



PlantNetwork
The Plant Collections Network of
Britain & Ireland

Glasshouse Forum

Glasshouse cultivation; rationalising and
connecting glasshouse collections

6th December 2016

Cambridge Botanic Garden

#ghcollns

@plantnetwork



PlantNetwork

The Plant Collections Network
of Britain & Ireland

PlantNetwork is the national network of botanic and heritage gardens and arboreta and other documented plant collections

- promoting botanical collections in Britain and Ireland as a national resource for research, conservation and education
- facilitating networking and training among holders of plant collections

Chairman: Simon Toomer

Vice-Chair: Faye Steer

Hon. President: Dr Matthew Jebb

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Edited by Pamela Smith.

Programme

| | |
|-------|---|
| 9.45 | Registration |
| 10.00 | Introduction Alex Summers, Cambridge University Botanic Garden |
| 10.15 | Rationalising Collections on a National Scale Paul Kessler, Hortus Botanicus Leiden |
| 11.00 | Look the right way and the whole world is a garden Dr. Sam Brockington Cambridge University Botanic Garden |
| 11.30 | Coffee break |
| 11.45 | An Educational Approach to Rationalising Public Collections Kate Pritchard, Oxford University Botanic garden |
| 12.15 | Rationalising a Reserve Collection and Choosing a Focus Will Ritchie, Glasgow Botanic Garden |
| 13.00 | Lunch |
| 14.00 | Tours led by Alex Summers and Sally Petitt Cambridge University Botanic Garden |
| 15.00 | Glasshouse Forum Discussion led by Alex Summers & Sally Petitt |
| 15.45 | Closing Remarks by Alex Summers |
| 16.00 | Close |

All presentations from our training days and conferences are shared through our website. www.plantnetwork.org. Our website search facility also allows you to find previous newsletter articles, presentations and downloads.

Speakers

Cambridge Botanic Garden

Dr Sam Brockington, Curator sb771@cam.ac.uk

Sally Petitt, Head of Horticulture scp22@cam.ac.uk

Alex Summers, Supervisor Glasshouse Section
aes59@cam.ac.uk

Oxford

Kate Pritchard, Curator Glasshouse Collection
kate.pritchard@obg.ox.ac.uk

Leiden Botanic Garden

Paul Kessler, Prefect/Director, Hortus botanicus, Leiden
p.j.a.kessler@hortus.leidenuniv.nl

Glasgow Botanic Garden

Will Ritchie, Curator, Glasgow Botanic Gardens
Will.Ritchie@glasgow.gov.uk

PlantNetwork Forum Groups

We would like to encourage the sharing of skills and interests amongst our members. We aim to facilitate those working in gardens and with plant collections to be able to meet, share common interests and discuss training needs. Forum Groups will help us gain closer links with our membership, create demand led training and keep PlantNetwork up to date with current issues and skills needs.

What Forum Groups are there?

Over the years we have a number of groups. The most successful and frequent has been the Plant Records Forum group. Today's training day is the start of the reformed Glasshouse Forum, initiated by Cambridge and Oxford Botanic Gardens. We also have interest in developing Forum groups on Trees, Propagation and Botanical Heritage.

How can you help with a Forum Group?

Our Forum groups could develop in a variety of ways. There is no set rule, we want to provide the support to people passionate about their subject and wanting to share their experiences, learn more themselves and develop a focus for our membership interested in the topic. We can help to coordinate, promote and deliver meetings, discussion groups and training days. You don't need to be an expert, just interested and willing to help us find the experts and relevant locations to deliver networking and training.

Please get in touch office@plantnetwork.org to discuss involvement with existing or new groups.

Over the years our former Glasshouse Forum group has arranged a number of training days relating to glasshouse collections. Our website has a good search facility and many of the presentations from these events are on our website.

Displays of Plants from Arid Places Royal Botanic Garden Edinburgh, 16 September 2009

Climate Control in Glasshouses University of Oxford Botanic Garden, 11 June 2008

How Low Can You Go? National Botanic Garden of Wales, March 21 2007

Focusing your Glasshouse Collections National Botanic Gardens, Glasnevin, 8 June 2006

Focusing your Glasshouse Collections National Botanic Gardens, Glasnevin, 8 June 2006

Propagation of Glasshouse Plants Royal Horticultural Society Garden Wisley, 26 October 2005

Foreign Bugs: Managing Pests and Diseases in a World of Increasing Imports Eden Project, July 2004

Glasshouses: Old Structures New Growth PlantNetwork conference Sheffield Botanical Gardens, September 2003

Plant and Landscape Maintenance under Glass Royal Botanic Garden Edinburgh, May 2003

Growing and Displaying Tropical Plants Royal Botanic Gardens Kew, 4 September 2002

RESOURCES

Plant Health

The UK Plant Health Risk Register

The risk register is one element of implementing the recommendations of the independent Task Force on Tree Health and Plant Biosecurity. It is a tool for government, industry and stakeholders to prioritise action against pests and diseases which threaten our crops, trees, gardens and countryside.

Structure of the Risk Register

- There are five main parts to the risk register:
- Key features of the pest
- Unmitigated risk ratings
- Current mitigations
- Mitigated risk ratings
- Actions to reduce the residual risk.

<https://secure.fera.defra.gov.uk/phiw/riskRegister/>

Plant Health controls including Passporting gov.uk web pages
<https://www.gov.uk/guidance/plant-health-controls>

Defra Plant Health risk register

<https://secure.fera.defra.gov.uk/phiw/riskRegister/> (which is not an APHA web page) but is a valuable source of information from Pest Risk Analysis, pest facts sheets, Defra Consultations etc. and is down loadable so people can filter and interrogate for their own needs.

Garden and Collections Management -Legal Frameworks

The Convention on Biological Diversity (CBD)

Opened for signature at the Earth Summit in Rio de Janeiro in 1992, and entering into force in December 1993, the Convention on Biological Diversity is an international treaty for the conservation of biodiversity, the sustainable use of the components of biodiversity and the equitable sharing of the benefits derived from the use of genetic resources. With 196 Parties up to now, the Convention has near universal participation among countries. The Convention seeks to address all threats to biodiversity and ecosystem services, including threats from climate change, through scientific assessments, the development of tools, incentives and processes, the transfer of technologies and good practices and the full and active involvement of relevant stakeholders including indigenous and local communities, youth, NGOs, women and the business community. The Cartagena Protocol on Biosafety is a subsidiary agreement to the Convention. It seeks to protect biological diversity from the potential risks posed by living modified organisms resulting from modern biotechnology. To date, 170 Parties have ratified the Cartagena Protocol. The Secretariat of the Convention and its Cartagena Protocol is located in Montreal.

www.cbd.int.

The Nagoya Protocol

The Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity was adopted at the tenth meeting of the Conference of the Parties in 2010, in

Nagoya, Japan, and entered into force on 12 October 2014. The Protocol significantly advances the objective of the Convention on the fair and equitable sharing of benefits arising from the utilization of genetic resources by providing greater legal certainty and transparency for both providers and users of genetic resources. By promoting the use of genetic resources and associated traditional knowledge, and by strengthening the opportunities for fair and equitable sharing of benefits from their use, the Protocol will create incentives to conserve biodiversity, sustainably use its components, and further enhance the contribution of biodiversity to sustainable development and human well-being. To date, 68 Parties have ratified the Nagoya Protocol.

The full text of the Nagoya Protocol is available at:

Nagoya protocol on access to genetic resources and the fair and equitable sharing of benefits arising from their utilization to the convention on biological diversity; text and annex

© 2011 by the Secretariat of the Convention on Biological Diversity. To download: www.cbd.int/abs/doc/protocol/nagoya-protocol-en.pdf

Information on Access and benefit Sharing (ABS)

The ABS-Clearing-House

<https://absch.cbd.int/>

BGCI webpages

www.bgci.org/resources/abs/

EU Regulations:

http://ec.europa.eu/environment/nature/biodiversity/international/abs/index_en.htm

You Tube

ABS Simply Explained

The Global Strategy for Plant Conservation

In 2010, the Conference of the Parties, by decision X/17, adopted the Updated Global Strategy for Plant Conservation 2011-2020. The Strategy's vision is to halt the continuing loss of plant diversity and to secure a positive, sustainable future where human activities support the diversity of plant life (including the endurance of plant genetic diversity, survival of plant species and communities and their associated habitats and ecological associations), and where in turn the diversity of plants support and improve our livelihoods and well-being.

The Strategy includes 16 outcome-oriented global targets set for 2020, and provides a framework to facilitate harmony between existing initiatives aimed at plant conservation, to identify gaps where new initiatives are required, and to promote mobilization of the necessary resources. The global targets for 2011–2020 should be viewed as a flexible framework within which national and/or regional targets may be developed, according to national priorities and capacities, and taking into account differences in plant diversity between countries.

In 2002, the Conference of the Parties, by decision VI/9, had adopted the Global Strategy for Plant Conservation which provided a pilot exercise for the development and use of outcome targets under the first Strategic Plan of the CBD.

The updating of the Strategy for the new decade was undertaken in parallel to the consultations leading to the adoption of the Strategic Plan for Biodiversity 2011-2020 and its implementation should be considered within the broader framework of the Strategic Plan for Biodiversity 2011-2020.

The targets 2011-2020

Objective I: Plant diversity is well understood, documented and recognised

Target 1: An online flora of all known plants.

Target 2: An assessment of the conservation status of all known plant species, as far as possible, to guide conservation action.

Target 3: Information, research and associated outputs, and methods necessary to implement the Strategy developed and shared.

Objective II: Plant diversity is urgently and effectively conserved

Target 4: At least 15 per cent of each ecological region or vegetation type secured through effective management and/or restoration.

Target 5: At least 75 per cent of the most important areas for plant diversity of each ecological region protected with effective management in place for conserving plants and their genetic diversity.

Target 6: At least 75 per cent of production lands in each sector managed sustainably, consistent with the conservation of plant diversity.

Target 7: At least 75 per cent of known threatened plant species conserved in situ.

Target 8: At least 75 per cent of threatened plant species in ex situ collections, preferably in the country of origin, and at least 20 per cent available for recovery and restoration programmes.

Target 9: 70 per cent of the genetic diversity of crops including their wild relatives and other socio-economically valuable plant species conserved, while respecting, preserving and maintaining associated indigenous and local knowledge.

Target 10: Effective management plans in place to prevent new biological invasions and to manage important areas for plant diversity that are invaded.

Objective III: Plant diversity is used in a sustainable and equitable manner

Target 11: No species of wild flora endangered by international trade.

Target 12: All wild harvested plant-based products sourced sustainably.

Target 13: Indigenous and local knowledge innovations and practices associated with plant resources maintained or increased, as appropriate, to support customary use, sustainable livelihoods, local food security and health care.

Objective IV: Education and awareness about plant diversity, its role in sustainable livelihoods and importance to all life on earth is promoted

Target 14: The importance of plant diversity and the need for its conservation incorporated into communication, education and public awareness programmes.

Objective V: The capacities and public engagement necessary to implement the Strategy have been developed

Target 15: The number of trained people working with appropriate facilities sufficient according to national needs, to achieve the targets of this Strategy.

Target 16: Institutions, networks and partnerships for plant conservation established or strengthened at national, regional and international levels to achieve the targets of this Strategy.

<http://www.cbd.int/gspc/strategy.shtml>

GSPC Toolkit

The toolkit for the Global Strategy for Plant Conservation has been developed under the leadership of Botanic Gardens Conservation International. You are invited to use it, provide feedback, and recommend material to be added.

<http://www.plants2020.net/>

Collections Policies

The example policy guidance below was produced for PlantNetwork Annual conference in Nottingham, November 2015 *'Plant Collections Management Keeping it legal, ethical and relevant'* and combines Example wording, adapted from a range of Collection Policies shared with delegates.

The process of creating and implementing a policy is as important and beneficial to the garden as the policy itself. A collections management policy is a working document that lies at the heart of the management and development of the garden and its collections. For policies to be effective, they must be understood and accepted by everyone. This means involving staff, governing authority and volunteers about the purpose of the policies, the distinction between policies and procedures, and how the procedures put policies into action.

Suggested format/contents for creating your Collection Policy

- 1.0 Introduction
- 2.0 Governance
- 3.0 History of current collections
- 4.0 Overview of current collections
- 5.0 Themes and priorities for future collecting
- 6.0 Accession criteria
- 7.0 Deaccession criteria

8.0 Access to collections

9.0 Related policies – record keeping, labelling

10.0 Evaluation and review

11.0 Appendices

1.0 INTRODUCTION

The purpose of this document is to guide the development and management of the _____ Botanic Gardens living collections. It provides guidelines for which plants are to be collected and held in the gardens and deals with all aspects of the stewardship of those collections. The Collections Policy supports the garden's mission and purpose as defined in our Mission Statement:

2.0 GOVERNANCE

The horticulture department is responsible for the care and maintenance of the living collections. A collections committee, comprised of representatives from the education, horticulture, visitor services and research departments along with other appropriate staff and at least two representatives from outside the staff will conduct periodic reviews, at least every five years, to keep this policy up-to-date with the garden's Vision, Mission and goals. The Curation Committee has the responsibility for discharging the duties set in this policy.

3.0 HISTORY OF CURRENT COLLECTIONS

4.0 OVERVIEW OF CURRENT COLLECTIONS

The garden's living collections are accessioned and assembled according to the following categories, some collections may represent a number of categories:

- Taxonomic (by plant genus) e.g. Lilac Collection
- Geographic (by geographical location or range) e.g. Mediterranean Garden
- Horticultural (with horticultural significance) e.g. Magnolia Collection
- Morphological (by form, traits or plant characters) e.g. Weeping Tree Collection
- Display (with an aesthetic function) e.g. Scented Garden
- Economic (plants with ethnobotanical interest) e.g. Medicinal Garden
- Conservation (rare or endangered species both wild and cultivated)
- Historically significant planting
- Ethnobotanical and cultural collections e.g. plants that relate to our local communities
- Educational collections e.g. a diverse collection of living plants for use in education, both at a popular and academic level.

5.0 THEMES AND PRIORITIES FOR FUTURE COLLECTING

The development of existing and acquisition of future collections will be determined by an agreed need to:

- Recognise and safeguard native flora
- Ensure the longevity of tree collections through continuous tree assessment and replacement
- Develop and interpret collections that address significant human themes
- Explore the relationship between art, science and nature as demonstrated by our collection
- Preserve, maintain and build our cultural heritage for future generations
- Restore historic collections
- Develop collections that reflect the cultural associations of our local communities
- Develop collections that relate to a particular person
- Develop collections which increase aesthetic and decorative horticultural displays

6.0 ACCESSION CRITERIA

Accessions may be acquired by purchase, gift, exchange, or collection. The Curation Committee will approve all acquisitions. Plant material will be acquired in accordance with the selection criteria stated above. Only plant material that has been collected, exported and imported in compliance with applicable laws and regulations will be allowed into the Garden's collection,

Plant material may be acquired by the garden from the following sources:

- Purchases. The appropriate horticulture department member in accordance with the selection criteria stated above may make plant purchases.

- Field collection. Field collectors must comply with all relevant local, national, and international laws and regulations with respect to the collection and movement of plant material. Only plants that are acquired in a way that does not deplete wild populations will be accepted.
- Donations. Donations are welcome if they meet one of our criteria, are needed and are given without restrictions placed by donor. All donated plant material is subject to approval by the Supervisor of Horticulture, or other designated staff member, who has the right to refuse, remove, donate, and/or dispose of gifts.
- Exchanges. The exchange of living material with other gardens and institutions is encouraged and will be subject to approval by the Supervisor of Gardeners or other designated staff member.
- Loans. Loans are temporary holdings of collections from other institutions or individuals. A loan period and other details shall be agreed upon in writing between the loaning institution/individual and the garden.

7.0 DE-ACCESSION CRITERIA

Deaccessions may be recommended by any member of the Curation Committee, but must be approved by the Committee. Plants shall be deaccessioned under one or more of the following conditions:

- The accession is no longer relevant to the purposes of the garden and is therefore in conflict with the collection policy
- The accession has been replaced by a more desirable accession

- The accession has deteriorated, died, or been stolen. It may be in poor health or not representative of its genus. If possible, an attempt should be made to propagate significant accessions before deaccessioning the specimen
- The accession can be more efficiently preserved in a seed bank
- The accession has been determined to be invasive or maybe encroaching other plants or the garden
- The accession is an unnecessary duplicate

8.0 ACCESS TO COLLECTIONS

The Garden aims to provide consistent, fair, and ready access to collections and collection information. Written requests for research use of the collections or collection information by researchers, horticulturists or students may be submitted to the xxxxx for review and recommendation.

No plant materials of any kind may be taken from the Garden without written, signed permission of the Curator or Head Gardener, except for plant materials intended for off-site sales to benefit the Garden.

No plant material from the Garden may be named without the written permission of xxx

All requests for plant material are to be referred to the Plant Records Office. Requests will be honored if the following criteria are met:

- Seed and plant material from the Garden shall be distributed under conditions that comply with the International Convention of Biological Diversity, especially those activities referring to the exchange of plant material. These conditions include: Plant material is used solely for scientific research, conservation of species, and development of recognised plant collections.
- All plants and propagules that are to be distributed must bear a phytosanitary or nursery inspection certificate.
- The plant is in good health and would not be compromised by the collection of propagules.
- The plant is not considered to be an invasive plant or have significant invasive potential in the region of destination.
- The delivery of the propagules is requested at a time of year conducive to the successful propagation of the plant requested.
- The plant is not available commercially from nurseries.
- The plant can be distributed according to parameters under which it was acquired or collected, including local and international regulations governing its propagation, distribution and use.
- Distributions of some plants may require a Materials Transfer Agreement (MTA).

9.0 RELATED POLICIES e.g. plant records, labelling.

10.0 EVALUATION AND REVIEW

Garden staff will review the Policy every xxx years and make amendments as required. Changes to the Policy may be determined by the overall health, maintenance, and general condition of the plant collections. In some cases, outside experts may be consulted.

NOTES

Garden visits

During 2017 we would like to arrange some informal garden visits which will create more networking opportunities and will also hopefully raise funds for our work. Would you like to show some PlantNetwork members around your garden? It's a great way to share your work and ideas with a group of fellow horticulturists. PlantNetwork will manage bookings charging £10 a head, enabling us to monitor numbers to suit individual garden requirements. You can support PlantNetwork by offering free admission and a tour to attendees which enables the £10 charge to go towards the work of PlantNetwork. If this isn't possible PlantNetwork will cover entrance costs from booking fees. Contact Pam to discuss.



PlantNetwork

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2017 Training Days

**April 26th
27th**

PlantNetwork Annual Conference
'Connecting gardens. engaging people'
Royal Botanic Garden Edinburgh

Call for papers and case studies on garden partnership working, community involvement, citizen science, collections interpretation and more. Contact office@plantnetwork.org

**(Between
May 2nd &
4th**

Plant Records Mount Stuart, Isle of Bute (2 day event including garden tour, exact timings tbc.)

June 20th

Propagation Forum RHS Wisley 10.00 to 16.00hrs

**September
27th**

Tree establishment Westonbirt Arboretum

Proposed

University Botanic Gardens Treborth Botanic Garden, Bangor, N Wales

Botanical Heritage meeting Hans Sloane Herbarium, London



**Professional
Gardeners'
Trust**

www.pgt.org offer funding for horticulturists to study and train, including PlantNetwork events.