

Cuttings

Botanic Gardens Conservation International Quarterly Newsletter

Growing partnerships BGCI and botanic gardens are at the heart of a new global partnership for plant conservation



meet the Targets set by the GSPC, new and innovative partnerships will be required - the Global Partnership for Plant Conservation will provide the ways and means for such partnerships to develop".

Continued on page 3 ➤



A Global Partnership for Plant Conservation was launched on Friday 13th February at the 7th Conference of the Parties (COP) to the Convention on Biological Diversity in Kuala Lumpur, Malaysia. The global partnership, which has been established to support the world-wide implementation of the Global Strategy for Plant Conservation, has been welcomed by the Executive Secretary of the CBD, Dr Hamdallah Zedan, and by a wide range of national and international organisations. The Global Partnership

was launched at an event organised by BGCI, who will provide the secretariat for the Global Partnership.

"The potential disappearance of vital plant resources is one of the greatest challenges presently facing the world community" said Dr Peter Wyse Jackson, BGCI's Secretary General. "Botanic gardens around the world are playing an essential role in ensuring the survival of thousands of endangered species, as are many other organisations. However, to

In this issue: Conservation targets - plants lead the way • A million species at risk? Musical plants • BGCI focuses on Africa • Landscapes for young people



BGCI

Plants for the Planet



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Cover Photos: *Mayodendron igneum* flowering in the Xishuangbanna Tropical Botanic Gardens, China. (Peter Wyse Jackson, BGCI). Xishuangbanna Tropical Botanic Gardens, China. (Peter Wyse Jackson, BGCI)

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Opinions expressed in this publication do not necessarily reflect the views of the Boards or staff of BGCI or of its members

International Agenda

Over 230 botanic gardens from 70 countries have now signed the International Agenda for Botanic Gardens in Conservation, thus confirming their commitment to plant conservation. Watch this space for a regular update on the growing number of signatories. A full list of gardens that have signed can be found on www.bgci.org.

Number of signatories to the International Agenda in Conservation



Meetings



Planta Europa meeting

The 4th European Conference on the Conservation of Wild Plants is being held in Valencia, Spain from September 17 - 20, 2004. This conference is being organised by *Planta Europa*, the network of organisations for the preservation and sustainable use of the wild flora in Europe, *Generalitat Valenciana* (Regional Government of Valencia) and the Botanical Garden of the University of Valencia. Further information: www.nerium.net/plantaeuropa/main.htm

Tver conference

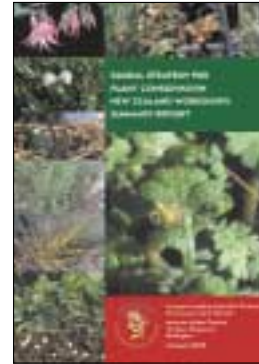
The Botanic Garden of Tver State University is holding an international conference, *Living in harmony: botanic gardens and society* to celebrate the 125th anniversary of the Garden from September 19-22, 2004. Further information: contact Olga Volkova, Secretary, Botanic Garden of Tver State University Zhelaybova Str, 33, Tver, Russia, 170000. Tel: +7 (0822) 315318; Fax: +7 (0822) 321274, E-mail: garden@tversu.u

Resources

Orchid Conservation

Orchid Conservation (Kingsley Dixon, Shelagh Kell, Russell Barrett & Phillip Cribb eds. Natural History Publications (Borneo) 2003 ISBN: 983-812-078-2 Price: US \$55.00) is the product of the First International Orchid Conservation Conference held in Perth, Australia in September 2001 under the auspices of IUCN's Species Survival Commission's Orchid Specialist Group and King's Park Botanic Garden, Perth. The book highlights the current plight of orchids and provides details of the techniques that can now be applied to their successful conservation. Both off-site, on-site and integrated approaches are considered in detail and is essential reading for anyone involved in orchid conservation.

Further information and orders: contact Natural History Publications (Borneo) Sdn. Bhd., A913, 9th Floor, Phase 1, Wisma Merdeka, P.O. Box 15566, 88864 Kota Kinabalu, Sabah, Malaysia. Tel: +60 88 233098, Fax: +60 88 240768, E-mail: chewlun@tm.net.my, www.nhpborneo.com for.



GSPC Workshop report

The New Zealand Plant Conservation Network has published a report on their workshop on the *Global Strategy for Plant Conservation* held at the Museum of New Zealand Te Papa Tongarewa, Wellington, New Zealand in August 2003.

For copies of the *Global Strategy for Plant Conservation Workshops: Summary Report* contact John Sawyer, e-mail: jsawyer@doc.govt.nz, www.nzpcn.org.nz



Herbage Ethnobotany database CD-Rom

This third edition of the Herbage CD-Rom contains a database of over 28,000 concise monographs of medicinal plant species characteristics – together with an inventory of claimed attributes and historical uses by cultures throughout the world. The database is the result of more than a decade of independent research. Monographs are linked to hundreds of thousands of articles and images via the internet, providing an exhaustive tool for in-depth global plant research. Each species listing has links to powerful image and article searches. The information provided on the CD-Rom has been collected from a number of diverse fields – botany, ethnobotany, traditional medicine etc. and the monographs are organised by 12 categories, including alphabetical listing, plant family, indigenous use and body part treated by the plant.

Further information and copies of the CD-Rom: contact Tim Johnson, 309 Cedar Street#33, Santa Cruz, CA 95060, USA. Email: timjohnson@dailyworldnews.net

The aims of the Global Partnership are "to provide a framework to facilitate harmony between existing initiatives aimed at plant conservation, to identify gaps where new initiatives are required and to promote mobilisation of the necessary resources". Plans for the partnership are being developed and will be announced over the coming months. For further details please consult the Global Partnership for Plant Conservation website: www.plants2010.org (under construction).

Notes:

Convention on Biological Diversity (CBD) - At the 1992 Earth Summit in Rio de Janeiro, world leaders agreed on a comprehensive strategy for "sustainable development". One of the key agreements adopted at the Earth Summit was the Convention on Biological Diversity. The Convention establishes three main goals: the conservation of biological diversity, the sustainable use of its components, and the fair and equitable sharing of the benefits from the use of genetic resources. Further information: www.biodiv.org.

Conference of the Parties (COP) -The Convention's ultimate authority is the Conference of the Parties (COP), consisting of all governments (and regional economic integration organizations) that have ratified the treaty. This governing body reviews progress under the Convention, identifies new priorities, and sets work plans for members.

Global Strategy for Plant Conservation (GSPC) - A strategy that has been developed to halt the current and continuing loss of plant diversity. The strategy includes 16 out-come oriented targets to be achieved by 2010. The GSPC was adopted by the CBD in 2002. Further information: www.bgci.org/conservation/strategy.html

Botanic Garden News

Stage set for world botanic gardens congress

The spectacularly located Botanic Garden of Barcelona is the venue for the 2nd World Botanic Gardens Congress, which will take place from 17-22 April, 2004. More than 400 members of the botanic garden and plant conservation communities worldwide are expected to converge on Barcelona for the meeting. The programme promises to be wide and varied, ranging from the heritage and tourism value of botanic gardens, through conservation-focused botanical research to education and public awareness programmes. As well as enjoying unparalleled views over the city of Barcelona, delegates will be able to listen to and participate in a stimulating series of talks, workshops and seminars. The organisers are particularly excited that Dr Hamdallah Zedan, the Executive Secretary of the Convention on Biological Diversity (CBD) has agreed to present the keynote address, thus confirming the strategic importance of botanic gardens in the implementation of the Biodiversity Convention. The organisers hope that the presence of Dr Zedan will serve to highlight the need for urgent action to stem the continuing loss of plant diversity, and provide recognition of the important plant conservation work being done by botanic gardens around the world

News and reviews from the Congress will be provided by BGCI in upcoming issues of Cuttings and BGjournal (See page 15 for details of how to subscribe).



Café Marron rescued from extinction?



Experts at the Royal Botanic Gardens, Kew have produced the first ever recorded fruits of Café Marron, giving new hope for the survival of this critically endangered plant species. Seeds from the fruit have been successfully germinated in vitro and the young seedlings are being carefully monitored at Kew.



Café Marron (*Ramosmania rodriguesii*), a plant endemic to the Mauritian Island of Rodrigues, was thought to be extinct until a single plant was found on a roadside by a schoolboy looking for rare plants in 1980. The single plant was in a sorry state, half-eaten by grazing animals, swamped by weeds and suffering from disease. Having recognised the plant as Café Marron, fences were erected to protect the only known tree of the species growing in the wild. In 1986, cuttings were sent to Kew, who successfully managed to propagate it.

In 2001, eleven plants were repatriated to Rodrigues and further plants were propagated by the Mauritian wildlife team on the island. However, as all the plants were clones of the original, and were unable to reproduce, the long term survival of the species was still

Left: Fruit of *Ramosmania rodriguesii* (Royal Botanic Gardens, Kew)

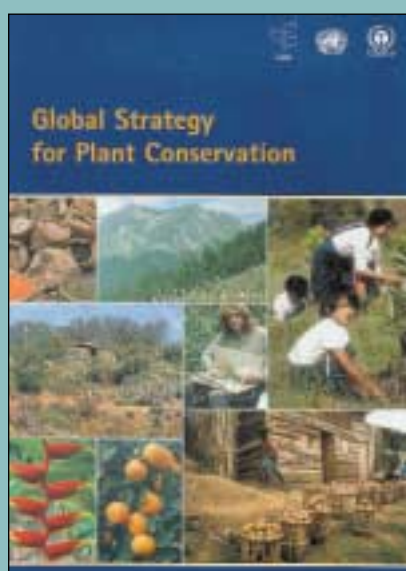
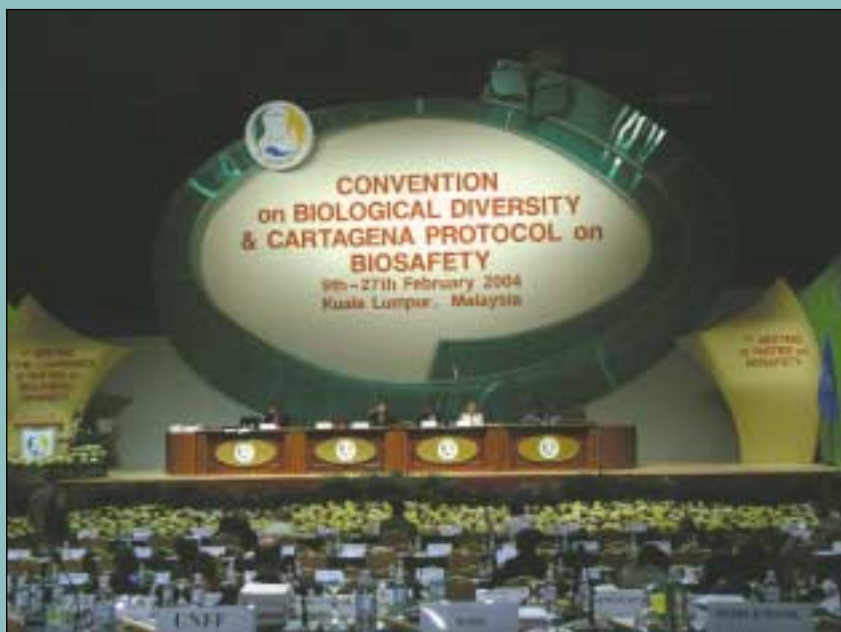
Left: The Botanic Garden provides panoramic views over the city of Barcelona (Peter Wyse Jackson, BGCI)

Plant conservation strategy provides global model

Governments agree that measurable targets and specific goals are essential to monitor progress in saving world's biodiversity. Such targets were first adopted for plant conservation.

A more quantitative approach to reducing the rate of biodiversity loss was agreed as essential by the 187 member states of the Convention on Biological Diversity (CBD) as they concluded a two-week meeting in Kuala Lumpur in February, 2004. The first conservation targets proposed in the framework of the CBD were those for plant conservation which were adopted in April 2002, as part of the Global Strategy for Plant Conservation (GSPC). These targets have now been incorporated into the CBD's work

Far right: 7th meeting of the Conference of the Parties to the Convention on Biological Diversity (Bian Tan, BGCI)



programme as a series of sub-targets, which will contribute to the overall target for significantly reducing the current rate of biodiversity loss by 2010

"The conservation and sustainable use of the world's biological resources is central to alleviating poverty and promoting sustainable development," said Klaus Toepfer, Executive Director of the United Nations Environment Programme, which provides the Convention's secretariat. "By adopting measurable indicators and specific goals for the overall 2010 target, this conference has empowered governments to more accurately monitor progress – or the lack of it – in reversing the modern extinction crisis".

In discussing the GSPC, delegates agreed that the strategy provides a flexible framework within which regional and national targets may be developed. Countries are now encouraged to nominate national focal points for the plant conservation strategy, and the Executive Secretary of the CBD has been requested to develop a toolkit to assist countries in integrating the GSPC targets into their strategies.

Further information:
www.biodiv.org/meetings/cop-07/press/

under threat. The production of seeds, with the potential to create genetic diversity, essential for the survival of a species, is therefore a tremendous breakthrough.

Dr John Mauremootoo, Flora Manager of the Mauritian Wildlife Foundation said: "we are tremendously excited about developments at Kew for the Café Marron. As one of 42 surviving species endemic to the island, it is of immense importance to help conserve our unique plant diversity."

Further information: www.kew.org.

Can't see the forest for the trees?



A new comprehensive guide to 140 economically important native trees in the Peruvian rain forest has recently been published. It is hoped that the guide will help to ease the threat to the Amazon rain forest and improve the livelihoods of some of its inhabitants.

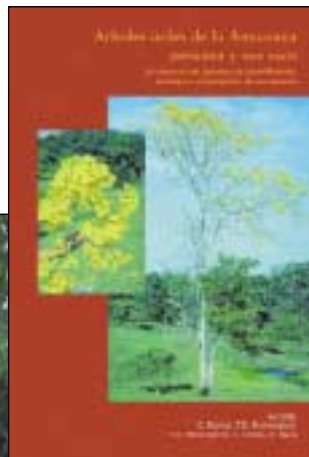
Peru is a resource-poor country, yet harbours almost 10% of all the plant species on earth, with the most important habitat being the rain forest



of the Amazon Basin. One of the biggest threats to the rain forest is slash and burn farming for subsistence agriculture. One potential hope, however, is being offered by the World Agroforestry Centre who are designing small-scale agriculture systems using native rain forest trees. These systems offer poor farmers the chance of a better livelihood, and critically, slow the rate of slash and burn because they are long-lasting, meaning new areas of forest are cut less often. Furthermore, the native trees are effectively conserved on the farms themselves.

Through the new, simple identification guide, this alternative is being promoted. The guide allows agroforestry organisations and local farmers to identify native trees that can offer a sustainable livelihood. Knowledge is the key to sustainable forestry and to preserving the diversity of the rain forests.

The project, which is being led by botanist Toby Pennington from Royal Botanic Garden Edinburgh, also involves the Royal Botanic Gardens Kew, The National Agrarian University in Lima, Peru and the World Agroforestry Centre. Much of the work



has centred round applying basic plant science. Using preserved plant specimens from the Edinburgh and Kew collections as a reference tool for formal identification, project staff have given native Amazonian tree species of economic potential a firm scientific basis. Silvicultural information obtained by the project has identified a widespread Amazonian tree, *Cedrelinga cateniformis* to be a promising alternative to the threatened mahogany. It is fast growing, and unlike mahogany, grows successfully under plantation conditions.

Further information: www.rbge.org.uk

Families discover science is fun...and botanic gardens are too!

BotaniCool™ Family Paks have been developed by the Cleveland Botanical Garden to encourage non-museum goers to explore the natural world at home and in the garden. Each Pack includes instructions and supplies for two activities to do at home and three to do at the garden, a related storybook to share, maps, and a pass for free family admission to the garden.

The packs use science process skills and simple instruments to explore ecology within the garden. "Splash and Flash" for example, focuses on light and water adaptations featured in the cloud forest of Costa Rica and spiny desert of Madagascar biomes. "Moving Around" focuses on plant and animal interactions. Visitors use envelopes as kaleidoscopes to create colour patterns that work well as camouflage in each biome.

The botanic garden is working with public libraries on a very successful outreach programme for the pack. Librarians and area teachers are excited - three hands-on programmes at each library, a poster, flyers for the neighborhood school and bookmarks all advertise BotaniCool™ Family Paks.

By Sandra Rode – Glasshouse Expert, Cleveland Botanic Garden, USA

Left: Toby Pennington in the rainforest (Royal Botanic Garden, Edinburgh)

Far left: Amazonian rainforest (Royal Botanic Garden, Edinburgh)

Right: Candles of support lit at the Royal Botanic Gardens, Kew (Royal Botanic Gardens, Kew)



Below: ...and at the Irish National Botanic Gardens, Dublin (Matthew Jebb)

Candles of hope for the National Botanic Garden of Wales

Botanic gardens around the world lit candles and sent messages of support for Middleton, the beleaguered National Botanic Garden of Wales, as its future hung in the balance last December. "It was a wonderful way in which many collection holders came together in support and we are very grateful for this" says Wolfgang Bopp, the curator at Middleton. The gardens themselves were host to a 'vigil of light' as over 1000 people flocked to prove their allegiance by forming a ring of light around the central glasshouse. Despite this, at the time of writing, the future for the gardens was still far from secure. Following a disastrous few months, which has seen the loss of 60 staff, the first national garden built in Britain for 200 years is now relying on an anonymous donor, who stepped in at the last moment to prevent the garden closing last December.

Far right: Mike Maunder (Fairchild Tropical Garden)

PS....

As a footnote to this item, we have also heard about possible garden closures in Los Angeles. The Department of Parks and Recreation recently put out a press release detailing curtailments they may make as a result of budget requests for the



next fiscal year. Among the items listed for closing are the Los Angeles County Arboretum, Virginia Robinson Gardens, and South Coast Botanic Gardens.

We will keep readers informed about the situation in both Wales and Los Angeles. In the meantime, we are interested in gathering information on the value of botanic gardens. What does it mean when a botanic garden closes? How does one put a monetary value on the conservation, community, social and education benefits provided by botanic gardens? Please send BGCI your thoughts and ideas.

Frank Howarth to head Australian Museum

Frank Howarth has been appointed director of the Australian Museum, Sydney, New South Wales (NSW). The Australian Museum is Australia's oldest museum: a museum of natural history and anthropology, with collections covering invertebrate and vertebrate zoology, mineralogy, palaeontology, and anthropology.

Frank Howarth was Director and Chief Executive of the Botanic Gardens Trust (the new name for the Royal Botanic Gardens Sydney) for seven years with a short period as Executive Director of the Policy and Science Division NSW Department of Environment and Conservation. Previously, Frank held several positions in NSW government departments and has a particular interest in science policy and the management of science-based programmes. The Royal Botanic Gardens, Sydney hosted the successful 5th BGCI International Congress on Education in Botanic Gardens in October, 2002. BGCI wishes Frank well in his new post.

New director of Fairchild

FAIRCHILD TROPICAL GARDEN

Michael Maunder has been appointed Director of Fairchild Tropical Garden in Miami, Florida, U.S.A, where he was director of Horticulture. Dr Maunder trained at the Royal Botanic Gardens, Kew, U.K., where he became Head of Conservation before becoming Director of Conservation and Curator of Living Collections between 2000 and 2002 at the National Tropical Botanic Garden (NTBG) in Hawaii. In 2002 Maunder received the Star Award from the Center for Plant Conservation USA, in honor of his concern and commitment to the conservation of the flora of the United States. He is an active member of the World Conservation Union (IUCN), and currently serves on the IUCN's Species Survival Commission Plant Conservation Committee.

Michael takes over from Julia Kornegay who has become Professor and Head of the Department of Horticultural Science, North Carolina State University, Raleigh, U.S.A.



Plants flowering earlier?

European plants are now flowering on average six days earlier than they were in the 1960s, and the overall growing season has increased by one to two weeks. This is the conclusion of a network of observers from European botanic gardens who compared present flowering times with historical records. Another network in North America, observing lilac and

honeysuckle cultivars found that plants were flowering approximately seven days earlier than in the 1950s.

The effect of climate change on plant development in Europe continues to be monitored by a network of European gardens which participate in the Network of International Phenological Gardens (IPG). According to a report from Germany, the currently observed changes in the timing of phenological events are still moderate, mostly not more than a few days per decade, but the relationship between air temperature changes and plant development seems to be clear. The biggest danger of advanced flowering and fruiting in response to climate change is that plants may lose their synchronous relationships with specialist pollinators or seed dispersers, leading to reproductive failure.

Further information - A.J. Miller-Rushing and R. B. Primack (2004) Climate change and plant conservation. Plant Talk No. 35 34-38.

See also the web site of the International Phenological Gardens of Europe. www.agrar.hu-berlin.de/pflanzenbau/agrarmet/ipg_2.html



Conservation through use?



The impact of trade on the conservation status of three plant species was reviewed at an international meeting of botanists held recently in Namibia. The 14th meeting of the Plants Committee (PC-14) of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) took place from 16-20 February 2003. The meeting, which drew together 77 participants representing governments, inter-governmental and non-governmental organizations focused on a range of issues to be considered prior to the next full meeting of the Conference to the Parties to the Convention, due to take place from 2-14 October 2004 in Bangkok, Thailand.

During the meeting, status reports were presented on the conservation and trade situation of *Guaiacum* spp. (lignum vitae or tree of life), *Harpagophytum* spp. (devil's claw) and *Aquilaria* spp. (agarwood). All three species are becoming increasingly widely traded and concerns over their conservation status have been expressed. These species continue to be monitored in Mexico and the Caribbean, Southern Africa and South East Asia respectively.

Plans to include *Caesalpinia echinata* (Pernambuco or Pau Brazil) in the CITES listings may be dropped following a report from the Confederation of Craftsmen and Users of Natural Resources (COMURNAT). Good progress has been made to protect the species through the International Pernambuco Conservation Initiative (IPCI). This initiative was launched by bowmakers in response to growing concerns over the sustainability of their supply of raw material. It is the first time that members of a craft profession have mobilized at the international level to resolve the problems of both the supply of raw material and the

conservation of their particular resource. Projects for the future, requiring the cooperation of bowmakers, violinmakers, musicians and music enthusiasts from around the world are also under consideration.



Other species proposed for consideration by CITES were several Asian species of *Taxus* (Yew tree) and *Hoodia* (Carrion flower), a Namibian indigenous species that faces global commercial demand. Members of the Convention have until May to submit proposals, so perhaps new plant species will also find their way on to the agenda in time for the Bangkok meeting.



Further information: www.cites.org; and www.ipci-comurnat.org/

Original source: Earth Negotiations bulletin enb@iisd.org. Published by the International Institute for Sustainable Development: www.iisd.org.

CITES was established as a response to growing concerns that over-exploitation of wildlife through international trade was contributing to the rapid decline of many species of plants and animals around the world. The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) entered into force on 1 July 1975. CITES' aim is to ensure that international trade of wild animal and plant species does not threaten their survival. CITES Parties regulate wildlife trade through controls and regulations on species listed in three Appendices. There are currently 164 Parties to the Convention and approximately 28,000 plant species are protected. Further information: www.cites.org.

Above: International trade in orchids is carefully controlled by CITES (Royal Botanic Gardens Kew)

Top left: Peonies provide a splash of colour (Peter Wyse Jackson, BGCI)

Bottom left: Crocuses - a welcome sign of spring in many countries (Suzanne Sharrock, BGCI)

Too hot to handle

Over a million species could be at risk of extinction as a result of climate change over the next 50 years

Below: Clearing rainforests reduces the amount of oxygen produced while, at the same time, increasing carbon dioxide emissions, resulting in global warming and erratic weather patterns. (BGCI)



Above: Many species of Protea could be threatened with extinction due to climate change (Peter Wyse Jackson, BGCI)

15-37% of all species in biodiversity-rich regions are at risk of extinction, and there is a high likelihood of extinctions in other regions as well, as a result of climate change over the next 50 years. This is the worrying conclusion of a study published recently in the internationally renowned journal 'Nature'. If the projections are extrapolated globally, the analysis suggests that over a million species could be threatened with extinction.

An international team of scientists led by Dr Chris Thomas of the University of Leeds, UK, studied six biodiversity-rich

regions, representing 20% of the planet's land area, and used computer simulation models to predict future distributions of 1,103 animal and plant species. Using data from the Intergovernmental Panel on Climate Change, the scientists considered three different scenarios – minimum, mid-range and maximum expected climate change, and combined this data with the ability of species to move to new 'suitable' areas.

South Africa's Cape Floristic region was among the regions studied, and here 30-40% of South Africa's

Proteaceae, including South Africa's national flower, the King Protea, are predicted to go extinct as a result of climate change. Indeed a recent drought has already had a severe impact on the toffee apple conebrush (*Leucadendron 'touwsvierenses'*). Other plant species at risk include many types of trees in the Amazon, such as *Virola sebifera*, a Brazilian tree whose entire range is likely to have disappeared by 2050.

The difference between the maximum and minimum extinction rates is 15-20%, thus indicating that if action is taken to ensure that only the minimum scenario of climate change occurs, hundreds of thousands of species could be saved from extinction. The scientists involved in the study suggest that action to minimise greenhouse gas emissions and store carbon, while at the same time implementing conservation strategies across entire ecosystems could save a substantial percentage of terrestrial species.

Further information:
Nature Vol 427, 8 January 2004
www.nature.com; Conservation International: www.conservation.org



2004 - International Year of Rice

Almost 3,000 million people share the culture, traditions, and untapped potentials of rice. In remote villages of southeast Asia, farmers still compare a grain of rice to a "grain of gold". In modern Japan, people see rice as the very heart of their culture. Along the Senegal River in West Africa, villagers greet guests with specially prepared rice dishes.

A symbol of cultural identity and global unity, rice is the world's most popular food. Yet all is not well in the world of rice. Growth in rice yields is slowing, and is already falling behind population growth. Most rice farmers are poor, but national policies often favour the consumer and export market.

The United Nations launched the International Year of Rice in 2004 to turn this situation around. The year's



theme -- "Rice is life" -- reflects the importance of rice as a primary food source, and is drawn from an understanding that rice-based systems are essential for food security, poverty alleviation and improved livelihoods.

The 2004 International Year of Rice is seen as a crucial effort to feed a burgeoning world population. Today, rice feeds nearly three billion people, or almost half the world's population, but by 2015, that number could shoot up to 4.6 billion people.

In celebrating the International Year of Rice, FAO has launched the IYR2004 website (http://www.fao.org/rice2004/index_en.htm) and is organising a wide range of events including a global rice conference and a photography competition.

Social horticulture

Durban Botanic Garden, South Africa has recently acquired an additional plot of land with the express aim of developing an urban agricultural and medicinal plant conservation-demonstration facility. The centre also hopes to focus attention on Permaculture, urban greening, composting, social welfare and environmental education.

Through the project, the Durban Botanic Garden hopes to highlight long-overlooked humanitarian

dimensions in horticultural work. Durban is one of the fastest growing cities in the world and rapid urbanisation poses a serious challenge to local authorities, who must plan for the development needs of residents. As poverty and AIDS impact on urban residents, so there will be growing need for urban food production and medicinal plant conservation. The garden aims to address this very need.

Further information:
www.durbanbotanicgardens.org.za

UK responds to plant challenge

PlantNet, the national network of botanic gardens and arboreta in Britain and Ireland, is to set up a working group to address the response by plant collections in the U.K. to the Global Strategy for Plant Conservation (GSPC). This was the conclusion of a meeting attended by nearly 100 plant conservation stakeholders in the UK recently. The meeting, which was attended by a mix of PlantNet members, government, national organisations and students, considered how they could use their combined expertise to contribute to the implementation of the GSPC.

Among the recurring themes that emerged in talks and discussions were the importance of:

- horticultural skills in implementing the Strategy, in both in situ and ex situ conservation
- botanic gardens working in partnership with regional and local biodiversity and conservation organisations
- the huge public interface in botanic gardens for raising awareness and conveying information about conservation
- small gardens with minimal resources being part of a larger response
- PlantNet co-ordinating the response of botanic gardens throughout Britain and Ireland to implementing the Global Strategy.

Copies of the Powerpoint presentations made at the PlantNet meeting are available on:
www.plantsci.rdg.ac.uk/GSPC.html

Left: Rice is a major staple food in India (FAO/19469/G. Bizzarri)

Left: Women winnowing rice in Senegal (FAO/17334/R. Faidutti)

News from BGCi

BGCi-Online

The number of visitors to the BGCi website (www.bgci.org) is increasing daily as more and more information and resources are being put on-line. Popular features include the **Garden**

Search database, which allows visitors to locate a botanic garden in any country in the world – useful whether it be for planning an excursion or identifying a research partner. For those interested in rare and threatened plants, the **Plant**

Search database includes over 80,000 taxa being cultivated in gardens around the world. The database is linked to taxonomic and Red Data lists so all entries can be checked for nomenclature and conservation status. Links are also provided to an image search engine, thus allowing instant access to pictures of any species selected.

A wide range of **educational resource materials**, sorted by categories such as "starting a programme", "interpretation", "community involvement" and many more, have recently been added to the website. In addition, **regional websites**, accessed through the BGCi homepage are being developed to give more details about country-specific activities. The BGCi-China site provides information and resources in both Chinese and English, while the BGCi-US site contains a wide range of useful links to resources and materials relevant to North America.

New on www.bgci.org:

- Sign up for BGCi's free bi-monthly e-bulletin 'Cultivate' to learn more about the fascinating world of plants and the activities of botanic gardens around the world
- Subscribe to Cuttings and become a member of BGCi on-line
- Garden administrators - verify the information about your garden in the Garden Search database (to apply for a password to update this information contact info@bgci.org)

Visit regularly for all the latest updates.



BGCi facilitates international consultation on education

At the request of the CBD's Executive Secretary, BGCi has been asked to facilitate a stakeholder consultation on Target 14 of the Global Strategy for Plant Conservation. Target 14 is about incorporating the importance of plant diversity and the need for its conservation into communication, educational and public-awareness programmes. The consultation document has been sent to all BGCi members and networks, as well as other organisations worldwide delivering plant-based education. Botanic gardens are key players in the implementation of Target 14 which is essential for the achievement of the GSPC.

Contact **Julia Willison** (julia.willison@bgci.org) for further information.

New staff for BGCi

BGCi has recently appointed a new member of the team. From January 2004, Sarah Kneebone has taken up the position of education officer based at BGCi's head office in the UK. Sarah will be working with Julia Willison to produce Roots, BGCi's education review, and other educational materials.

Before arriving at BGCi, Sarah worked as the education officer for Wales for the Royal Society for the Protection of Birds. She has also worked in an educational capacity for Bristol



Zoological Gardens and the Eden Project. Sarah's formal qualifications include a Postgraduate Certificate for Education, in secondary school science, awarded by the University of Cambridge and a Master's degree in Conservation from University College London.

Flying display



In December 2003, BGCi was happy to be invited to participate in British Airways Communities and Conservation Open Day. The purpose of the day was to provide British Airways staff the opportunity to find out more about the work of the communities and conservation groups supported by British Airways. It also allowed BGCi staff to meet and network with other charitable organisations. The event was held in British Airways UK headquarters at Waterside, near Heathrow Airport, with over 40 charities represented. The BGCi stand attracted much interest and several hundred handmade, banana-fibre bookmarks promoting the BGCi website were distributed.

BGCi is very grateful to the BA Communities and Conservation scheme which, in 2003 awarded free flights to BGCi in support of the implementation of the Global Strategy for Plant Conservation, the completion of a feasibility study into a new botanic garden in Jordan and participation in a number of workshops and training courses around the world.



Right: Sarah Kneebone, BGCi's new Education Officer (BGCi)

Far right: BGCi staff (Suzanne Sharrock, Julia Willison and Barbara Bridge) inform BA staff about the work of botanic gardens (BGCi)

BGCI – New look



For those of you who are already members of BGCI, you will be aware that this is the first issue of an entirely new newsletter. From now on BGCI will be producing Cuttings quarterly – and we hope you will enjoy receiving regular updates of news and views from the botanic garden world. Cuttings will be distributed to existing BGCI members together with Roots (BGCI's educational review) and our new journal BGjournal, which replaces BGCNews. Information on how new members can subscribe to any or all of our publications is provided on page 15. The launch of Cuttings is part of an overall renewal of BGCI's 'look'. You may have noticed our new logo on the front cover of this newsletter – the traditional BGCI *Ravenala* (traveller's palm) has been maintained – but we have added a strap line "Plants for the Planet". The strapline aims to provide a simple but easily remembered fact about the nature of BGCI and the work we do.

Welcome SEABG!

On 31st January 2004, following an historic meeting of South East Asian botanic gardens, a new network for South East Asia was established. Nineteen participants, representing eleven institutions from ten countries met for two days at the Singapore Botanic Garden. The countries represented included Cambodia, China, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand and Vietnam.

This meeting marked the first gathering of botanic garden representatives in the region, and resulted in the formation of a network called SEABG

Focus on Africa

BGCI is pleased to announce the launch of a new programme for African Botanic Gardens.

Funded by HSBC through the Investing in Nature partnership, the programme aims to assist botanic gardens in Africa to implement the conservation and education elements of the *International Agenda for Botanic Gardens in Conservation*.

Over 130 botanic gardens are thought to exist in Africa today. The oldest garden in the region is the national botanic garden of the Mauritius, while that of Kirstenbosch (Cape Town), South Africa is perhaps the most well-known. In November 2002, the African Botanic Gardens Network (ABGN) was established and since then, other sub-regional networks, such as the Central African Botanic Garden and Arboreta Network (CABGAN) have also appeared. The main function of these networks is to strengthen individual gardens by promoting information exchange and the sharing of experiences and resources.

Through its new programme for Africa, BGCI will be working with ABGN to strengthen conservation and education programmes in African botanic gardens, carry out a survey of threatened plants in



cultivation in African botanic gardens and raise awareness of the importance of African botanic gardens. As well as developing a BGCI-Africa website to publicise the work of botanic gardens, BGCI will also be initiating a small grants programme to support plant conservation projects. All recognized African botanic gardens that have registered their participation in the *International Agenda* with BGCI, are eligible to apply for a small grant. Only one application is permitted from each botanic garden and applications must be received by May 31st 2004. Projects should be of one year or less in duration and grants of between £1,000 - £2,000 are available.

Further information and application forms are available from info@bgci.org.

Above: Tree planting in South Africa (National Botanical Institute, Kirstenbosch)

Left: Townships such as this will benefit from the work of botanic gardens (see also 'Social horticulture' p. 9. (Geoff Nicholls)

Nature through children's eyes

More than 600 young artists gathered to celebrate the launch of Akar Environmental Club at the Cibodas Botanic Gardens in Indonesia

The launch of the BGCI 'Investing in Nature' funded Akar environmental club in December last year was marked by a huge gathering of teachers and school children at Cibodas Botanic Gardens. The children and teachers represented the 114 primary schools from the Pacet and Sukaresmi sub-districts surrounding the Botanic Gardens - each school was invited to select 5 children to compete in a Nature Drawing Competition. The competition was designed to raise children's awareness of their surrounding environment and to encourage them to help to conserve it, with the aid of the botanic gardens. This aim is reflected in

Right: Drawings in progress
(Bian Tan, BGCI)



Right: Drawing competition winners are announced
(Bian Tan, BGCI)



Far right: Prize winners display their pictures
(Bian Tan, BGCI)



the name of the new environmental club, AKAR in Indonesian means "root" and the acronym roughly translated means "the way of getting to know the natural Universe."

Prizes for the competition included encyclopedia sets for the schools and stationary kits for the children. The judges' point scores were very close, and there was great excitement as the winners were announced. The first

prize winner was Muhammad Idrus from the Mitra Bakti Government School, one of the farthest and most remote schools in the region. After the prize-giving ceremony, over 200 trees were distributed among the teachers for planting in the schools.

Each participating school was given 50 copies of the inaugural issue of ALAM (Nature), the newsletter of the AKAR environmental club, to be given to

children who were not in the competition. This first issue of ALAM contained articles on how nature can be a source of information and learning, the highlights of botanic gardens including important plant collections and animals such as birds and insects, and an invitation to visit the gardens to explore nature. Information on BGCI, Investing in Nature and how to participate in the children's club programmes that will be offered in 2004 at the Cibodas Botanic Gardens was also included.

Investing in Nature is a US\$50 million, five-year environmental partnership funded by HSBC, working with Botanic Gardens Conservation International, Earthwatch and WWF. For more information visit: www.hsbc.com/investinginnature.



(South East Asia Botanic Gardens – pronounced “see bee gee”). The general aims of the network are to assist member gardens in capacity building, to share the use of resources, and to improve the overall standards of botanic gardens in the region.

In addition to the discussion sessions, the attendees also toured the collections at the Singapore Botanic Gardens, including the renowned National Orchid Garden and enjoyed a preview of the new Evolution Garden. The meeting was welcomed by the attendees as an opportunity to give voice to their institutional needs and to share their problems in an informal, supportive and collegiate atmosphere.

BGCI acknowledges the support of HSBC through the Investing in Nature partnership for the meeting in Singapore.

Bian Tan moves to Singapore

With a considerable increase in his area of operation, Bian Tan, the co-ordinator for the BGCI South East Asia programme, will be moving his office from the Bogor Botanic Garden in Indonesia to the Singapore Botanic Garden. The new office will commence operation on 22 March. Bian’s involvement in the current Indonesian programme and his close collaboration with the Indonesian Botanic Gardens will continue unchanged.

Plant conservation gets a boost in India

The National Botanical Research Institute (NBRI) Lucknow and BGCI are pleased to announce the successful projects that have been selected for the Small Grant Awards for 2003-2004 under the National Plant Conservation Programme. The winners of the Small Grant Project awards include a range of 11 institutions representing botanic gardens, arboreta, and community/conservation organizations under the Central and State Government Departments, Universities and NGOs.

- Conservation of some selected critically endangered endemic angiosperms of the Kashmir Himalaya.
- Population assessment and maintenance of germplasm of selected multipurpose trees and rare, endangered medicinal plants in the Arboretum, Kosi-Katarmal, Almora, Uttaranchal.
- Conservation of legume germplasm from the Western Ghats of Maharashtra, with special emphasis on rare and threatened species.
- Conservation of endangered, rare and endemic plants of Gujarat.
- Conservation of 10 threatened plants of Chitrakoot Region of Madhya Pradesh through ex situ methods.
- Renovation and maintenance of the mangrove eco-garden at Jharkhali, West Bengal.
- Enriching existing orchid germplasm at the Orchid Research Centre, Tipi, Arunachal Pradesh
- Conserving 10 rare, endangered and threatened plant species for the livelihood security of tribal and rural communities of Wayanad District, Kerala.
- An arboretum for endemic and endangered flora of the Nilgiri Biosphere Reserve, Tamil Nadu.
- Development of an arboretum and conservation of native forest and medicinal plant species, Tambaram, Chennai, Tamil Nadu
- Propagation of indigenous plants of the tropical dry evergreen forest of South India. Auroville, Tamil Nadu.

The projects selected for support all have clear relevance to Indian national plant conservation priorities as well as

the implementation of the Global Strategy for Plant Conservation. The projects cover different eco-geographic zones and include a wide range of players in plant conservation in India. They also focus on practical methods and approaches for conservation of rare and threatened plants and can demonstrate that expected benefits will flow to local and indigenous communities.



The NBRI-BGCI National Plant Conservation programme is supported by the Investing in Nature partnership.

Further information:
www.ibgn.org/index.htm.

Royal support for Jordan botanic garden

BGCI has been requested by HRH Princess Basma Bint Ali of Jordan to assist in developing a feasibility study for a national botanic garden in Jordan. A team of local experts in botany and biology has been assembled and BGCI will work with this team to develop plans for the garden.



Top left: SEABG members view the cycads in the new evolution garden at Singapore botanic garden (Bian Tan, BGCI)

Bottom left: Founding members of SEABG (Bian Tan, BGCI)

Above: First planting for the endangered species arboretum, Coimbatore Zoological Park, India (BGCI)

Left: Proposed site for new national botanic garden in Jordan (Mark Richardson, BGCI)

Government ministries have demonstrated their support for the project and a national committee has been established. BGCI staff visited the proposed site of the garden in November 2003 and were most impressed with the potential offered.

Acting locally, thinking globally



Above: Participants at the International Agenda meeting in Atlanta, USA (Peter Wyse Jackson, BGCI)

Far right: Members of the European Botanic Gardens Consortium (Peter Wyse Jackson, BGCI)

With the generous support of the Chanticleer Foundation, BGCI(US) is holding a series of workshops to explore the variety of roles botanic gardens can play in plant conservation, using the *International Agenda for Botanic Gardens in Conservation* as a basis for discussion.

Launched at the first World Botanic Gardens Congress in Asheville, USA in 2000, the *Agenda* was developed as a framework for botanic gardens around the world to contribute to biodiversity conservation. From follow-up discussions with colleagues since Asheville, BGCI(US) realised that some US public gardens found it hard to see how the *Agenda* might apply to them, especially those with a very broad garden mission. The purpose of the workshops is therefore to demystify the *Agenda* by exploring how it can be a useful tool for assessing a garden's current accomplishments and its potential to expand programmes that promote conservation.

Right: Wuhan Botanic Garden, China (Mark Richardson, BGCI)

Through a series of workshops being held in various parts of the USA, participants are being introduced to the *Agenda* and, drawing on case studies,

shown how to use the *Agenda* to review the activities of their gardens. From the "acting locally, thinking globally" viewpoint, participants come to realise how even the smallest plant conservation and public education programmes can indeed contribute to a global effort. Botanic gardens are encouraged to view the *Agenda* as a useful framework for their activities and as a catalyst for future actions. They are reminded that *Agenda* registration is not a binding commitment, but rather a means to demonstrate support for plant conservation.

Further information: www.bgci.org/us/international_agenda.html

US gardens respond to survey

171 gardens and arboreta in the USA supplied information for a survey recently carried out by BGCI and the Chanticleer Foundation. The results of the survey show that collectively these 171 gardens are responsible for the stewardship of roughly 50,508 acres of land, they display over 722,000 plants and have approximately 65,460,300 specimens held in herbaria. Conservation is part of the mission of 47% of the gardens.

The gardens have been responsible for conserving around 237 species of plants through plant recovery programmes, while roughly 480 species, of which 93% were considered native to the garden's region, have been reintroduced to the wild.

The primary roles of these gardens, as determined by the survey results, are aesthetic display (86%), followed by environmental education (67%), plant selection and utilization (43%), conservation of rare and endangered species (38%), ecological management (34%), plant introduction (30%), horticultural research (28%), genetic resource conservation (18%), taxonomic research (17%), and rare plant reintroduction (15%).

Survey data provided by Julie McIntyre, Chanticleer Fellow, 2002. Further information: www.bgci.org/us/bioreport.html



European Botanic Gardens Consortium meets in London

Representatives from 13 European countries converged recently on London for a meeting of the European Botanic Gardens Consortium, which was hosted by BGCI. The Consortium is preparing itself for a considerable enlargement as the EU expands its membership to include 10 new countries in 2004. On the agenda of the meeting were plans for the next European Botanic Gardens Congress (Eurogard IV), the development of a Consortium website and responses to the global and European plant conservation strategies.

BGCI awards travel scholarships in China

As part of the Investing in Nature partnership, BGCI has been able to award travel scholarships to seven applicants from China and Hong Kong. Of these, 5 Chinese botanists will be visiting Kadoorie Farm and Botanic Garden (4 people) and Hong Kong Botanic Garden (1 person). Two botanists from Hong Kong will be hosted in China by Beijing Botanical Garden and Wuhan Botanical Garden.

Further information: www.bgci.org/china-english/index.html



How to join Botanic Gardens Conservation International

The mission of BGCI is to build a world network for plant conservation. It was founded in 1987 and now includes over 525 member institutions in 115 countries, working together to implement the *International Agenda for Botanic Gardens in Conservation* and the new *Global Strategy for Plant Conservation*.

Institutions can join BGCI for the following benefits:

- Membership of the worldwide plant conservation network
- Botanic Garden Management Resource Pack (upon joining)*
- Regular publications:
 - the regular newsletter, *Cuttings*
 - *BGjournal* – an international journal for botanic gardens (2 per year)
 - *Roots* - environmental education review (2 per year)
 - A wide range of new publications
- Invitations to BGCI congresses and discounts on registration fees
- BGCI technical support and advisory services

Institution Membership		£ Stlg	US \$	£ Euros
A	BGCI Patron Institution	5000	7500	7500
B	Institution member (budget more than US\$2,250,000)	600	940	940
C	Institution member (budget US\$ 1,500,000 - 2,250,000)	440	660	660
D	Institution member (budget US\$ 750,000 - 1,500,000)	300	440	440
E	Institution member (budget US\$ 100,000 - 750,000)	160	220	220
F	Institution member (budget below US\$100,000)*	75	110	110
*Generally applies to institutions in less developed countries				

Other Membership Categories:

Membership benefits depend on category - see below. These can include:

- Regular publications:
 - the regular newsletter, *Cuttings*
 - *BGjournal* - an international journal for botanic gardens (2 per year)
 - *Roots* - Environmental Education Review (2 per year)
- Invitations to BGCI congress and discounts on registration fees

Corporate Membership		£ Stlg	US \$	£ Euros
G	Corporate Gold Member (<i>BGjournal</i> , <i>Roots</i> and <i>Cuttings</i> plus more)	5000	7500	7500
H	Corporate Silver Member (<i>BGjournal</i> , <i>Roots</i> and <i>Cuttings</i> plus more)	1000	1500	1500
Individual Membership		£ Stlg	US \$	£ Euros
J	Conservation donor (<i>BGjournal</i> , <i>Roots</i> and <i>Cuttings</i> plus more)	160	220	220
K	Associate member (<i>Cuttings</i> and <i>BGjournal</i>)	35	50	50
L	Associate member (<i>Cuttings</i> and <i>Roots</i>)	35	50	50
M	Friend (<i>Cuttings</i>) available through online subscription only (www.bgci.org)	10	15	15

* Contents of the Botanic Garden Management Resource Pack: *The Darwin Technical Manual for Botanic Gardens*, *A Handbook for Botanic Gardens on the Reintroduction of Plants to the Wild*, *A CITES Manual for botanic gardens*, *BGjournal - an international journal for botanic gardens (2 past issues)*, *Roots - environmental education review (2 past issues)*, *The International Agenda for Botanic Gardens in Conservation*, *Global Strategy for Plant Conservation*, *Environmental Education in Botanic Gardens*, *BG-Recorder (a computer software package for plant records)*.

Payment may be made by cheque payable to Botanic Gardens Conservation International, or online at www.bgci.org or by VISA/Mastercard sent to BGCI, Descanso House, 199 Kew Road, Richmond, Surrey, TW9 3BW, U.K or Fax: +44 (0) 20 8332 5956.

I wish to apply for membership of Botanic Gardens Conservation International.

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Membership category Annual rate
 VISA/Mastercard number Credit card expiry date
 Signature Print name

I would like to make a donation to BGCI. Amount

Please clearly state your name (or the name of your institution) on all documentation. Please contact info@bgci.org for further information.



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