Garden's horticulturists

This letter is your invitation to join the service along with instructions on how to subscribe following the prompts from the link listed below:

<http://lists.rbg.vic.gov.au/mailman/listinfo/horttech>

At this stage, the service will be running for a trial period of 6 months after which feedback will be sought from subscribers. Pending a favourable response, the service will continue with a further review at the end of 12 months.

Yours faithfully
Peter Symes
Senior Curator, Horticulture
Melbourne Gardens
Peter.Symes@rbg.vic.gov.au
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Articles

Council of Heads of Australian Botanic Gardens (CHABG) Meeting

The Royal Tasmanian Botanical Gardens (RTBG) hosted the Council of Heads of Australian Botanic Gardens (CHABG) Meeting 21-23 April 2002. The last meeting was held at RTBG almost 6 years ago.

The Tasmanian regional botanic garden representative phil Parsons of the Tasmanian Arboretum attended the meeting and Bryan Gould of New Plymouth City Council attended the meeting on behalf of New Zealand botanic gardens.

It was a successful meeting with several official activities providing a special Tasmanian flavour to the occasion including the planting at the Gardens of the first Wollemi Pine in Tasmania by the Minister for Primary Industries, Water and Environment, the Hon. David Llewellyn. This was followed by a cocktail evening at the Botanical Gardens Restaurant with an inspection of the historic Conservatory lit up at night for the first time.

On the second day, a full meeting day was followed by dinner at the aptly named Gondwana Restaurant, where much business was still discussed while enjoying the fine local food and wine.

RTBG staff Mark Fountain, Manager Horticultural Operations and Jim Cane, Horticultural Development Officer led the CHABG group up to Tarn Shelf in Mount Field National Park to see the autumn colour

of the *Nothofagus gunnii*. The group was not disappointed. The field day provided an excellent rare opportunity for botanising and for informal discussions between members.

There were several important outcomes of the formal meeting and they included:

- The next national congress for botanic gardens will be in Geelong in September 2003. Rob Small, General Manager Parks and Recreation, Geelong City Council will be Congress Chair and John Arnott, Curator Geelong Botanic Gardens will be assisting.
- The national newsletter for Australian and New Zealand botanic gardens is considered successful and three editions will be produced each year.
- A national association of botanic gardens is still being investigated. It is acknowledged that the task is large and complex and will take some time to resolve, and considerable commitment from all Gardens. During this process, CHABG confirmed commitment to the national congresses, regular BGANZ newsletters and inclusion of regional and New Zealand representatives at meetings and discussions.
- The Common Policy Guidelines on Benefits Sharing of Genetic Resources was adopted in principle. Guidelines aim to provide a more equitable arrangement clear responsibilities between countries sharing plant material, especially parties taking plants from other countries. It was noted that each Gardens would need to consider the Guidelines based on their State legislation and statutory requirements.
- The Botanic Gardens Conservation International's, International Agenda for Botanic Gardens in Conservation - A User's Guide for Australian Gardens was adopted in principle. Frank Howarth, Director Royal Botanic Gardens, Sydney will oversee the Living Collections Working Group to help further develop guidelines for broad local use.

Each botanic garden will implement the last two points according to local requirements.

The ongoing involvement of regional botanic gardens and representatives from New Zealand is an important development for CHABG. The input and feedback by the New Zealand and Regional representatives on proposed policies and actions and the impacts on the many regional botanic gardens is invaluable.

If you want to know more about the Council of Heads of Australian Botanic Gardens you can visit the web site www.anbg.gov.au/chabg/.

Steve Corbett
CHABG Chair



Group photo of CHABG:

*l-r back row: Robin Nielsen (ANBG), Stephen Forbes (BG of Adelaide), Stephen Hopper (Kings Park and BG), Greg Leach (Darwin), Frank Hopper (RBG Sydney), Bryan Gould (Pukekura Park, NZ), Steve Corbett (RTBG),
front row: phill Parsons (Tas Arboretum), John Arnott (Geelong), Jim Cane (RTBG), Philip Moors (RBG Melbourne)*



*Planting at RTBG of first Wollemi Pine in Tasmania.
l-r Minister for Primary Industries, Water and Environment, the Hon. David Llewellyn, Frank Howarth (RBG Sydney), Steve Corbett (RTBG)*



Nothofagus gunnii at Tarn Shelf in Mount Field National Park.

Feature Garden

Olive Pink Botanic Garden, Alice Springs

Nestled in the valley of Meyers Hill and bordered by the Todd River is where you will find the Olive Pink Botanic Garden. Its close proximity to the CBD of Alice Springs, Northern Territory, allows visitors and locals alike convenient access to the 16 hectare Garden including the 6 hectares of arid zone plantings in the valley floor and the native vegetation of the encircling hills.

Founded in 1956 by Miss Olive Muriel Pink (1884-1975), the Garden was originally gazetted as the Australian Arid Regions Native Flora Reserve with Miss Pink as the Honorary Curator. Prior to this Miss Pink had studied the anthropology of both the Arrernte and Walpiri people and was a great advocate of Aboriginal rights, which led to her insisting that Aboriginal gardeners receive employment conditions under the award. Johnny Tampitjimpa Yannarilyi was one of the Aboriginal gardeners whom Miss Pink held in high esteem and was employed in the Garden from 1960 for a period of 12 years.

From the time of Miss Pink's death in 1975 until 1985, many developments took place in the Garden including establishment of irrigation systems, construction of the waterhole and the visitor centre. When the Garden opened to the public in 1985 it was as the Olive Pink Flora Reserve, and in 1996 it was renamed to more accurately reflect its purpose as the Olive Pink Botanic Garden. A voluntary seven person Board of Trustees manages the Garden. They

draw on experience and expertise in commerce, science, law and tourism and are responsible to the NT Minister for Local Government.

Education is a key element of the Garden's ethos with information available about the evolution of Australia's arid zone flora, the traditional use of plants by Aborigines and local history in the graphic displays housed in the visitors centre. Identification of plants is made easy by the labelling of more than 300 plant species. Staff and visitors can access the Garden's herbarium and extensive library to further assist with enquiries.

Fine examples of arid zone flora can be seen within the garden such as the prominent *Allocasuarina decasineana* in the car park, rare *Acacia undoolyana* and *Xanthorrhoea thornstonii*. Some of the simulated habitats include the Mulga (*Acacia aneura*) woodlands, a rock waterhole surrounded by *Livinstona mariae*, and the creek floodout dominated by *Melaleuca* sp and grasses. The source, conservation status, growth rate and health of the planted living collection are recorded in the Garden's database.

Delicious coffee and wholesome lunches are a part of the fare available from The Garden Café and Gift Shop as well as a wide range of books and gifts relevant to the local region. The Garden is often utilised after hours by individuals and community groups holding functions in this secluded location. Both the visitors centre and café are open between 10 am and 4pm while the Garden remains open for a further 2 hours until 6pm, 7 days a week, except Christmas Day and Good Friday.

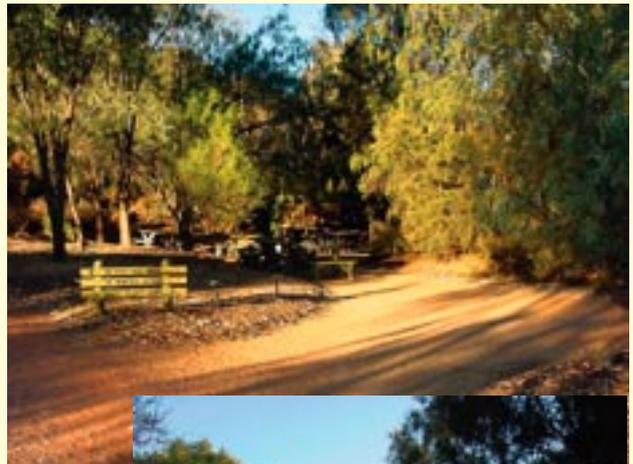
Olive Pink Botanic Garden

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*The Blakeman Shelter
Garden Café*



**Olive Pink
Botanic Garden,
Alice Springs**



*Looking across the Garden
from Meyers Hill to Mt
Gillen*

*Mt Gillen from the
Garden grounds*

*Livistona palms at the Garden
waterhole*



*From left, Elaine Sheridan, concessionaire for the Café and
Giftshop; Clarry Smith, Garden Curator; Frances Smith,
horticulturalist*

Interior of the Garden's Visitor Centre

Botanic Gardens and the Convention on Biological Diversity

In 1993 the Convention on Biological Diversity came into force and signatory countries took on the responsibility of “conserving biological diversity, using biological resources sustainably, and sharing equitably the benefits arising from the use of genetic resources.”

Australia and its States are signatories to the Convention and since that commitment have been working on its implementation. Botanic gardens have an important role to play in the regulation of access to biological resources. Although they generally do not control primary access to resources they act as conduits for supply. They are often the repositories of the resource inventory, and they frequently have ex situ holdings of desirable plant material. Accordingly the world’s botanic gardens have worked on a policy so that they would have a harmonised approach.

A working group representing the botanic gardens of the world have developed a set of guidelines for this process. This is now known as the Common Policy Guidelines: Guidelines to assist in the preparation of Institutional Policies based on the Principles on Access to Genetic Resources and Benefit-Sharing for Participating Institutions for Participating Institutions (CPG). It includes comprehensive explanation throughout and is available electronically on the Royal Botanic Gardens, Kew website at www.rbgekew.org.uk Gardens that agree to adopt the principles of the CPG are asked to become Participating Gardens. Before doing this, there is quite a lot to think about.

The CPG responds to the need to reconcile the requirements of botanic gardens with obligations of national governments to implement policies under international conventions on trade in endangered species and biological diversity. It is an agreement to conduct botanic gardens plant accession and supply activities in an ethical and responsible manner, and provides for benefit sharing with original owners. Participating gardens are not obliged to supply material, but if they do they must follow certain principles and agree to

some contractual conditions. Botanic gardens that do not adopt this proposal may not be able to access material from other participating gardens except through a multiplicity of bilateral agreements.

In effect, botanical institutions (including botanic gardens) should facilitate the exchange of botanical material and associated knowledge whilst ensuring that there is prior informed consent and benefit sharing with the owners of the botanical resources they might exchange. In other words, if seed or cuttings or other plant materials are being provided, then (a) stakeholder-owners of that material need to be consulted for their permission, and (b) the recipients must agree to share any benefits that arise from the use of the material with the stakeholder-owners. Fundamental to this is the need to be aware of who has ownership.

Guidance on how to develop a reliable procedure to implement this global initiative is contained in the CPG. Each garden will need to be aware of its own state legislation governing the acquisition, management and transfer of plant biodiversity. To do this they will need to develop a method of record keeping that facilitates not only where the material came from (together with associated permissions), and where it is either growing or stored, but also to whom material has been passed on (together with agreement to conform with benefit sharing etc). Ownership, permissions, and promises to return benefits need to be kept track of.

CHABG members are all in the throes of grappling with this responsibility. Three have become (officially) Participating Gardens and five are still working on it. CHABG and its members (especially those that are Participating Gardens) will be able to discuss the whole process with any/all of Australia’s botanic gardens who are on the brink of adopting the CPG and becoming Participating Gardens themselves.

Helen Hewson and Iain Dawson
Australian National Botanic Gardens

Trevor Christensen visited the Rimba Ilmu Botanic Garden in April whilst on holiday in Kuala Lumpur.

Rimba Ilmu is the only Botanic Garden in Kuala Lumpur, Malaysia. It is situated within the University of Malaya and covers an area of approximately 80 hectares, 40 hectares of which are under managed cultivation. The name Rimba Ilmu means “Garden of Knowledge”

The garden was established in 1974 from an abandoned rubber plantation. The cultivated area has been mostly cleared of rubber plants and now grows approximately 1600 different taxa. The uncleared 40 hectare area is being left to regenerate with secondary rainforest which will eventually dominate the remaining rubber plants. The secondary forest has become home to a large number of monkeys, which then search out fruit as food sources from the entire site.

Only six staff, with direction and assistance from two of the Universities academic staff, maintain the garden. The garden collections comprise a range of tropical plants with a major emphasis on Malaysian tropical rain forest species, their diversity and the need for adequate conservation.

Specialist areas of focus within the garden displays and also areas of study include medicinal plants, palms, bamboo and Citrus and citroid species. Guidebooks are available on Medicinal Plants and Citrus and Citroid Species. A large research conservatory houses rare and threatened species and a reference collection of Malaysian indigenous orchids.

An environmental education program was developed by the University of Malaya and the Malaysian Nature Society and caters for booked tours and activities for various age groups. An excellent exhibition titled “Rainforests and Environment” is currently running and deals with rainforests and diversity, conservation, threats, plant and animal life. A volunteer program is also operated by the garden to assist with special events and aspects of garden maintenance and improvement.

Rimba Ilmu is a very interesting developing Botanic Garden with extremely limited

resources. It is worth visiting and spending a few hours exploring on any visit to Kuala Lumpur.

Trevor Christensen
Manager Scientific Services,
Botanic Gardens of Adelaide

Robert Hatcher, from the Botanic Gardens of Adelaide, recently attended the Botanic Gardens Education Diploma Course at Royal Botanic Gardens Kew.

The Botanic Gardens Education Diploma Course at Royal Botanic Gardens Kew was not only a learning experience in Education Techniques for the participants. Being privileged to be among them, I found it to be a cultural learning experience as well. Of course having the diverse cultures represented you would expect nothing else. The countries represented were China (Dongyan Hu), India (Mohamed Abdul Kareem), Cameroon (Henry Ikose and Solange Lekeanyi), Brazil (Doris Vasconcelos), Columbia (Ana Maria Echeverri), Estonia (Helve Meitern), Portugal (Ana Cristina Tavares), France (Muriel Hernandez) and Australia (me). (See Picture accompanying which also has a couple of Tutors with the group). We all were from backgrounds in either Botanic Gardens or Environmental Education of some description.

The course was run jointly by BGCI and Kew. It had elements from areas including Education for Sustainability, Interpretation Techniques, Education Program Development and Delivery, Marketing and Promotion and Dealing with the Media. This all took place within a four-week period from April 15th to May 10th and included field trips to The Eden Project (and I managed to convince everyone we needed to visit Heligan as well), The Barnes Wetlands, Wakehurst Place and Chelsea Physic Garden.

The Lectures were held in Museum No.1. This houses the Education Branch at Kew. We all had a good deal of exposure to the delivery of Botanic Gardens Education at Kew ranging from early school age to Adults. While this is designed for the English Education system it can be looked at objectively and applied within the curriculum demands and organisational

needs from whichever region of the World you may come from.

The access we all had to the Kew Network meant we could contact home via e-mail and the computers were in almost constant use. We all worked well together as a group and this was just as well because we had to develop a day educational program in teams (the larger group was divided into three groups for this). The object of this was to come up with a method of delivering a day of activities to a visiting group of school students. The interesting thing about this was each group chose a different age group and topic. This also widened everyone's experience at delivery technique and content. This was just one of the many interactive tasks we had on the formal front. The informal conversations around the cups of tea and coffee, with the biscuits provided by Barrie Blewett of Kew's Education Branch (for some reason I always got the job of chasing up the biscuits) were great fun.

The Field trips widened our views on Interpretation and Education from just what Kew had to offer. The trip to The Eden Project was certainly an eye opener in terms of style and scale. I recommend it to anyone who wants to see the closest thing to a "Disney World for Plants". They certainly had the "Wow" factor going for them.

We all still have a bit of work to do back within our own countries in developing a five-year Education programme to be sent back to Kew for assessment. This will keep us all off the streets for the next six months at least.

The whole trip certainly was a great experience for me and I hope the friendships made during the time in the UK at Kew will stay with me and flourish.

I would like to acknowledge the assistance of the Lennox-Boyd foundation at Kew, the SA Branch of the Australian Rhododendron Society, The Botanic Gardens of Adelaide and a wide range of friends and my family for all the help and support in helping me get to Kew to do this course.

Robert Hatcher
Botanic Gardens of Adelaide



l-r: Julia Willison (BGCI), Lucy Sutherland (BGCI), Henry Ikose (Cameroon), Ana Cristina Tavares (Portugal), Mohamed Abdul Kareem (India), Muriel Hernandez (France), Helve Meitern (Estonia), Solange Lekeanyi (Cameroon), Rob Hatcher (Australia), Ana Maria Echeverri (Columbia), Doris Vasconcelos (Brazil), Dongyan Hu (China), Gail Bromley (Kew)

Australian Network for Plant Conservation Master Workshops

Wollongong and Mount Annan Botanic Gardens

Jeanette Mill, National Coordinator

In April the Australian Network for Plant Conservation conducted two Master Workshop courses in specific plant conservation techniques and issues, training 109 practitioners.

A two day Master Workshop entitled Demystifying Threatened Plant Conservation was held in Wollongong on 16th – 17th April. Hosted by Wollongong City Council, Bushcare and Botanic Garden, the workshop was held at Glennifer Brae, a beautiful historic mansion with views to the sea, located on the Botanic Gardens site. Twenty five participants attended.

This workshop focussed on:

- The legal process
- Current legislation
- Planning
- Local management strategies
- Nominating species for listing as threatened
- The listing process
- Recovery planning

Conservation of Ecological Communities was the focus of the second Master Workshop, a one day workshop held at Mount Annan Botanic Garden on 30th April. The hosting organisation was Royal Botanic Gardens Sydney, and 85 participants attended. Numbers well and truly exceeded expectations, and the Bottlebrush Room was filled to capacity!

This workshop covered methods and strategies for the conservation of ecological communities, of which there are 48 listed as endangered in NSW, and 27 listed nationally. Presentations covered a range of ecological community types from across NSW, and included:

- Management, rehabilitation and community participation: Three keys to the effective conservation of endangered ecological grassy communities in the NSW Southern Tablelands
- Recovery planning approach for ecological communities in western Sydney
- Skilling the community, funding and finances, project planning, monitoring and evaluation
- Rainforest Ecosystem Conservation – building an evolutionary future from the remnants of the past
- Regeneration of Cumberland Plain Woodland

Field trips to sites of significance included industry land where threatened species occur, and Mount Annan Botanic Garden's own remnant of the endangered ecological community Cumberland Plain Woodland.



Debra Little, from Mount Annan Botanic Garden, talks to workshop participants about the regeneration of the Cumberland Plain Woodland. Photo: Jeanette Mill

Fifteen botanic gardens staff attended as participants. Presenters representing botanic gardens included Peter Cuneo, Mount Annan Botanic Garden and Anders Bofeldt, Wollongong Botanic Garden. Jason Brown, the Director of Wollongong Botanic Garden, and Dr Tim Entwisle, the Director of Plant Sciences at Royal Botanic Gardens Sydney, represented their respective organisations in welcoming participants to the courses and their gardens.

Other presenters included Assoc. Prof Paul Adam, Deputy Chair of the NSW Scientific Committee and Rainer Rehwinkle, Senior Threatened Species Officer (Grassy Ecosystems),

NSW National Parks and Wildlife Service.

The ANPC would like to thank all of the botanic gardens which contributed to making these courses a success, and the Council of Heads of Australian Botanic Gardens for generously providing a staff development grant to assist botanic gardens staff to attend.

This project has been assisted by the NSW Government through its Environmental Trust.





BIO

DIVERSITY BITES

Public Lectures

The Centre for Plant Biodiversity Research and the Australian National Herbarium present a series of public lectures on their biodiversity research.

Over four months some of our scientists will talk about the results and impacts of our research and associated activities.

What's Its Name? - 7 August, 6pm

Why plants change their name - blame the botanists!

Botanical Treasures - 4 September, 6pm

Unlocking the many values of Australian plants.

Plant Invaders - 2 October, 6pm

It's not only the exotics that are escaping - our crops are getting away and even some of our natives are on the move.

Bushland on Life Support - 6 November, 6pm

Remnant vegetation and the quality of life.

Time: 6.00 - 7.00 pm (seating available from 5.00 pm)

Location: CSIRO Discovery Lecture Theatre
Black Mountain Laboratories
Cnr Clunies Ross St and Barry Dr, Canberra



Registration is not required. Further information available via our Website: <http://www.cpbr.gov.au/cpbr/lectures/> or Phone: 02 6246 5533 or Email: Val.Oliver@csiro.au