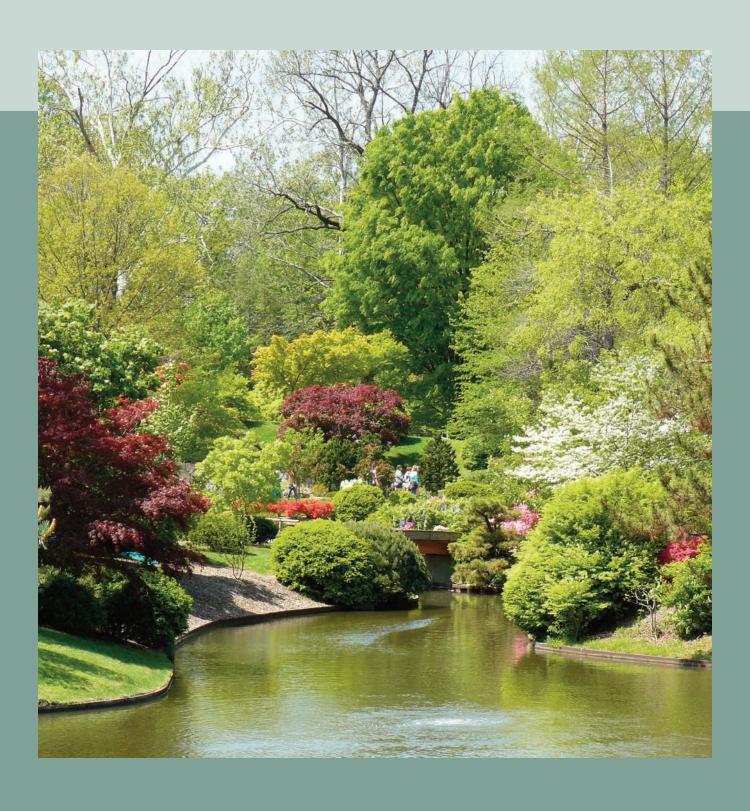


# BGCI's Annual Member's Review 2019

POLICY & ADVOCACY • CONNECTING PEOPLE SHARING KNOWLEDGE • SAVING PLANTS



# Message from BGCI's Secretary General



Dear BGCI member,

As I write this in mid-January 2020, I am cautiously optimistic that in 2019 the world finally woke up to the twin issues of climate change and loss of biodiversity. On New Year's Day here in the United Kingdom, nearly all of the national newspapers ran the headline We have a decade to save

the planet. True, they were quoting Prince William but these issues are now so mainstream that they made the front pages. So what has changed? Extinction rebellion, people taking to the streets, Greta Thunberg, 'A list' celebrities and other high profile public figures, corporates and banks, a proliferation of natural disasters, and the media taking up the cause have all contributed. Perhaps, also, in our small way, those of us who work in botanic gardens have played a role too.

At the global **policy** level (page 7), BGCI has continued to put a considerable amount of time and effort into working with the Global Partnership for Plant Conservation (GPPC) to draft the next iteration of the **Global Strategy for Plant Conservation**, which aims to fit into the broader post-2020 biodiversity framework under the Convention on Biological Diversity (CBD). Thank you to all who have contributed to this work, and congratulations to our partners in China who will host the CBD Conference of the Parties in Kunming in October, and who have shown the world the way by already publishing a hugely ambitious Chinese Strategy for Plant Conservation (2021-2030).

BGCI is about conservation action as well as conservation policy of course, and, I'm delighted to say that, at the 2019 IUCN Species Survival Commission (SSC) Leaders' Meeting, our very own Malin Rivers was awarded the Harry Messel Award for Conservation Leadership in recognition of her outstanding leadership of the Global Tree Assessment (page 8, and below).

As part of our work as an advocate for botanic gardens, and at the request of BGCI's International Advisory Council (IAC), in 2019 we produced a technical review on The role of botanic gardens in urban greening and conserving urban biodiversity. This study includes 35 case studies of the work of botanic gardens in contributing to urban forestry and resilient landscapes; supporting and advancing urban agriculture, and supporting urban biodiversity (see page 8). Another important topic on the IAC agenda was the role of botanic gardens in promoting sustainability amongst visitors in energy, water, food, recycling and responsible consumption. BGCI will launch a sustainability campaign in 2020, so expect to hear more on this important topic.

As always, 2019 has been a busy year for connecting people. Although we had no BGCI global congresses in 2019, BGCI held or attended more than 50 meetings during the year (pages 8-10). These included the 7th Southeast Asia Botanic Gardens Network Conference, held in Queen Sirikit Botanic Garden, Thailand and the 1st South American Botanic Gardens Network Workshop, held at the Universidad del Tolima y Jardín Botánico Alexander von Humboldt, in Ibagué, Colombia. Both of these meetings instilled a sense of common cause, and the value of working together, the results of which can be seen in the reports from BGCI's regional offices, networks and consortia (pages 12-14).

BGCl's work sharing knowledge within and outside our community of botanic gardens was given a big boost in 2019 with the launch of BGCl's new website (page 16), and all of the updating and development of our webpages and resources that entails. In addition, a huge amount of work went into improving our databases (see page 15) and developing new resources for botanic gardens. New publications include the BigPicnic policy briefs for food security; guidelines on Metacollections and coordinating conservation collections to safeguard plant diversity; and the European Red List of Trees (pages 16-17).



Harold Porter National Botanic Garden (P. Smith)

In 2019, **BGCI training courses** were attended by 775 people from 331 institutions in 67 countries (pages 18-21). Topics included: red-listing and conservation prioritisation; ex situ collections management; conservation horticulture; ecological restoration; tree conservation; public engagement evaluation and research; co-creation and team-based inquiry, and how to run a science café. 2019 also saw the launch of BGCI's Advanced Conservation Practitioner accreditation, with 13 botanic gardens gaining recognition for their efforts through the accreditation (page 22). New resources developed this year include the plant identification app, PlantSnap, LearnToEngage modules on interpretation, working with diverse audiences, science communication and research and evaluation; and BGCI's Access and Benefit-Sharing Learning Package, developed with the support of the Darwin Initiative (see page 23).

Central to our mission is working with you, our members and other partners, to save plants (pages 24-27). This has been an outstanding year for the Global Tree Assessment, with 8,282 tree assessments published on the IUCN Red List of Threatened Species, four times the number published in 2018 and 93% of all IUCN global tree assessments published in 2019. At the action end of conservation, the Global Trees Campaign celebrated its 20th anniversary in 2019, and has grown significantly since the early days, with 87 threatened tree species in 27 countries the focus of conservation efforts in 2019. More than 375,000 seedlings of threatened tree species were raised for conservation and restoration programmes in 2019. Our work restoring more complex species assemblages also continues to grow with the Ecological Restoration Alliance of Botanic Gardens now numbering 43 institutions on 5 continents. Similarly, the International Plant Sentinel Network has grown to include 55 member organisations tracking pests and diseases or carrying out research.

This was the final year of BGCI's **BigPicnic** project, which reached a staggering **800,000 people** (page 27). A major finding of the project was the importance of cultural heritage and its relationship to the way that we view food, a hitherto underappreciated factor in policy-making.

Last but not least, BGCI supports botanic gardens through providing funding for plant conservation, public engagement and other important activities. In 2019, we disbursed funds totalling USD 2,089,750 to botanic gardens and other institutions. While the vast majority of this funding came from BGCI-led projects, 2019 also saw the launch of a brand new service for BGCI members – the Global Botanic Garden Fund (GBGF). BGCI received 72 applications to the GBGF from 64 institutions from 39 countries, and gave out 17 grants totalling USD33,013 in 2019. Eight grants were provided through unrestricted funding of the GBGF, four through BGCI/Minnesota Landscape Arboretum grants, and five through the BGCI/ArbNet Partnership Programme. I would like to acknowledge those partners' generous contributions, and encourage other institutions to contribute (details on page 28).

I hope that this gives you a sense of what we have been doing this year, and I hope that you feel that this represents a good return on your investment in BGCI. For my own part, I would like to acknowledge the BGCI team, who are not only extremely committed but are also a joy to work with. Of course, we cannot do what we do without your support, and we are very appreciative that you continue to support us through your membership fees and through partnership.

As always, we would love to hear from you.

**Dr Paul Smith**BGCI Secretary General

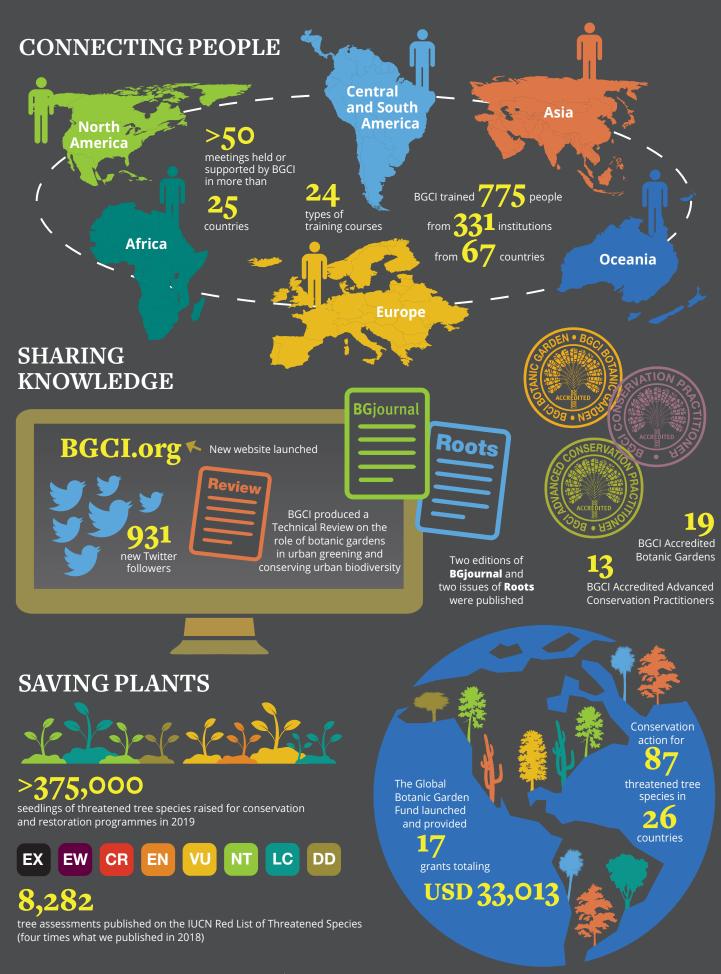


Longdongqilin, South China Botanical Garden

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BGCI disbursed funds totaling USD 2,089,750 to botanic gardens and other institutions in 2019. This figure is nearly ten times more than what we receive in membership fees.



### **BGCI Staff**



Paul Smith – Secretary General



Suzanne Sharrock – Director of Global Programmes



Joachim Gratzfeld – Director of Regional Programmes



Meirion Jones – Head of Information Management



**Brian Lainoff** – Head of Membership Strategy and Services



Martha Love – Head of Finance



Helen Miller – Head of Education and Vocational Training



Katherine O'Donnell – Head of Seed Conservation and Plant Health



Malin Rivers – Head of Conservation Prioritisation



Kirsty Shaw — Head of Ecological Restoration and Tree Conservation



Noelia Alvarez – Plant Conservation Project Manager



Alex Hudson – Conservation Project Manager



**Megan Barstow** – Conservation Officer



Emily Beech – Conservation Officer



Yvette Harvey-Brown – Conservation Officer



Gail Bromley – Biodiversity Education Officer



**Vivien Isaac** – Accounts Officer



**Liz Smith** – Membership & Administration Officer



Katharine Davies – Tree Red List Coordinator



Kate Marfleet – Seed Conservation and Plant Health Network Coordinator



**Dan Crowley** – Global Conservation Consortia Coordinator



Ryan Hills – Global Tree Assessment Conservation Assistant



Xiangying Wen – Executive Director BGCI China



Abby Meyer – Executive Director BGCI-US



Igor A. Smirnov – Director BGCI Russia



Murphy Westwood – Director of Global Tree Conservation at The Morton Arboretum



Jean Linsky – Southeast Asia Botanic Gardens (SEABG) Network Coordinator

BGCI would like to acknowledge the following people for their support in 2019

**Liliana Derewnicka** – Former Education Coordinator **Simon Barber** – BGCI Volunteer



### GLOBAL PARTNERSHIP FOR PLANT CONSERVATION

BGCI provides the Secretariat for the Global Partnership for Plant Conservation (GPPC), an informal partnership of more than 50 institutions with international plant conservation programmes. During 2019, BGCI worked with the members of the GPPC to prepare a review of progress in implementing the 16 targets of the *Global Strategy for Plant Conservation* (GSPC). The draft report was presented to the Parties of the Convention on Biological Diversity (CBD) at a meeting of its Scientific Advisory Body (SBSTTA) in November 2019 and is available on the GPPC website: Plants2020.net. The report indicates that significant progress has been made towards all targets and provides highlights of relevant work carried out by BGCI, its members and other partners in the GPPC. The report will be published in 2020 as a companion volume to the 5th edition of the Global Biodiversity Outlook. The GPPC also made progress in 2019 in developing a draft post-2020 framework for plant conservation, including 18 proposed targets to be achieved by 2030. The draft post-2020 GSPC was discussed at a World Forum on the GSPC, which was held in Dujiangyan City, China in October 2019. The participants at the forum expressed strong support for the post-2020 GSPC.



Attendees of BGCl's International Advisory Council 2019 meeting

### **BGCI'S INTERNATIONAL ADVISORY COUNCIL MEETING 2019**

BGCI's International Advisory Council (IAC) meeting 2019 was held at the Omni Shoreham Hotel in Washington DC on Sunday 16th June. It was attended by 20 botanic garden directors from five continents. The main topics of discussion were:

- Promoting horticulture and gardens as aspirational career choices
- BGCl's Technical Review on botanic gardens supporting urban greening and biodiversity
- An update on the Global Strategy for Plant Conservation and the Biodiversity Framework post-2020
- Launching a sustainability challenge for the world's botanic gardens

The IAC endorsed efforts in the US and UK to promote horticulture as a career, and strongly supported BGCI's initiatives to incorporate sustainability practices related to energy, water, food, recycling, plastics, etc. into botanic gardens globally. The focus of BGCI's 2020 Technical Review will be on sustainable practices in botanic gardens, and encouraging behavioural change among visitors.

Left: An overview of progress towards the targets of the GSPC was provided to delegates at SBSTTA-23 in Montreal Canada. November 2019



### **BGCI'S TECHNICAL REVIEW ON THE ROLE OF BOTANIC GARDENS IN URBAN GREENING AND CONSERVING URBAN BIODIVERSITY**

At the request of BGCI's International Advisory Council, the focus of BGCI's 2019 Technical Review was on urban greening, and the role that botanic gardens play in (1) contributing to

urban forestry and resilient landscapes; (2) supporting and advancing urban agriculture, and (3) supporting urban biodiversity. The Review draws on the results of a BGCI online survey, a literature review and the particular expertise of the lead author, Nicole Cavender from The Morton Arboretum, in this sphere. The Review includes 35 case studies from around the world, and includes references and a resource guide. It can be downloaded from

https://www.bgci.org/resources/bgci-tools-andresources/bgci-technical-reviews/

### 2019 IUCN SPECIES SURVIVAL COMMISSION **AWARDS**

BGCI has hosted the secretariat for the Global Tree Specialist Group (GTSG) for over 10 years and at the 2019 IUCN Species Survival Commission (SSC) Leaders' Meeting, members of the GTSG were recipients of several IUCN SSC awards. These awards are given to recognize the exemplary voluntary contribution of individuals and Specialist Groups towards the global work of IUCN.

The Harry Messel Award for Conservation Leadership was received by Malin Rivers, Head of Conservation Prioritisation at BGCI. Malin is also secretary of GTSG and the award recognises her key role in coordinating the Global Tree Assessment (GTA) and her innovative management of this initiative. This includes the development of the Least Concern Workflow, chairing the Red List Technical Working Group, her collaboration with multiple partners and institutions towards completing GTA, and her significant contribution of tree assessments to the IUCN Red List.



Global Tree Specialist Group Meeting March 2019 at La Selva Biological Station, Costa Rica

The GTSG were the recipients of *The SSC Chair's Citation* of Excellence, in recognition of the 'outstanding contribution the GTSG has made in delivering the Species Strategic Plan between 2017 and 2018'. During this period, over 2,000 assessments for trees were added to the IUCN Red List. The award was accepted by GTSG co-chair Sara Oldfield who attended the meeting in Abu Dhabi, bringing great publicity to the GTA and the progress of the initiative in the last few years. The GTSG now has 130 experts, all contributing to GTA efforts.

#### THE MARSH AWARDS

In partnership with the Marsh Christian Trust, BGCI manages the Marsh Awards for International Plant Conservation and the Marsh Awards for Education in Botanic Gardens.

In October, BGCI announced Ana Sandoval as the winner of the 2019 Marsh Award for International Plant Conservation and Benjamin Ong as the winner of the 2019 Marsh Award for Education in Botanic Gardens.





Left: Ana Sandoval receives the 2019 Marsh Award for International Plant Conservation from Marsh Trustee, Mr. Nick Carter. Right: Benjamin Ong guiding primary school children at the screwpine (Pandanus) clump at the fringes of Rimba Ilmu's central wetland

Nominated by Noelia Alvarez (BGCI), Ana has been working as a technical researcher at the seedbank of Instituto de Investigaciones Agropecuarias (INIA) in Vicuña, Chile since 2005.

Chile is very lucky to have such an individual as Ana Sandoval who is dedicated to the conservation of its endemic and native flora. Her passion for nature began from an early age, mountain and countryside walks awakened within her a capacity for respect and observation of local biodiversity.

Noelia Alvarez, BGCI,

Nominated by Sugumaran Manickam (Rimba Ilmu Botanic Garden), Benjamin founded and developed the Rimba Project, a platform for community engagement and volunteer development.

In short, Benjamin Ong is courageous, bringing hope and adding value, daring to go where complexity is high and certainty is low, without template, and where much faith is needed. In so doing, he has put Rimba Ilmu on the leading edge of conservation. Sugumaran Manickam, Rimba Ilmu Botanic Garden

## **Connecting People**

### **MEETINGS AND SYMPOSIA**

BigPicnic Final Festival (Spain)





The BigPicnic Final Festival, Spain

The BigPicnic Festival was the finale to the BigPicnic project and took place on 27th February 2019 at Real Jardín Botánico de Madrid, Spain. The event celebrated the achievements of the project partners and audiences and featured a range of speakers, workshops, stands and activities to continue the work of BigPicnic in generating active interest and dialogue around food security.

The event brought together educators, policy-makers and stakeholders and was used to launch the BigPicnic project policy recommendations. The event provided an opportunity to share stories, ideas and traditional culinary delights associated with the BigPicnic partnership, which represents 13 countries.

Almost 200 delegates attended the event, representing 27 countries and 117 organisations.

### Neotropical Conservation Consortium for Magnolia

(Universidad de Guadalajara, Guadalajara, Mexico)



In July, BGCI in collaboration with the University of Guadalajara, Jalisco, Mexico hosted the Neotropical Conservation Consortium for

Magnolia. The aim of the meeting was to link institutions and experts to deliver comprehensive conservation strategies for species of Magnolia, which are technically challenging to conserve and manage. The event was an academic and cultural success in the exchange of knowledge and conservation experiences as well as in outreach and networking. The event hosted over 100 attendees. The exhibitors included visitors from 13 countries across Asia, Europe and the Americas. Atlanta Botanical Garden attended the event and was nominated as the Consortium Lead for the Global Conservation Consortium for Magnolia (GCCM). Dr Emily Coffey will coordinate this initiative.

### 7th Southeast Asia Botanic Gardens Network **Conference** (Queen Sirikit Botanic Garden, Thailand)

The Southeast Asia Botanic Gardens Network (SEABG), in collaboration with Queen Sirikit Botanic Garden and The Morton Arboretum, hosted the 7th Southeast Asia Botanic Gardens Network Conference from August 5th-9th. The conference was supported by ArbNet and Fondation Franklinia. Over 70 participants from 16 countries participated in the conference. During the conference the Network reviewed past activities and presented ongoing conservation initiatives in the region. The network also developed an up-to-date action plan with a focus on the objectives of the SEABG as stated in the Working Practice document. A parallel training session on The role of botanic gardens in in situ species recovery' covering planning for reintroductions, ex situ collections management for the purposes of conservation and reintroduction and 'Integrative Conservation and Population Reinforcement/Reintroduction of Threatened Plants' were also delivered.

Below: The participants of the 7th Southeast Asia Botanic Gardens Network Conference



The participants of the 7th Southeast Asia Botanic Gardens Network Conference



Attendees of the National Geographic Society A World of Plants symposium in Washington, D.C. (Mark Thiessen)

### National Geographic Society: A World of Plants Symposium (Washington, D.C., USA)

A two day event was hosted by National Geographic Society in Washington, D.C. (USA) in September to engage the foremost champions of botanical research and conservation to share insights and ideas, and generate science-based solutions to the impending plant extinction crisis. Talks highlighted anthropogenic threats and other pressing challenges, addressed critical data gaps, and explored ways to elevate the plight of plants on a greater scale. Presentations and interactive discussion sessions identified actionable next steps that the Society can take to support the conservation of the world's 400,000+ plant species. BGCI participated to advocate for the role of botanic gardens in securing the world's plant diversity. An upcoming special issue of the journal Plants, People, Planet will feature the talks presented at the symposium.

### IPSN Workshop (Oxford, UK)

The annual UK IPSN Workshop was held on the 3rd/4th September 2019 at Oxford Botanic Garden/Magdalen College, Oxford. Attendees included colleagues from BGCI, Bedgebury National Pinetum and Forest, Defra, Eden Project, Fera, National Trust, Oxford Botanic Garden, Royal Botanic Gardens Kew, Royal Botanic Garden Edinburgh, RHS Wisley, Westonbirt Arboretum and Yorkshire Arboretum. The workshop included updates on activities from all attendees and from the UK IPSN Research and Development Committee. The recent IPSN research projects were discussed as well as potential future projects and priority topics based on the UK Pest Risk Register.



IPSN Workshop Day 1

### World Forum on the Global Strategy for Plant Conservation (Dujiangyan, China)

The 15th meeting of the Conference to the Parties to the Convention on Biological Diversity (CBD COP15) will be held in Kunming, China in October 2020. COP15 will set the strategic plan for biodiversity for the next decade, and this preparatory meeting in China aimed to discuss and improve the current draft Global Strategy for Plant Conservation (GSPC) 2021-2030 in advance of the COP. The meeting was organised by the China Wild Plant Conservation Association, included a wide range of Chinese and international experts and comprised presentations, workshops and discussions. The meeting culminated in the release of China's Plant Conservation Strategy 2021-2030. This provides clear leadership from China and endorsement of the GSPC as it prepares to host COP15 nest year.

First South American Botanic Gardens Network Workshop: supporting and promoting the work of botanical gardens in the region (Universidad del Tolima y Jardín Botánico Alexander von Humboldt, Ibagué, Colombia)



Participants at the 1st South American Botanic Gardens Network Meeting

In December, in collaboration with the Universidad del Tolima and the Botanic Garden Alexander von Humboldt, BGCI organised a meeting to engage with the South American botanic gardens community and promote the creation of a new botanic garden network in the region. The event was attended by more than 40 participants from countries such as Argentina, Brazil, Chile, Colombia, Guyana, Mexico, Paraguay, Perú, Suriname, Uruguay and Venezuela. Talks were presented by all the attendees on achievements, challenges and opportunities at their botanic gardens. There was the opportunity to discuss topics such as management and curation of living collections, the need for capacity building and the lack of funding and resources. During the last session it was agreed that there was a need for the creation of a South American Botanic Garden Network, boundaries are not strict and the network is open to other Latin-American countries. An action plan was drafted and will be implemented by the attendees, the year 2020 will be a very important one to consolidate this network.

### Other Meetings Attended or Supported by BGCI

- 4th Xishuangbanna International Symposium (China, Jan)
- 1st Georgia Botanic Gardens Workshop (USA, Feb)
- Regional Workshop: Conservation Priorities for Asian Tree Species and Their Genetic Resources, APFORGIS Project (Sri Lanka, Mar)
- Shanghai International Flower Show (China, Mar)
- Shenzhen International Flower Show (China, Mar)
- Meeting of the Board of the Dutch Association of Botanical Gardens (Netherlands, Mar)
- APGA Celebrating Crop Diversity Symposium (USA, Apr)
- International Year of Plant Health Partners meeting (Italy, Apr)
- University of Kiel Botanic Garden 400th Anniversary (Germany, Apr)
- 7th International Orchid Conservation Congress (Kew Gardens, May)
- PlantNetwork Database Meeting (UK, May)
- GSPC implementation in Korea (Korea, May)
- IUCN Red List Committee Meeting (UK, May)
- Pontifical Academy of Sciences Biodiversity Meeting (Vatican, May)
- Advances and Perspectives of Biodiversity Research and Conservation in Georgia (Georgia, May)
- Meeting of Norwegian and Swedish Botanical Gardens (Norway, May)
- 2019 Center for Plant Conservation National Meeting (USA, May)
- Magnolia Society International Annual Meeting (USA, May)
- 11th Flora Malesiana Symposium (Brunei, Jun)
- Summer School: Protecting the Forest Resource: Risk assessment and Management using Innovative Tools (Ireland, Jun)
- Mauritian Wildlife Foundation Meeting (UK, Jun)
- European Botanic Gardens Consortium Meeting (Poland, Jun)
- Come In: International Conference on Accessibility

- Island Biology Conference (Réunion, Jul)
- GenRes Bridge Project Meeting (Slovenia, Jul)
- Association for Zoological Horticulture 2019 Annual Conference (USA, Aug)
- Green List Workshop (UK, Sep)
- Plants, People, Planet Symposium (UK, Sep)
- The Red List Status of Europe's Overlooked Species (Belgium, Sep-19)
- IUCN SSC Target 12 post-2020 Task Force Meeting (UK, Sep)
- 8th World Conference on Ecological Restoration. SER 2019 (South Africa, Sep)
- Ecological Restoration Alliance Annual Business Meeting (South Africa, Sep)
- 114th Congress of the Italian Botanical Society (Italy, Sep)
- 27th Annual Meeting of German Association of Botanical Gardens (Germany, Sep)
- 130th Anniversary of Botanical Garden "Jevremovac" (Serbia, Sep)
- IUCN SSC Leaders Meeting (UAE, Oct)
- Italian Arboretum Conference (Italy, Oct)
- COST Action Plant Conservation Meeting (Belgium, Oct)
- GenRes Bridge Project Meeting (Finland, Oct)
- Crop Strategies Meeting, Crop Trust (Germany, Oct)
- BGANZ 9th Congress (New Zealand, Oct)
- World Forum on the Global Strategy for Plant Conservation (China, Oct)
- 90th Aniversary Celebration, CAS Botanical Gardens (China, Oct)
- National Geographic Society "World of Plants" Symposium (USA, Oct)
- European Botanic Gardens Consortium Meeting (Greece, Nov)
- SBSTTA-23, CBD (Canada, Nov)
- BGCI China Strategic Planning Workshop (China, Nov)
- South China Botanical Garden 70th Anniversary



### REGIONAL BGCI OFFICES AND NATIONAL BOTANIC GARDEN NETWORKS

### The Southeast Asia Botanic Gardens (SEABG) Network



The Southeast Asia Botanic Gardens Network had a great year of growth in 2019. New conservation projects were launched in Vietnam on *Camellia* and Malaysia on *Rhododendron* and discussions for new projects in Cambodia were held. The *Securing* 

the future of threatened tree giants in Borneo Project made great strides in collecting and conserving threatened Dipterocarpaceae species and a training workshop held in Kalimantan in September brought together partners from Malaysia, Indonesia and Brunei to exchange knowledge on propagation and planting (more information in the Training Courses subsection). Tree conservation projects are on-going in Taiwan, China and Laos.

SEABG members met to network at the 11th Flora Malesiana Symposium in June. The major event of 2019 was the 7th Southeast Asia Botanic Garden Network Conference in August. Hosted by Queen Sirikit Botanic Garden, Thailand the conference covered action planning for the network, training on *in situ* species recovery and engagement with international plant conservation initiatives. Quarterly newsletters were sent out to the network in 2019, which has grown its audience to over 150 people and SEABG social media remains active in sharing news and events across the network. The SEABG Network is looking forward to implementing its new action plan, starting new projects and implementing further networkwide training courses as well as planning for the 8th SEABG Network Conference to be held in 2021 at Makiling Botanic Gardens, Philippines.

### ABGN Year in Review



AFRICAN BOTANIC GARDEN NETWORK

The African Botanic Garden Network (ABGN) aims to build capacity of and share resources between African botanic gardens. ABGN is a joint initiative led by BGCI, Jardins Botaniques de France et des pays Francophones (JBF) and the South African National Biodiversity Institute

(SANBI). In 2019, we circulated two ABGN newsletters to promote funding opportunities, current projects and useful resources. BGCI is excited to be a co-organiser of the 22nd AETFAT conference on "Diversity and conservation of African plants: Challenges and opportunities", which will take place in March 2020 in Zambia (www.aetfat.org). During 2019, BGCI has been busy processing all abstracts submitted for the conference, more than 250! So it is looking to be a great conference! If you would like to be added to the ABGN mailing list, please email africa@bgci.org.

#### **BGCI-US Year in Review**

In 2019, BGCI-US continued to provide resources to build botanic garden collections and conserve plants, and found critical momentum to launch major initiatives in 2020.

#### **Build collections**

Using collections data from PlantSearch and garden collaborators, we completed a Crop Wild Relative *ex situ* assessment of botanic gardens and published the results in the *Crop Science* journal (Meyer, 2019). BGCI-US has continued to offer collection assessment services to individual institutions, including San Diego Zoo Global in 2019, with more planned for 2020.



BGCI-US published a summary report on sampling strategies for *ex situ* conservation called *Toward the Metacollection: Coordinating conservation collections to safeguard plant diversity* following the culmination of a 3-year Institute of Museum and Library Services (IMLS) project led by the Montgomery Botanical Center (MG-30-16-0085-16). We were also successful in receiving funding for major updates to BGCl's PlantSearch and GardenSearch databases, including support from the United States Botanic Garden, and an IMLS National Leadership Grant that will be led by the Chicago Botanic Garden in 2020.

### Conserve plants

BGCI-US conducted a conservation gap analysis of U.S. native oaks and made major progress toward completing Red List assessments for all U.S. trees by 2020, in partnership with The Morton Arboretum, NatureServe, the United States Botanic Garden, and the United States Forest Service. For species that



cannot be conserved long-term in a seed bank we supported development of the Exceptional Species Conservation Network and drafted the first global list of threatened exceptional species, in collaboration with the Cincinnati Zoo & Botanical Garden and The Morton Arboretum. As 2020 marks the end of the Global (and North American) Strategy for Plant Conservation, we completed the first full year of data collection for the North American Plant Conservation Benchmarking tool in partnership with the American Public Gardens Association. We are planning a large data collection campaign for 2020 to guide establishment of new conservation targets in North America for the next decade.

### European Consoritum

BGCI convenes the European Botanic Gardens Consortium, which links botanic gardens across Europe. The Consortium meets twice per year, and in 2019, meetings were held in Poland and Greece. In Poland the meeting was held in association with a conference of the Erasmus project 'Come In!'. The theme of the conference was accessibility and featured educational activities for botanic garden visitors with special needs. In Greece, the Consortium meeting was held alongside a symposium entitled "Priority species: conservation and evaluation in botanic gardens" organised by the Balkan Botanic Garden of Kroussia. Key issues addressed by the Consortium in 2019 included the implementation of European regulations on invasive species and the movement of plant material, botanic garden accreditation and reporting on European and global plant conservation targets.

#### **BGCI** China



Xiangying Wen and partners planting Dalbergia odorifera in Gongcheng project base

In China, there are 50 members including seven Patron Gardens: South China Botanical Garden, Xishuangbanna Tropical Botanical Garden, Shenzhen Fairylake Botanical Garden, Shanghai Botanical Garden, Shanghai Chenshan Botanical Garden, Beijing Botanic Garden, Hunan Forest Botanic Garden, two of which were new Patron Garden Members in 2019.

To implement the Global Trees Campaign in China in 2019, BGCI funded 10 projects to conserve 13 threatened tree species. More than 29,900 seedlings were raised by BGCI China projects, through working with botanical gardens, forest departments, plant conservation organisations, as well as local communities. All projects apply integrated conservation approaches, by integrating *ex situ* conservation efforts and reintroductions.

In 2019, BGCI China training events were attended by 200 people from 25 institutions in China. In addition, more than 817 local villagers were trained on the techniques of propagation, cultivation, reintroduction, as well as harvesting in China. This accompanied the distribution of about 300 training materials. To raise awareness of plant conservation for local authorities, local people, and students, the BGCI China office organised one stakeholder workshop with about 80 stakeholders attending/participating and held 5 educational activities in local kindergarten, primary schools for about 1,050 students, accompanied with the distribution of about 5,136 outreach materials and included 52 exhibition panels with the theme of threatened plants.

BGCI China translated a selection of BGCI's resources into Chinese in 2019. The Chinese Association of Botanical Gardens (CABG) is working on the translation of BGCI's *Manual on Planning, Developing and Managing Botanic Gardens* into Chinese and will be finished in 2020. The Species Recovery Briefs were translated into Chinese and uploaded to the BGCI website in 2019.

#### GLOBAL CONSERVATION CONSORTIA

### Global Conservation Consortium for Acer



In 2019 BGCI initiated the Global Conservation
Consortium for *Acer* (GCCA).

The Red List of Acer: revised and extended, due early 2020,

states that nearly 25% of *Acer* species are threatened with extinction. The GCCA comprises botanical institutions with specialist knowledge of *Acer* species, who will work strategically to conserve threatened members of the genus. The University of British Columbia Botanical Garden (Canada) is the lead institution for the GCCA, and will receive support from the BGCI Global Conservation Consortia Coordinator to achieve Consortium objectives. Various projects are being developed, including on the threatened *Acer* species of Yunnan and taxonomic work on section *Macrantha*. The Consortium will meet formally for the first time in 2020.

### Global Conservation Consortium for *Rhododendron*



In 2018, BGCI established the Global Conservation Consortium for *Rhododendron* (GCCR). This Consortium includes botanic gardens with

specialist knowledge of rhododendrons, which will deploy their knowledge and resources for the integrated (*in situ* and *ex situ*) conservation of *Rhododendron* species. BGCI has secured funding for *Rhododendron* conservation projects in the following countries: China, Malaysia and Papua New Guinea. The Consortium lead institution for the GCCR is Royal Botanic Garden Edinburgh (RBGE) (UK) and Dr Alan Elliot has been appointed as its coordinator. He is developing various projects such a taxonomic review, micropropagation experiments and curation of RBGE threatened *Vireya* taxa, to test genetic diversity.



Rhododendron luciferum (Ken Cox)



OACN team members and local partners transplanting 700 seedlings of endangered Quercus brandegeei to a field study plot in Baja California Sur, Mexico

### Global Conservation Consortium for Oak



### The Global Conservation Consortium for Oak (GCCO)

was officially launched in 2019, led by The Morton Arboretum (USA). The GCCO aims to

collect, cultivate and conserve the world's 450 species of oak (genus *Quercus*). The GCCO is now recruiting members at the Consortium Steering Committee, Species Champion, and Safe Site levels, with an initial focus in North America, one of the



OACN team members and local partners

world's two oak diversity hotspots. East Asia (the other diversity hotspot) will be a priority focus for GCCO expansion in 2020. Moving forward, the GCCO will take the place of the Global Oak Conservation Partnership, an initiative established in 2016 by The Morton Arboretum, BGCI and FFI to integrate targeted *in situ* and *ex situ* conservation of priority threatened oak species.

### Oaks of the Americas Conservation Network

The Oaks of the Americas Conservation Network (OACN) is a regional, cross-sector conservation and research consortium whose 100+ members from eight countries work collaboratively to conduct the research needed to understand and reverse the threats facing oak species in the Americas, with a focus on Mexico and Central America, a global diversity hotspot for oaks. OACN activities in 2019 included a meeting at The Morton Arboretum; significant progress on elucidating the oak phylogeny; dozens of field surveys in Mexico, Guatemala, Honduras, and Costa Rica that discovered previously unknown populations of rare species (and confirmed other populations that are extirpated); thousands of acorns collected and seedlings reintroduced in the wild for priority threatened species; and the establishment of field research plots in Baja, Mexico.

### Global Conservation Consortium for Magnolia



In 2019, BGCI also established the **Global Conservation Consortium for** *Magnolia* **(GCCM)**. Partners so far involved include botanical institutions

based in centres of diversity for *Magnolia* as well as specialists from further afield. Atlanta Botanical Garden is leading the GCCM. The first meeting of the Global Conservation Consortium for *Magnolia* was held at the Neotropical Conservation Consortium for *Magnolia* in Mexico in July 2019. The next GCCM meeting will be held in South Korea in April 2020.

# **Sharing Knowledge**

### **DATA SERVICES**

**PlantSearch** (https://tools.bgci.org/plant\_search.php) is the only global database of living plant, seed, and tissue

collections composed of over **1.4 million records** representing nearly **600,000 taxa** maintained at over **1,100 botanic gardens**. In 2019, approximately **300 institutions** updated their taxa

lists, over **1,600 requests** for information and material were sent through PlantSearch, and **26 bulk data** requests were provided for research and conservation projects around the world. BGCI staff participated in a series of three workshops focused on integration of BGCI's data services, including alignment of PlantSearch and ThreatSearch data. With successful funding awarded in 2019, BGCI-US will lead an effort in 2020 to enhance PlantSearch and develop an accessions-level module to guide pedigree management of species of conservation concern.

### GardenSearch (https://tools.bgci.org/garden\_search.php)

is the only source of information on botanic garden features, facilities, and programmes, and provides over **3,600** gardens worldwide with a visible web presence, even when they don't have a website. Approximately **250 new Garden Editors** were registered, and over

**500 GardenSearch profiles** were updated by Garden Editors in 2019. With successful funding awarded in 2019, BGCI-US will lead an effort in 2020 to enhance GardenSearch and update the online interface.

GlobalTreeSearch (https://tools.bgci.org/global\_tree\_search.php) is a global list of the world's tree species and

their country distributions. It was launched in 2017 and now lists **60,012 tree species**. In 2019, **1,447 species** were added to the tree list and over **13,000 geographic and taxonomic changes** were

made, reflecting feedback from our partners and taxonomic progress in many groups.

### ${\bf Threat Search}~(https://tools.bgci.org/threat\_search.php)$

is the most comprehensive database of conservation

assessments of plants, including global, regional and national assessments. It has over **345,000** conservation assessments of plants, with about **62,000** species considered globally threatened.

It covers assessments carried out at a global as well as national scales. It was promoted by the CBD Secretariat to all CBD national focal points as the authoritative source of information on threatened plants towards achieving Target 2 of the Global Strategy for Plant Conservation.



Seed collection of Pinus krempfii, showcased in BGjournal

### **PUBLICATIONS**

### **BGjournal**

Two issues of BGjournal were published during 2019. The January edition focused on Access and Benefit Sharing and highlighted the ways in which botanic





gardens around the world are implementing the provisions of the Nagoya Protocol. Of particular note are the respectful relationships many botanic gardens are developing with the local and indigenous communities who are the custodians of much of the world's plant diversity. The August edition continued this theme by examining the plant collecting activities of botanic gardens and showcased the wide range of local and international partnerships that support such activities. Past issues of BGjournal are now available on JSTORE and the BGCI website.

### Roots

BGCI produced two issues of Roots in 2019. The first, published in May, was titled **Responsible research and innovation (RRI)**. This topic was chosen to align with the





final stages of BGCl's BigPicnic project, which used RRI to engage the public with food security. This issue featured articles from the BigPicnic project and the wider sector on the use of RRI in botanic gardens and other informal learning sites. The second, published in November, focused on **citizen science** and included a range of examples of ways in which botanic gardens are using citizen science to enhance participation and contribute towards the conservation work of our sector. Past issues of Roots can be found at https://www.bgci.org/resources/bgci-tools-and-

### Cultivate

resources/roots/

In 2019, five issues of BGCl's e-newsletter Cultivate were published. Each issue contained a summary of recent news, events and publications and was sent to around **7,000 recipients**.

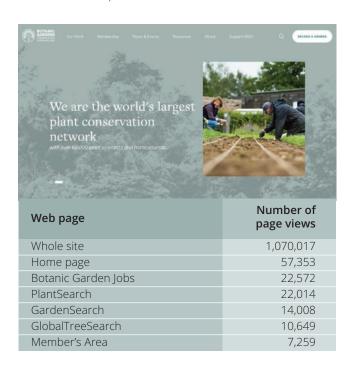
#### **BGCI** Website

In 2019, BGCI launched a revamped and upgraded website to better advocate for BGCI's Members and all of our work in plant conservation at botanic gardens.

BGCI and BGCI members can share news, press releases, articles, blogs and upcoming events in the News and Events Centre. The Jobs Centre is a listing of jobs at BGCI and at BGCI Member Institutions. As a BGCI member, you are entitled to share news, events, and job announcements and can do so by completing the form found here:

### https://www.bgci.org/members-news-events-and-job-postings/

BGCI will share our efforts to support plant conservation and botanic gardens across the globe in the Projects and Case Studies Centre. Successful recipients of the Global Botanic Garden Fund will be promoted on this page. Additionally, BGCI Members and supporters can now access our incredible resources in our updated Tools and Resources Centre.





Tovomita megantha (Lucas Marinho)

#### Red List Assessments

In 2019, BGCI and Global Tree Assessment (GTA) partners published assessments for 8,282 species of tree on the IUCN Red List of Threatened Species. This is four times the publication output of 2018. Over the year, we have established partnerships in countries of Mesoamerica, the Philippines, Papua New Guinea and islands of the South Pacific, while continuing to work with partners in Madagascar, Malaysia, Brazil and Colombia and with taxonomic experts in Annonaceae, Lamiaceae and Lauraceae. Over 200 individuals have now contributed to GTA.



In January, *The Red List of Tovomita* was published. It included assessments for all 50 species in the genus *Tovomita*, a Neotropical genus of Clusiaceae. Despite being the third largest genus in Clusiaceae, it is relatively poorly known, with 38% assessed as Data Deficient. The group is also poorly represented in *ex situ* and *in situ* 

conservation sites, an issue that would otherwise have gone unnoticed without this publication.



In September, the European Red List of Trees was published marking one of the first complete regional groups of trees on the IUCN Red List of Threatened Species. The publication includes assessments for 454 tree species native to Europe. Forty-two percent of native species were assessed as threatened. When looking only at the

species endemic to Europe, 58% are threatened with extinction in the wild. But luckily, 359 species (79%) are currently known to occur in at least one protected area and 393 European tree species (87%) are found in *ex situ* collections in botanic gardens and arboreta worldwide.

### Ex Situ Surveys

In 2019, BGCI-US conducted *ex situ* surveys of Crop Wild Relatives and *Coffea* spp. using PlantSearch as a foundation, followed by more detailed data requests for garden collaborators around the world. Overall, we found significant collections of crop wild relative species in botanic garden collections, especially for U.S. native crop wild relatives. Botanic gardens maintain important *Coffea* spp. accessions, of which 40% are of wild origin and also include six taxa not known in crop gene bank collections. The results of the Crop Wild Relatives survey were published in the *Crop Science* journal, and the *Coffea* spp. survey report is planned for 2020.

Also, as part of *The Red List of Tovomita*, BGCI conducted an *ex situ* survey for the group, which found that none of the 50 trees that make up the genus occurred in *ex situ* collections. Therefore the collection of these species for botanic garden, arboretum and seed bank collections is a high conservation priority for the genus.



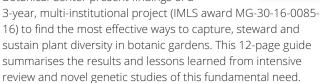
Seven policy briefs were developed and published as part of the BigPicnic recommendations

### **BigPicnic Recommendations**

The BigPicnic recommendations are a series of policy briefs developed as part of the BigPicnic project using data collected from project participants on the topic of food security. There are seven policy briefs. Four aim to support policy makers to shape future food policies and funding frameworks and two seek to support informal learning sites to apply the learning that occurred throughout the project. A seventh policy brief specifically addresses issues raised by the Ugandan project partner to illustrate how their context complements and contrasts the European. To highlight where BigPicnic findings link to existing frameworks and illuminate gaps in current policy, each policy brief maps the BigPicnic recommendations to the most relevant United Nations Sustainability Goals (SDGs) and the European Union's Food 2030 Priorities.

### Toward the Metacollection: Coordinating conservation collections to safeguard plant diversity

BGCI-US and the Montgomery Botanical Center present findings of a



### **Publications**

**Meyer, A.** and Barton, N. Botanic Gardens Are Important Contributors to Crop Wild Relative Preservation. Crop Science. 59: 6 (2019): 2404-2412.

Beckman, E., **Meyer, A.**, Denvir, A., Gill, D., Man, G., Pivorunas, D., **Shaw, K**. and **Westwood, M**. Conservation gap analysis of native U.S. oaks. The Morton Arboretum, Lisle, IL, USA (2019).

Daoping yu, **Xiangying Wen**, Cehong Li, Tiyi Xiong, Qixin Peng, Xiaojie Li, Kongping Xie, Hong Liu, Hai Ren. Integrated conservation of *Parakmeria omeiensis* (Magnoliaceae): A Critically Endangered plant species endemic to Southwest China. Oryx (2019) (accepted).

Denvir, A., Alvarez-Clare, S. and **Westwood, M**. The Morton Arboretum's oak conservation efforts in Latin America. International Oaks 30 (2019): 317–323.

Griffith, M.P., Beckman, E., Callicrate, T., Clark, J., Clase, T., Deans, S., Dosmann, M., Fant, J., Gratacos, X., Havens, K., Hoban, S., Lobdell, M., Jiménez-Rodriguez, F., Kramer, A., Lacy, R., Magellan, T., Maschinski, J., Meerow, A.W., **Meyer, A.**, Sanchez, V., Spence, E., Toribio, P., Walsh, S., **Westwood, M**. and Wood, J. Toward the metacollection: Safeguarding plant diversity and coordinating conservation collections. Botanic Gardens Conservation International-US. San Marino, USA (2019).

Guangman Song; Jun Wang; Taotao Han; Quan Wang; Hai Ren; Huoxing Zhu; **Xiangying Wen**; Dafeng Hui. Changes in plant functional traits and their relationships with environmental factors along an urban-rural gradient in Guangzhou, China. Ecological Indicators 106 (2019): 105558.

Hai Ren, Haining Qin, Zhiyun Ouyang, **Xiangying Wen**, Xiaohua Jin, Hong Liu, Hongfang Lu, Ju Zhou, Yan Zeng, **Paul Smith**, Peter Jackson, **Joachim Gratzfeld**, **Suzanne Sharrock**, Haigen Xu, Zhi-Xiang Zhang, Qinfeng guo, Weibang Sun, Jinshuang Ma, Yonghong HU, Qianmei Zhang, Lina Zhao. Progress of implementation on the Global Strategy for Plant Conservation (2011-2020) in China. Biological Conservation (2019): 169-178.

Hai Ren, Huilin Yi, Qianmei Zhang, Jun Wang, **Xiangying Wen**, Qinfeng Guo, Hong Liu. Morphological and physiological traits of the rare and endangered plant *Euryodendron excelsum* as affected by conservation translocation (augmentation vs. conservation introduction) in South China. Photosynthetica 57, no. 1 (2019): 217-225.

**Hills, R.**, Bachman, S., Forest, F., Moat, J. and Wilkins, P. Incorporating evolutionary history into conservation assessments of a highly threatened group of species, South African Dioscorea (Dioscoreaceae). South African Journal of Botany 123 (2019): 296-307.

Janicke, S., **Beech, E.** and **Rivers, M.** "Exploring the diversity and conservation status of tree species with TreeeX." *Environmental Earth Sciences* 78, no. 21 (2019): 627.

#### TRAINING COURSES

In 2019, BGCI trained **775 people** from **331 institutions** from **67 countries** (see Table 2). Our courses covered a wide range of topics in plant conservation policy, practice and education. Some of the highlights are included below.

### PLANT CONSERVATION POLICY

## Training Course for *Ex situ* Collection Holders (Ethiopia)

In January 2019, a training course for *ex situ* collection holders was held in Ethiopia. This workshop was organised in the framework of the Darwin Initiative-funded project *Promoting the use of plant resources in research and development*. While the workshop had a focus on access and benefit-sharing, international trainers also discussed issues related to establishing and managing plant collections and database management. Twenty-nine people participated in the training course.





Participants at the workshop for ex situ collection holders in Ethiopia





Top; Magnolia seed sowing demonstration at the CNRG Above: Tissue culture demonstration for Magnolia at the CNRG

### PLANT CONSERVATION PRACTICE

### Conservation Horticulture for Magnolias Workshop (Centro Nacional de Recursos Genéticos, Tepatitlán, Jalisco, Mexico)

In July, in collaboration with the Centro Nacional de Recursos Genéticos (CNRG) de Tepatitlán y la Universidad de Guadalajara, Mexico, BGCI organised a two day workshop on 'Conservation Horticulture for Magnolias'. This genus is particularly challenging to conserve and needs quality ex situ conservation collections to prevent their extinction. Magnolia conservationists, horticulturists, university students and researchers attended the course which covered topics such as seed and vegetative propagation, tissue culture and cryopreservation. The trainers were experts in the subject and came from Colombia, USA, Mexico and Thailand. The 22 participants received hands-on training during the course. This workshop increased the capacity of the participants to propagate and maintain their Magnolia collections at a high standard and ensure they have the tools required to deal with the most threatened species, which are generally the most challenging to conserve. After the workshop, participants have been given the opportunity to get in touch with the trainers if any questions or doubts arise.



Dipterocarpaceae workshop participants identify dipterocarp species in the field

## Conservation of Dipterocarpaceae in Borneo (Kalimantan, Indonesia)

A workshop on the Conservation of Dipterocarpaceae in Borneo was held in Kalimantan, Indonesia in September as part of the National Geographic funded 'Securing the future of threatened tree giants' project. Over four days, the project partners from Indonesia, Malaysia and Brunei presented project updates, discussed the conservation status of the target species, shared best practice in propagation and planting of dipterocarps and made plans for dipterocarp conservation awareness activities. The workshop participants also had a field visit to local reforestation sites. Training focused on seed collection, preparation of nurseries, development of propagation protocols and planting of dipterocarps for conservation and restoration. The material will be developed into a dipterocarp conservation training module which will be available online in 2020. The project partners will continue surveying, collecting and conserving dipterocarps across Borneo into the new year and will be developing propagation protocols for several species.

### Ecological Restoration (Tooro Botanical Gardens, Uganda)

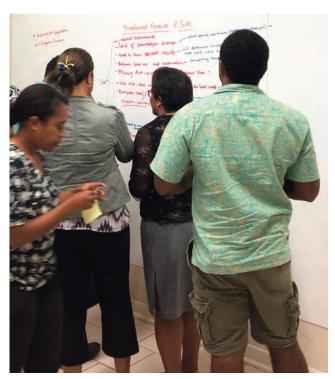
BGCI is working with Tooro Botanical Gardens on a Darwin Initiative project that has established four indigenous tree nurseries close to areas that have been identified as high priority sites for restoration in Uganda. Trained personnel are collecting and supplying seed to these nurseries, where 40 nursery workers grow a supply of seedlings to support genetically and species diverse forest restoration. In November 2019, nursery workers received training from ERA member Brackenhurst Botanic Gardens on propagation and nursery management.



The participants of the Dry Forest Restoration Plan and Red Listing Workshop held in Suva, Fiji

## Dry Forest Restoration Plan and Red Listing Workshop (Suva, Fiji)

As part of the final year of the 'Saving Fiji's Threatened Trees' project a Dry Forest Restoration Plan and Red Listing Workshop was held in Fiji in February. The workshop included participants from NatureFiji-MareqetiViti (NFMV), Conservation International, The Pacific Community (SPC), University of the South Pacific, The National Trust of Fiji and the Department of Forestry. The sessions of the workshop included facilitated discussion on key priorities for the restoration and management of a newly designated protected area, drafting of the restoration plan, discussion of threatened species propagation protocols as well as the review and completion of Red List assessments for dry forest tree species. The restoration plan is now being implemented by NFMV and the assessments were published on the IUCN Red List in late 2019.



Fiji workshop team prioritises restoration issues to address in the plan



Participants of strategic project planning techniques training, Benxi, Liaoning, northeast China

### Strategic planning workshop (Benxi, China)

Since 2007, BGCI's China Programme has been implementing integrated ex and in situ recovery action for some 70 native, threatened trees. Whilst these efforts have significantly contributed to raising the profile of the Global Trees Campaign (GTC) in China and internationally, BGCI continually seeks to consolidate strategic planning methods as well as monitoring and evaluation (M&E) techniques to measure and evidence conservation progress. In response to this pursuit, in collaboration with its local partners from the Institute of Shenyang Applied Ecology, CAS, Shenyang Arboretum and Benxi Forestry and Grassland Bureau, BGCI organised a threeday capacity building workshop in November 2019, in Benxi, Liaoning province. Some 50 participants involved in ongoing or formerly engaged in GTC projects received training in techniques of logical framework analysis and M&E. The course not only further equipped GTC partners to apply evidencebased conservation tools, but also assisted to identify and prioritise future projects in China.



A promising new generation of Chinese naturalists on a field botany tour in Benxi, Liaoning province, China



Global Tree Assessment Workshop at Flora Malesiana Sympoisum 11 hosted at Universiti Brunei Darussalam

### Red List and Global Tree Assessment Training

In 2019, BGCI ran six training workshops for the Global Tree Assessment GTA). These workshops included training in the IUCN Red List Categories and Criteria, and also provided opportunities for participants to complete their own assessments for tree species of interest.

The first workshop was held in Papua New Guinea at Lae Botanic Garden, where 30 people from universities and PNG Forest Research Institute were trained. In March, a meeting at La Selva Biological Station in Costa Rica brought together participants from Belize, Costa Rica, El Salvador, Honduras, Mexico, Nicaragua, Panamam, Colombia, Venezuela and the US.

In April, the third CEPF Madagascar Dry Forest Trees workshop took place and 15 new Malagasy assessors were trained for the second year of the project. BGCI were also hosted in Manila, Philippines by GTA partners Energy Development Corporation (EDC) to train 30 participants in conservation assessments for trees and build on conservation prioritisation tools already developed at EDC.

Further capacity for red list assessments was built for the Southeast Asia region with training held at Flora Malesiana Symposium 11 hosted by the Univiersiti Brunei Darussalam in June/July. Alongside training of 14 regional experts, assessments for all Bornean Dipterocarpaceae trees were completed at the workshop.

The first red list training in the South Pacific was hosted in Samoa in September 2019. Participants from local Samoan institutions attended alongside regional experts for Fiji, New Caledonia, Vanuatu, Solomon Islands, Tonga, Wallis and Futuna and French Polynesia.

The final training of the year occurred in-house at BGCI HQ, training BGCI and Royal Botanic Garden Edinburgh staff and GTA assessors from the Nepalese government.

Across meetings in 2019, over 500 assessments for trees were produced and 130 people were trained from 57 institutions.



Practical demonstration on how to prepare herbarium vouchers

### Identification and Seed Collection of Threatened Trees (Jardim Botânico Araribá, Brazil)

In June, in collaboration with Jardim Botânico Araribá, Brazil, BGCI organised a workshop on "Identification and Seed Collection of Threatened Trees". This course was part of the capacity building component of a three-year project funded by Fondation Franklinia at the private natural heritage reserve Duas Cachoeiras near São Paulo. This project is promoting the integrated conservation of four threatened tree species in the semi-deciduous Atlantic forest which is recognised as one of the most degraded ecosystems on the planet. The course was attended by 20 participants from botanic gardens, nurseries, conservation organisations and nature reserves.

It was divided into theoretical classes and practical exercises, such as tree identification in the field, with the collection of herbarium vouchers, seed collection, data recording and tree climbing demonstrations. The participants were able to share their own experiences in conserving threatened tree species and there were plenty of discussions on how to achieve high quality conservation seed collections.

### Species Conservation Assessment Training Workshop (United States)

BGCI-US, The Morton Arboretum, and NatureServe collaboratively held a half-day species conservation assessment training workshop during the American Public Gardens Association annual conference in Washington, DC on June 19, 2019. The 25 attendees from public gardens across the United States were taken through the NatureServe and IUCN Red List assessment processes, and a hands-on component using example species assessments aided group discussion.

Science café for children (Natural History Museum, University of Oslo)



### PUBLIC ENGAGEMENT AND EDUCATION

### Evaluation and research



Participants of the LearnToEngage Evaluation and research module

A twelve-week blended learning module on the subject of *'Evaluation and research'* was developed and delivered by BGCI and our LearnToEngage partners between February and April 2019. Ten students from Portugal, five from the UK and five from Italy took part in this module, representing 20 botanic garden or museum institutions. The students studied online for eleven weeks and were provided with a series of videos, presentations, reading and assignments. They also attended an on-site week in Lisbon, Portugal hosted by the University of Lisbon Botanic Garden on 11-15th February 2019.

LearnToEngage produced a suite of professional development modules for botanic garden staff and museum educators in the UK, Portugal and Italy. In addition to the module run in 2019, three further modules were delivered in 2017 and 2018 in Interpretation, Working with Diverse Audiences and Science Communication.

As part of the outputs of the project, participant and tutor handbooks have been produced for all four modules to support other organisations to deliver similar training.

Three multiplier events were held in 2019 to further disseminate the modules. These short training sessions gave participants an idea of what is covered in the modules, some quick hands-on training and guidance on where to access more information. Events were held in the UK (March), Italy (June) and Portugal (July). In total, 118 individuals attended these multiplier events.

# Co-creation, TBI, science cafés, stop-motion workshops

As part of the BigPicnic project, a final festival was held in Madrid in February. This event provided an opportunity for project partners to offer training in key elements of the project to attendees. Training workshops were delivered in cocreation, Team-Based Inquiry evaluation (TBI), how to run a science café and the use of stop-motion and digital storytelling techniques. The event was attended by almost 200 individuals.

#### RESOURCES

### The BGCI Accreditation Scheme







BGCI's Accreditation Scheme distinguishes botanic gardens from non-botanic gardens and recognises achievements in plant conservation. The scheme aims to raise awareness and recognition of the activities that botanic gardens do exceptionally well to policymakers and funders. Accreditation can result in tangible benefits for participating gardens – such as recognition, peer review, creating standards for excellence, and funding – and will act as a motivator for botanic garden leadership. In 2019, BGCI launched the BGCI Advanced Conservation Practitioner Accreditation.

Also in 2019, BGCI and ArbNet announced an agreement to allow for applicants to be considered for both accreditation programmes through a single application. Both BGCI Botanic Garden Accreditation and ArbNet Arboretum Accreditation (at levels III and IV) set similar standards for leadership, collections management, horticulture, public education, research, staff, and networking. Each accreditation programme, however, supports different target audiences. BGCI Botanic Garden Accreditation recognises botanical institutions with a focus on plant conservation and sustainability, while ArbNet Arboretum Accreditation is tailored to gardens with a strong focus on woody plants and trees.

Under this new reciprocal agreement, those applying for BGCI's Botanic Garden Accreditation who wish to be considered for ArbNet Arboretum Accreditation will be required to answer additional questions related to their focus on woody plant and tree species. Those applying for ArbNet Arboretum Accreditation at Level III or IV who wish to be considered for BGCI's Botanic Garden Accreditation will be required to answer additional questions on their plant conservation and sustainability activities.







To learn more about the BGCI Accreditation Scheme or to apply for BGCI Botanic Garden, Conservation Practitioner, or Advanced Conservation Practitioner Accreditation, please visit www.bgci.org/accreditation.

Auckland Botanic Gardens, New Zealand Barnes Arboretum at Saint Joseph's University, **United States** 

Botanical Garden of Klaipeda University, Lithuania Botanical Garden of Vilnius University, Lithuania Botanical Garden, Natural History Museum -University of Oslo, Norway

Botanischer Garten der Universität Bern BOGA, Switzerland

Cambridge University Botanic Garden, United Kingdom Eden Project, United Kingdom

FossilPlants, United Kingdom

Giardino Botanico di Oropa, Italy

Göteborgs botaniska trädgården, Sweden

Institute of Botany, Czech Academy of Sciences, Czech Republic

Jardin Botanique de Montréal, Canada

Jardín Botánico Regional de Cadereyta 'Ing. Manuel González de Cosío', Mexico

Leon Levy Native Plant Preserve, Bahamas

National Tropical Botanical Garden, United States

Rotterdam Zoo and Botanical Garden, Netherlands

San Diego Zoo Global, United States United States Botanic Garden, United States



### The following botanic gardens achieved BGCI Advanced Conservation Practitioner Accreditation in 2019:

Atlanta Botanical Garden, United States

Botanic Garden Meise, Belgium

Chicago Botanic Garden, United States

Conservatoire et Jardin Botaniques de la Ville de Genève, Switzerland

Denver Botanic Gardens, United States

Missouri Botanical Garden, United States

The Morton Arboretum, United States

National Botanic Garden of Wales, United Kingdom

Native Plant Trust - Garden in the Woods, United States

North Carolina Botanical Garden, United States

Royal Botanic Garden Edinburgh, United Kingdom

Royal Botanic Gardens & Domain Trust Sydney, Australia

The State Botanical Garden of Georgia, **United States** 



### The BGCI PlantSnap Initiative



BGCI has partnered with PlantSnap so that BGCI Members can collaborate

on the creation of possibly the most comprehensive database of plant photos and geo-locational data in the world!

PlantSnap is the most technologically advanced, comprehensive and accurate plant identification app ever created. It gives you a whole new way to explore the natural world in your everyday life.

PlantSnap is a simple way for everyone to play a role in protecting and saving the environment simply by snapping photos of plants. This allows us to map and track every plant on the planet and share this data with scientists.

PlantSnap's open source plant database features 600,000+ plants and 150 million+ plant images. The app recognises nearly all species encountered in botanical gardens and is available in 37 languages. To date, there have been more than 25 million downloads.

BGCI has partnered with PlantSnap so that our member gardens can offer the app to their visitors. As a partner in



BGCl's PlantSnap Initiative, the main role of a garden is to actively promote the app to their members and visitors and encourage them to make use of the educational and scientific benefits of diving deep into the importance of plant conservation through PlantSnap. BGCl and PlantSnap will provide each garden with a customisable set of marketing content to support their efforts, but ultimately it will be up to the garden to entice visitors to download the app.

To be a part of this great initiative and to learn more visit **www.bgci.org/plantsnap**.

### Access and Benefit-Sharing Learning Package



In the framework of the Darwin Initiative-funded project *Promoting the use of plant resources in research and development,* a learning package on Access and Benefit-Sharing was developed. This consists of a suite of resources to help staff from botanic

gardens (and other *ex situ* collection holders) learn about the international access and benefit sharing (ABS) regime and how the implementation of national and international ABS regulations and legislation impacts on the work of collection-based institutions. The resources can be used as self-learning tools, but can also be used to support capacity building and training within an institution.

The ABS Learning package can be found on the BGCI Tools and Resources website:

https://www.bgci.org/resources/bgci-tools-and-resources/abs-learning-package/.











### LearnToEngage Module Resources

As part of the LearnToEngage project, BGCI and partners developed four 12-week blended learning modules and have made the resources for these modules available, open access. Each module consists of a trainer and participant handbook and also includes online resources which are hosted on Royal Botanic Garden Edinburgh's PropaGate Learning platform. The four modules are Interpretation, Working with diverse audiences, Science communication and Evaluation and research. The module resources can be accessed at:

https://www.bgci.org/resources/bgci-tools-and-resources/learntoengage-module-resources/











### **GTA YEAR IN REVIEW**



The Global Tree Assessment (GTA) has significantly increased their Red List assessment output in 2019, with **8,282 tree assessments** published

on the IUCN Red List of Threatened Species, four times the number published in 2018. We have established new partnerships in Mesoamerica, the Philippines, Papua New Guinea and islands of the South Pacific. **Over 200 individuals** have now contributed to GTA.

We have assessed many entire groups over the course of the year, including all species of *Eucalypt* (826 species), *Liquidambar*, monotypic tree families and all Dipterocarpaceae endemic to Borneo.

# GTA Project example: Using SIS Connect to import Amazonia tree assessments

Over the last year, the GTA team have developed innovative methods to streamline tree assessments onto the IUCN Red List. Working with Brazil's CNC Flora and the IUCN SSC Colombian Plant Specialist Group, we devised a system to enable the import of their fantastic assessments, stored in external databases, into the IUCN system. This process has ensured a quicker publication time and enabled the assessments to be published in Portuguese and Spanish. Not only is this a more inclusive approach, but it also has practical advantages, making the assessments more useful to people carrying out conservation on the ground.

Right: Rubiaceae Calycophyllum in Rio botanic garden

### GLOBAL SEED CONSERVATION CHALLENGE



The Global Seed Conservation Challenge (GSCC) currently comprises **212 members**. BGCI continues to provide

support to gardens that are involved in seed banking. Throughout 2019, BGCI added to our seed banking resources including our advanced learning modules (https://www.bgci.org/resources/bgci-tools-and-resources/global-seed-conservation-challenge-advanced-learning-modules/) and a video guide to the seed conservation directory of expertise (https://www.bgci.org/news-events/new-video-seed-conservation-directory-of-expertise-dashboard/). The GSCC coordinator attended a meeting of the IUCN Seed Conservation Specialist Group at the Island Biology Conference, which provided an opportunity to discuss future priorities for the network and how to further develop the directory of expertise.

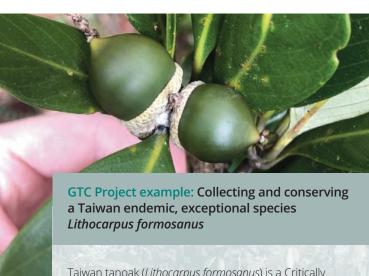


#### GTC YEAR IN REVIEW



In 2019, the Global Trees Campaign (GTC) celebrated its **20th anniversary**! GTC was launched in 1999 to take action for the world's most threatened tree species, following the publication of The World List of Threatened Trees (Oldfield, *et al.* 1998).

Over the past 20 years, our portfolio of practical conservation projects has delivered conservation for more than **570 of the world's most threatened trees**. Recognising that at least 1 in 5 tree species are threatened with extinction, GTC trains and mobilises others to take action for threatened trees. GTC is run by a small team based in the UK, US, China, Taiwan, China and Kenya, and we work with a broad network of partners across the world. We would like to say a big thank you to all of the funders and partners that we have worked with over the past 20 years!



Taiwan tanoak (Lithocarpus formosanus) is a Critically Endangered member of the Fagaceae family which is endemic to the island of Taiwan, China. The small population of Taiwan tanoak is restricted to the Hengchun Peninsula in Southern Taiwan. There has been little evidence of natural regeneration in the recent past. Seed crops appear to be poor and they are often eaten by squirrels. BGCI has partnered with the Dr. Cecilia Koo Botanic Conservation Center (KBCC) and the Department of Forestry and Natural Resources at National Chiayi University (NCYU) to develop strategies for the ex situ conservation of the species and to develop ex situ collections which can be used to reinforce the species in its natural habitat. In 2019, over 200 cuttings were made and specific facilities for propagating woody cuttings have been created at KBCC to trial the effect of various conditions, including humidity and temperature on rooting. At NCYU trials are underway to develop tissue culture propagation protocols for the species. Further collaboration with land management authorities and other stakeholders is planned to ensure in situ conservation of the species in its natural habitat.

Above: Taiwan tanoak is endemic to Southern Taiwan.



GTC Project example: Integrated ex and in situ conservation of the threatened Sorbus hajastana in Armenia and Prunus microcarpa in Georgia

Given the importance of the Caucasus as a plant diversity hotspot, BGCI's Global Trees Campaign has been working with partners in the region for many years. In addition to the threatened Amygdalus georgica, Betula megrelica, Salix kikodseae and Nitraria schoberi, between 2017 and 2019 these efforts have been focusing on the Vulnerable Sorbus hajastana in Armenia and Prunus microcarpa in Georgia. Habitat loss and conversion have been reducing the viability of natural populations in recent years. In collaboration with the Institute of Botany After A. Takhtajyan of the Armenian National Academy of Sciences and Yerevan Botanical Garden in Armenia, as well as with the National Botanical Garden of Georgia and the Institute of Botany Ilia State University, Tbilisi, in Georgia, integrated ex and in situ conservation activities were undertaken to secure both species for the future. This included the documentation of the species' distribution range, establishment of a best-practice propagation protocol, development of ex situ collections and the planting of saplings in situ to reinforce existing populations in close cooperation with local authorities. In addition to the long-term conservation outcomes, these efforts have raised the profile of botanical institutions in the Caucasus as pivotal custodians of native biodiversity.



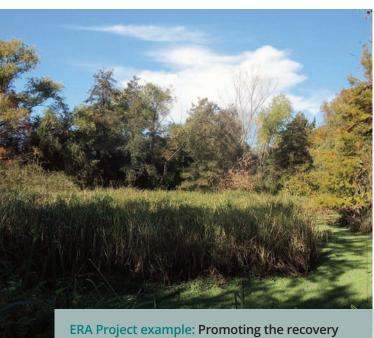
Above: Sorbus hajastana, Sevan Peninsula, Armenia. Top: Prunus microcarpa, David Gareji, east Georgia.

#### ERA YEAR IN REVIEW



The Ecological Restoration Alliance of Botanic Gardens (ERA) held its annual meeting at Kirstenbosch National Botanical Gardens on 1st September, following participation in SER's 8th

World Conference on Ecological Restoration. ERA membership has now expanded to 43 gardens. ERA provides model projects that use a wide mix of native species and planting material of appropriate provenance. Projects help to raise awareness of the need for restoration and aim to directly involve communities in restoration. For example, our two current Darwin Initiative funded ERA projects in Malawi and Uganda employ almost 2,000 people. During 2019, ERA has also added new resources to our website (www.erabg.org), sharing expertise from our global network of botanic gardens to scale up best practice. With increased interest in restoration and the announcement of the UN Decade on Ecosystem Restoration (2021 – 2030) these models and resources are becoming increasingly important, encouraging the delivery of ecosystem restoration that is based on science, and benefits people and biodiversity.



of native wetland flora in the Río de la Plata estuary, Argentina











**ERA Project example:** 

Supply and demand: restoration in Uganda for people and biodiversity

Uganda has pledged to bring 2.5 million ha of degraded land under restoration by 2020. With funding from the UK government's Darwin Initiative, BGCI is working with Tooro Botanical Gardens, which runs the largest indigenous tree nursery in Uganda, to set up four additional indigenous tree nurseries close to priority areas for restoration. Since the project started in mid-2018, we have trained 60 seed monitors and collectors, 40 nursery workers and set up four nurseries. The first batch of seedlings are due to be ready for planting after the onset of rains (April 2020). The project has a marketing and outreach component to encourage planting of native trees and purchase from our community nurseries.

Top: Four community nurseries have been set up next to high priority areas for restoration in Uganda Left: Secondary Monte Blanco vegetation, Delta Terra, Río de la Plata

Building on the success of the previous conservation venture between Klorane Botanical Foundation, Pierre Fabre Dermo-Cosmétique, Jardín Botánico de la Ciudad, Carlos Thays, and BGCI, the partners started a new, three-year initiative in 2019. Targeting the recovery of native wetland flora in the Río de la Plata estuary, Argentina, and working with the local Fundación de Historia Natural Félix de Azara, the specific objectives include: 1) Enhancing *ex situ* conservation of native species of the original Monte Blanco forest vegetation; 2) Piloting ecological restoration; and 3) Strengthening public outreach to raise awareness of the ecological significance of the world's widest freshwater system.

### THE INTERNATIONAL PLANT SENTINEL **NETWORK**



The International Plant Sentinel Network has 55 members and is funded by

the UK's Department of Environment, Food and Rural Affairs (Defra) and supported by Fera Science LTD. Through the Euphresco network 15 partners in Europe, Australia, New Zealand and the US are involved in research activities on future pest threats. The focus this year has been on evidence gathering to inform the UK Pest Risk Register. Two IPSN videos have also been produced, which can be found on the website (www.plantsentinel.org) and an article summarising the work of the IPSN is due to be published in Sibbaldia: the Journal of Botanic Garden Horticulture.

### **BIG PICNIC YEAR IN REVIEW**



2019 saw the completion of the BigPicnic project - a three-year, EU Horizon2020 funded project

with 19 partners that aimed to generate debate on the topic of food security and bring together the public, scientists, policy-makers and industry to help address the global challenge of food security.

Botanic garden partners co-created a range of exhibitions and participatory events with people from all walks of life, to generate dialogue and build greater understanding of food security. This collaborative approach gave a voice to adults and young people, communicating their views to policy-makers, sharing ideas, encouraging debate on the future of our food and achieving Responsible Research and Innovation (RRI).

In 2019, the project produced its final resources which included the BigPicnic project recommendations (policy briefs), a science café online toolkit, and an online co-creation navigator. In addition, the final partner meeting and a dissemination event (the BigPicnic final festival) were held in February/March 2019. This final event was an opportunity to share lessons learnt and key findings of the project and to provide training in the key elements of the project such as cocreation, team-based inquiry and delivering science cafés.



BigPicnic final partner meeting (Krystyna Jedrzejewska-Szmek)



Post-it notes activity at a science café organised by Juan Carlos I Royal Botanic Gardens, Alcalá de Henares University

A major finding of the project was the importance of cultural heritage and its relationship to the way that we view food. Key outputs of the project include:

- A total of nearly 800,000 individuals reached
- A set of 7 policy briefs produced
- Production of online open access toolkits in co-creation (Co-creation Navigator) and science cafés (the science café toolkit)
- Delivery of 103 exhibitions, reaching almost 180,000 participants
- Delivery of 102 science cafés to over 6,000 participants
- 15 botanic garden partners trained in new and innovative participatory approaches (co-creation and Team-Based Inquiry)
- Almost 1,000 science communicators and educators (nonproject) trained in participatory approaches which will lead to over 90,000 individuals being engaged through these techniques over the next two years.

### LEARNTOENGAGE YEAR IN REVIEW



The LearnToEngage project was successfully completed in late 2019. This was a three-year Erasmus plus funded project

between BGCI, Royal Botanic Garden Edinburgh, MUSE science museum in Trento, National Museum of Natural History and Science – University of Lisbon and Nottingham Trent University.

As part of the project, a suite of professional development modules were developed for botanic garden staff and museum educators. Four 12-week blended learning courses were developed and piloted with participants from the UK, Italy and Portugal on the topics of Interpretation, Working with diverse audiences, Science communication and Evaluation and research. The online resources and accompanying training and participant handbooks are available to download via the BGCI website.

In this final year of the project, the fourth module (Evaluation and research) was piloted, handbooks and resources for all four modules made freely available, and a series of multiplier events were held to promote and disseminate the project resources.

In total, 79 individuals from 73 organisations attended the LearnToEngage modules. In addition, 171 individuals from 111 organisations attended our speed training multiplier events.

# Funding and Capacity Building

BGCI disbursed funds totalling USD 2,089,750 to botanic gardens and other institutions in 2019 (see Table 1). This figure is nearly ten times more than what we receive in membership fees.

### **BGCI'S GLOBAL BOTANIC GARDEN FUND**

BGCI launched the BGCI Global Botanic Garden Fund in 2019. The Global Botanic Garden Fund aims to drive plant conservation, especially in smaller gardens. The fund will initially disburse grants **from USD 1,000 to USD 2,500 each** and is available to BGCI members only.

Grants must be framed within the Global Strategy for Plant Conservation, and will support plant conservation practices, plant conservation policy and education, infrastructure development, training for plant conservation, international partnerships, and mentoring botanic gardens in efforts to achieve success through BGCI's Botanic Garden Accreditation Scheme.

In 2019, BGCI received **72** applications from **64** different institutions from **39** different countries. BGCI's Global Botanic Garden Fund gave out **17** grants totaling USD **33,013** in 2019. Eight grants were provided through unrestricted funding of the GBGF, four through Minnesota Landscape Arboretum/BGCI funding, and five through ArbNet/BGCI funding.

The following are recipients of the 2019 BGCI Minnesota Landscape Arboretum Grants through the Global Botanic Garden Fund:

- Jardin Botanique Kivu (Democratic Republic of Congo)
- Puebla University Botanical Garden (Mexico)
- Amur Branch of Botanical Garden-Institute of Far Eastern Branch of Russian Academy of Science (Russia)
- MM Gryshko National Botanical Garden of the National Academy of Sciences of Ukraine (Ukraine)

The following are recipients of the 2019 BGCI ArbNet Partnership Program Grants through the Global Botanic Garden Fund:

- Tropical Rainforest Conservation & Research Centre (Malaysia) and The Blue Mountains Botanic Garden, Mount Tomah (Australia)
- Grigadale Arboretum (Argentina) and Peckerwood Garden (USA)
- Northwestern University Ecological Park & Botanic Gardens (Philippines) and Dr. Cecilia Koo Botanic Conservation Center (Taiwan, China)
- Bo Arboretum (Sierra Leone) and Ghana Permaculture Institute (Ghana)
- Pha Tad Ke Botanical Garden (Laos) and Yale University (USA)

### Recipients of the 2019 BGCI's Global Botanic Garden Fund grants

Garden	Project
Bogor Botanic Gardens (Indonesia)	Conservation of <i>Dehaasia pugerensis</i> , an endemic species of the family Lauraceae
Stellenbosch University Botanical Garden (South Africa)	Ex situ conservation of five highly threatened Cape taxa: focus on geophytes and ground orchids
MUSE Botanic Gardens and Tooro Botanical Gardens (Uganda)	Conserving the flora of the Mountains of the Moon
Rio de Janeiro Botanical Garden (Brazil)	Conservation of the Rio de Janeiro Botanical Garden cacti collection
National Tropical Botanical Garden (USA)	Conservation of the Endangered Hawaiian species Pteralyxia kauaiensis
Tallinn Botanic Garden (Estonia)	Spore viability and propagation of the species of endemic fern genus Adenophorus with ex situ conservation of Critically Endangered Hawaiian species Adenophorus periens
MS Swaminathan Botanical Garden (India)	Development of an <i>ex-situ</i> conservation garden of the threatened Western Ghats endemic genus <i>'Humboldtia'</i>
Clavijero Botanical Garden (Mexico)	Cloud forest sanctuary restoration

BGCI will issue a call for applications for the 2020 Global Botanic Garden Fund grants in April/May 2020. Visit https://www.bgci.org/our-work/services-for-botanic-gardens/global-botanic-garden-fund/ for more information.

# Table 1: Institutions supported by BGCI with funding in 2019

Institution	Country
Jardin Botánico Carlos Thays	Argentina
Institute of Botany of the Armenian National Academy of Sciences	Armenia
Botanic Gardens Australia and New Zealand of the Australian National Botanic Gardens	Australia
Council of Heads of Australian Botanic Gardens	Australia
Universität Innsbruck	Austria
Plant Conservation and Research Foundation	Bangladesh
Agentschap Plantentuin Meise	Belgium
Herabio Nacional de Bolivia	Bolivia
Fundacao Flora de Apolo a Botanica	Brazil
Jardim Botânico Araribá	Brazil
Rio de Janeiro Botanical Garden	Brazil
Sofiiski Universitet Sveti Kliment Ohridski	Bulgaria
Instituto de Investagaciones Agropecuarias	Chile
Guangxi Institute of Botany	China
College of Humanities and Science, Guizhou Minzu	China
Hangzhou Botanical Garden	China
Hunan Forest Botanical Garden	China
Shenyang Arboretum, CAS	China
Sichuan Provincial Academy of Natural Resource Sciences, Chengdu	China
South China Botanic Garden	China
Wuhan Botanical Garden	China
Zhejiany Forestry Academy	China
Asociación Columbiana de Herbario	Colombia
Jardin Botanique Kivu*	Democratic Republic of Congo
Fundación Progressio	Dominican Republic
Tallinn Botanic Garden	Estonia
Ethiopian Biodiversity Institute	Ethiopia
Gullele Botanic Garden	Ethiopia
NatureFiji-MareqetiViti	Fiji
National Botanic Garden of Georgia	Georgia
Freie Universitaet Berlin	Germany
Leiterin Schulbiologiezentrum	Germany
Wissenschaftsladen Bonn EV	Germany
CSIR – Forestry Research Institute of Ghana	Ghana
Hellenic Agricultural Organization-Demeter	Greece
Jardin Botanique des Cayes	Haiti
Auroville Botanical Gardens	India
MS Swaminathan Botanical Garden	India
Peermade Development Society	India
Bogor Botanic Garden	Indonesia
Orangutan Foundation International	Indonesia
Comune Di Bergamo	Italy
Museo Delle Scienze di Trento	Italy
African Forest	Kenya
Kivukoni Indigenous Tree Nursery	Kenya

Institution	Country
Pha Tad Ke Botanical Gardens	Laos
IUCN SSC Madagascar Plant Specialist Group	Madagascar
Kew Madagascar Conservation Centre	Madagascar
Missouri Botanic Garden	Madagascar
University of Antananarivo	Madagascar
Forest Research Centre, Sabah Forestry Department	Malaysia
Sabah Parks	Malayisa
Tropical Rainforest Conservation & Research Centre	Malaysia
Mulanje Mountain Conservation Trust	Malawi
Mauritian Wildlife Foundation	Mauritius
Clavijero Botanical Garden	Mexico
Puebla University Botanical Garden*	Mexico
Maastricht University	Netherlands
Stichting Waag Society	Netherlands
Universiteit Leiden	Netherlands
Universitetet I Oslo	Norway
Papua New Guinea Forest Research Institute	Papua New Guinea
Lopez Group Foundation Inc	Philippines
Uniwiersytet Warszawski	Poland
Universidade De Lisboa	Portugal
Amur Branch of Botanical Garden-Institute of Far Eastern Branch of Russian Academy of Science*	Russia
Samoa Conservation Society	Samoa
Stellenbosch University Botanical Garden	South Africa
Agencia Estatal Consejo Superior De Investigaciones Científicas	Spain
Fundacio Jardí Botànic de Sóller	Spain
Universidad de Alcalá	Spain
Dr Cecilia Koo Botanic Conservation Center	Taiwan, China
National Chiayi University	Taiwan, China
Tanzania Forest Service	Tanzania
Tooro Botanical Gardens	Uganda
MM Gryshko National Botanical Garden of the National Academy of Sciences of Ukraine*	Ukraine
Nottingham Trent University	United Kingdom
Royal Botanic Garden Edinburgh	United Kingdom
Royal Botanic Gardens, Kew	United Kingdom
University College London	United Kingdom
Chicago Botanic Garden	USA
San Francisco Botanical Garden Society	USA
The Morton Arboretum	USA
National Tropical Botanical Garden	USA
Bidoup-Nuiba National Park	Vietnam
Southern Institute of Ecology	Vietnam
Provita ONG	Venezuela
Vumba Botanical Gardens	Zimbabwe
* Funded by the BGCI Minnesota Landscape Arboretu	m Grants through the

<sup>\*</sup> Funded by the BGCI Minnesota Landscape Arboretum Grants through the BGCI's Global Botanic Garden Fund.

### Table 2 Training Provided by BGCI in 2019

Institution	Country	Topic(s)		
The state of the s				
Addis Abba University	Ethiopia	Management of ex situ collections		
African Forest  Ambiental Mudas Nativas e Exoticus Sida	Kenya Brazil	Ex situ collections management Seed conservation		
American Public Gardens Association	USA	Red list training & assessments		
American University of Beirut, Lebanon	Lebanon	Co-creation, TBI, science cafés, stop motion workshops		
ANG Foundation Nezahat Gökyi it Botanik Bahçesi	Turkey	Co-creation, TBI, science cales, stop motion workshops  Co-creation, TBI, science cafés, stop motion workshops		
Arariba Botanic Garden	Brazil	Seed conservation		
Arba Minch University	Ethiopia	Management of <i>ex situ</i> collections		
Arboreti di Vallombrosa - Raggruppamento carabinieri biodiversità	Italy	Interpretation, science communication, evaluation		
Areka Agricultural Research Centre	Ethiopia	Management of ex situ collections		
Asociación Jardin Botanico La Laguna, El Salvador	El Salvador	Red list training & assessments		
Asosa Biodiversity Centre	Ethiopia	Management of ex situ collections		
Atlanta Botanical Garden	USA	Red list training & assessments		
Azores Government	Portugal	Interpretation, science communication, evaluation		
Azores University	Portugal	Interpretation, science communication, evaluation		
Azorina	Portugal	Interpretation, science communication, evaluation		
Badagongshan National Nature Reserve	China	Strategic planning workshop and training		
Bahir Dar Biodiversity Centre	Ethiopia	Management of ex situ collections		
Bahir Dar University Balai Lingkungan Hidup	Ethiopia Indonesia	Management of ex situ collections Propagation, assessments, in situ restoration		
Banco Base de Semillas, INIA, Vicuña	Chile	Network development		
Banco de Germoplasma UPM	Spain	Co-creation, TBI, science cafés, stop motion workshops		
Bath & NE Somerset Council	UK	Interpretation, science communication, evaluation		
BBS Handel	Germany	Co-creation, TBI, science cafés, stop motion workshops		
Beihua University	China	Strategic planning workshop and training		
Beijing Botancial garden, CAS	China	Strategic planning workshop and training		
Belfast Botanic Gardens	UK	Interpretation, science communication, evaluation		
Bergamo Botanic Garden	Italy	Co-creation, TBI, science cafés, stop motion workshops		
Bienvenidos Refugiados Alcalá	Spain	Co-creation, TBI, science cafés, stop motion workshops		
Bioversity International, CGIAR	Italy	Co-creation, TBI, science cafés, stop motion workshops		
Birmingham Botanical Gardens	UK	Co-creation, TBI, science cafés, stop motion workshops		
Bogor Botanic Garden	Indonesia	Propagation, assessments, <i>in situ</i> restoration, Species reintroductions, collection management of genetic resources, Red list training & assessments		
Botanic Garden "G. Longhi" - Parco del Serio	Italy	Co-creation, TBI, science cafés, stop motion workshops		
Botanic Gardim O Chão das Artes - Casa da Cerca (Almada Municipality)	Portugal	Interpretation, science communication, evaluation		
Botanical Garden Alcala	Spain	Co-creation, TBI, science cafés, stop motion workshops		
Botanical Garden of Palermo  Botanical Garden of the Adam Mickiewicz University	Italy Poland	Interpretation, science communication, evaluation  Co-creation, TBI, science cafés, stop motion workshops		
Botanical Garden of the Ivan Franko National University of Lviv	Ukraine	Co-creation, TBI, science cafes, stop motion workshops  Co-creation, TBI, science cafes, stop motion workshops		
Brackenhurst Botanic Garden	Kenya	Management of <i>ex situ</i> collections		
British and Irish Association of Zoos & Aquariums	UK	Interpretation, science communication, evaluation		
Bulolo University College	Papua New Guinea	Red list training & assessments		
Camara Municipal de ponta delgada	Portugal	Interpretation, science communication, evaluation		
Cambridge University Botanic Garden	UK	Interpretation, science communication, evaluation		
Carbonozero Consultoria Ambiental	Brazil	Seed conservation		
Central South University of Forestry and Technology	China	Reintroduction technique training		
Centre for Biodiversity at Aberdeen University	UK	Interpretation, science communication, evaluation		
Centro de Educación ambiental de Casa de Campo	Spain	Co-creation, TBI, science cafés, stop motion workshops		
Centro nacional de Recursos Geneticos del IMFAP	Mexico	Seed and vegetative propagation, tissue culture, cryo preservation		
Centro Orto Botanico - Università degli Studi di Urbino	Italy	Interpretation, science communication, evaluation		
Centro Universitario Regional del Este (CURE-Universidad de la República)  Champalimaud Foundation, Lisbon	Uruguay Portugal	Network development Interpretation, science communication, evaluation		
Chelsea Physic Garden	UK	Interpretation, science communication, evaluation		
Chengdu Botanical Garden	China	Strategic planning workshop and training		
Chongqing Nanshan Botanical Garden	China	Strategic planning workshop and training		
Chris Chadwick Consultancy	UK	Interpretation, science communication, evaluation		
Colegio Doctores y Licenciados	Spain	Co-creation, TBI, science cafés, stop motion workshops		
Colegio Sagrados Corazones Madrid	Spain	Co-creation, TBI, science cafés, stop motion workshops		
Comune di Trieste - Civico Orto Botanico	Italy	Interpretation, science communication, evaluation		
Comunidad de Madrid	Spain	Co-creation, TBI, science cafés, stop motion workshops		
Consejería de Educación Madrid	Spain	Co-creation, TBI, science cafés, stop motion workshops		
Consejería de Medio Ambiente y Ordenación del Territorio	Spain	Co-creation, TBI, science cafés, stop motion workshops		
Conservation International  Conservatoire et Jardin botaniques de Genève	Fiji Switzerland	Dry forest restoration planning Co-creation, TBI, science cafés, stop motion workshops		
Core Networks	Spain	Co-creation, TBI, science cates, stop motion workshops		
	Opun.	Salari, 18, control care, richard montainepo		

Institution	Country	Topic(s)
Corpo forestale - Università di Cagliari	Italy	Interpretation, science communication, evaluation
Debre Berhan University	Ethiopia	Management of ex situ collections
Debre Tabor University	Ethiopia	Management of ex situ collections
Delegation a la Recherche  Denver Botanic Gardens	Samoa USA	Red list training & assessments  Red list training & assessments
Department of Greenery, Warsaw Municipality	Poland	Co-creation, TBI, science cafés, stop motion workshops
Department of National Parks, Wildlife and Plant Conservation	Thailand	Species reintroductions, collection management of genetic resources
Deutsche Gesellschaft für Ernahrung e.V.	Germany	Co-creation, TBI, science cafés, stop motion workshops
Deutsches Netzwerk Schulverpflegung e.V.	Germany	Co-creation, TBI, science cafés, stop motion workshops
Di.S.Te.B.A. Orto Botanico - Università del Salento	Italy	Interpretation, science communication, evaluation
Dilla University	Ethiopia	Management of <i>ex situ</i> collections
Dipartimento di Biologia Università di Pisa	Italy	Interpretation, science communication, evaluation
Direcas Regional Do Ambiente	Portugal	Interpretation, science communication, evaluation
Dr. Cecilia Koo Botanic Conservation Center	Taiwan, China	Species reintroductions, collection management of genetic resources
Earth Day network Philippines.Inc	Philippines	Red list training & assessments
East China Normal University	China	Strategic planning workshop and training
EBI Horta	Portugal	Interpretation, science communication, evaluation
Ebianera Do Heroismo	Portugal	Interpretation, science communication, evaluation
Ecsite - The European Network of Science Centres and Science Museums	Belgium	Co-creation, TBI, science cafés, stop motion workshops
Eden Project	UK	Co-creation, TBI, science cafés, stop motion workshops
Emeishan Botanical Garden	China	Strategic planning workshop and training
Endemia Endemia	Samoa	Red list training & assessments
Energy Development Corporation	Philippines	Species reintroductions, collection management of genetic resources
Escola Basila I Horta	Portugal	Interpretation, science communication, evaluation
Escola de Hotelaria e Turismo	Portugal	Co-creation, TBI, science cafés, stop motion workshops
Escola secunderia Manuel de Artiaga	Portugal	Interpretation, science communication, evaluation
eSpring	Spain	Co-creation, TBI, science cafés, stop motion workshops
Estacion Experimental de Orquideas, Jalisco	Mexico	Seed and vegetative propagation, tissue culture, cryo preservation
Estacion Experimental/Hidro Xacbal	Guatemala	Seed and vegetative propagation, tissue culture, cryo preservation
Ethiopian Biodiversity Institute	Ethiopia	Management of ex situ collections
Ethiopian Environment and Forest Research Institute	Ethiopia	Management of ex situ collections
Faculty of Humanities of the University of Lisbon	Portugal	Interpretation, science communication, evaluation
Fauna and Flora International Indonesia Programme	Indonesia	Red list training & assessments
Fazenda Estancia JTb	Brazil	Seed conservation
First Generation Hydro Power Corporation	Philippines	Red list training & assessments
Fondazione Museo Civico di Rovereto	Italy	Interpretation, science communication, evaluation
Forest Foundation Philippines	Philippines	Red list training & assessments
Forest Management Bureau	Philippines	Red list training & assessments
Forest Management Bureau - DENR	Philippines	Red list training & assessments
Forest Research Institute	Myanmar	Species reintroductions, collection management of genetic resources
Forest Research Institute Malaysia	Malaysia	Species reintroductions, collection management of genetic resources
Forest Science Institute of Central Highlands and South of Central Viet Nam	Vietnam	Species reintroductions, collection management of genetic resources
Forum Pohon Lanka Indonesia	Indonesia	Propagation, assessments, in situ restoration
Fundación Defensores de la Naturaleza	Guatemala	Co-creation, TBI, science cafés, stop motion workshops
Fundacion EcoMinga	Ecuador	Seed and vegetative propagation, tissue culture, cryo preservation
Fundacion Progressio, Reserva científica Ébano Verde	Dominican Republic	Seed and vegetative propagation, tissue culture, cryo preservation
Fundación Vida Sostenible	Spain	Co-creation, TBI, science cafés, stop motion workshops
GAEA	Brazil	Seed conservation
Gastronomía digital	Spain	Co-creation, TBI, science cafés, stop motion workshops
GBA, Universidade Dos Azores	Portugal	Interpretation, science communication, evaluation
General Secretariat for Sustainable Development	Cambodia	Species reintroductions, collection management of genetic resources
Giardino Botanico Alpino del Cansiglio - Veneto Agricoltura	Italy	Interpretation, science communication, evaluation
Giardino Botanico Villa de Ponti	Italy	Co-creation, TBI, science cafés, stop motion workshops
Giardino Condiviso La Chiocciola Rho	Italy	Interpretation, science communication, evaluation
Giardino della Flora Appenninica di Capracotta	Italy	Interpretation, science communication, evaluation
Giardino della Minerva	Italy	Interpretation, science communication, evaluation
Giardino Parolini di Bassano (VI)	Italy UK	Interpretation, science communication, evaluation
Gladstone Pottery Museum Green gardens Azores	Portugal	Interpretation, science communication, evaluation Interpretation, science communication, evaluation
Grupo de Specialistas de Plantas de Colombia - IUCN	Colombia	
Guangxi Institute of Botany, CAS	China	Red list training & assessments  Strategic planning workshop and training
Guizhou Minzu University	China	Strategic planning workshop and training  Strategic planning workshop and training
Gullele Botanic Garden	Ethiopia	Management of <i>ex situ</i> collections
Hangzhou Botanical Garden	China	Strategic planning workshop and training
Hangzhou Normal University	China	Strategic planning workshop and training  Strategic planning workshop and training
Hawassa Biodiversity Centre	Ethiopia	Management of <i>ex situ</i> collections
Hawassa University  Hawassa University	Ethiopia	Management of <i>ex situ</i> collections  Management of <i>ex situ</i> collections
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Institution	Country	Topic(s)
Hellenic Agricultural Organisation	Greece	Co-creation, TBI, science cafés, stop motion workshops
Herbario Nacional de Costa Rica	Costa Rica	Red list training & assessments
Herbario OCA - Universidad Catolica, Ecuador	Ecuador	Seed and vegetative propagation, tissue culture, cryo preservation
Herbario Unicamp	Brazil	Seed conservation
Herbario Universidad National Autonoma de Nicaragua	Nicaragua	Red list training & assessments
Herbarion Nacional de Bolivia, Universidad Mayor de San Andres	Bolivia	Seed and vegetative propagation, tissue culture, cryo preservation
Heritage Insider	UK	Interpretation, science communication, evaluation
Het Loo Palace	Netherlands	Co-creation, TBI, science cafés, stop motion workshops
Hidroeléctrica Estatal Itaipú	Paraguay	Network development
Horniman Museum and Gardens	UK	Interpretation, science communication, evaluation
Hortus botanicus Leiden	Netherlands	Co-creation, TBI, science cafés, stop motion workshops
Huaihua Botanical Garden	China	Reintroduction technique training
Triumida Botamoar dardon	Offina	Species reintroductions, collection management of genetic resources,
Hunan Forest Botanical Garden	China	Strategic planning workshop and training, Conservation technical training
Huntington Library, Art Museum, and Botanical Garden	USA	Management of ex situ collections
I Giardini di Castel Trauttmansdorff - Merano	Italy	Interpretation, science communication, evaluation
Ibercivis	Spain	Co-creation, TBI, science cafés, stop motion workshops
Imperial College London	UK	Interpretation, science communication, evaluation
Indonesian Threatened Tree Forum	Indonesia	Red list training & assessments
Institute of Applied Sciences of The University of the South Pacific	Fiji	Red list training & assessments
Institution Experimental Jardin Botanico	Venezuela	Red list training & assessments
Instituto de Ecologia, Mexico	Mexico	Red list training & assessments
Instituto de Investigación de Recursos Biológicos Alexander von Humboldt	Colombia	Network development
Instituto Experimental Jardín Botánico "Dr. Tobías Lasser"	Venezuela	Network development
Inverness Botanic Garden	UK	Interpretation, science communication, evaluation
Iwokrama International Centre for Rainforest Conservation and Development	Guyana	Network development
Jardim Botânico Araribá RPPN Duas Cachoeiras	Brazil	Network development
Jardim Botânico da Universidade de Coimbra	Portugal	Co-creation, TBI, science cafés, stop motion workshops
Jardim Botanico de Jundiai	Brazil	Seed conservation, Network development
Jardín Botánico «Arturo E. Ragonese"	Argentina	Network development
Jardín Botánico "Ing. Lucas D. Roic"	Argentina	Network development
Jardín Botánico Alexander Von Humboldt	Colombia	Network development
Jardin Botánico Bogota	Colombia	Network development
Jardín botánico Carlo Thays	Argentina	Network development
Jardín Botanico de Bogotá	Colombia	Network development
Jardín Botánico de Cartagena "Guillermo Piñeres"	Colombia	Network development
Jardín Botanico de Medellín	Colombia	
Jardin Botanico del Choco-jotaudo	Colombia	Network development
Jardín Botanico del Parque de Las Leyendas	Peru	Network development  Network development
Jardin Botánico Francisco Javier Clavijero		
Jardín Botánico Horco Molle de la Facultad de Ciencias Naturales	Mexico	Network development
e IML de la Universidad Nacional de Tucumán	Argentina	Network development
Jardín Botánico Medellín	Colombia	Network development
Jardín Botánico Nacional de Lima	Peru	Network development
Jardín Botanico Nacional, Universidad de la Havana	Cuba	Seed and vegetative propagation, tissue culture, cryo preservation
Jardín Botanico Raúl Echeverry Libano	Colombia	Network development
Jardín Botánico Universidad de Talca	Chile	Network development
Jardín Botánico Universidad Técnica de Manabí	Ecuador	Network development
Jardin Botanico Yachay	Ecuador	Network development
Jardín Etnobotánico Patiño.	Paraguay	Network development
Jerusulum Botanice Garden	Israel	Co-creation, TBI, science cafés, stop motion workshops
Jiande Forest Station	China	Strategic planning workshop and training
Jimma Agricultural Research Centre	Ethiopia	Management of <i>ex situ</i> collections
Jimma University	Ethiopia	Management of ex situ collections
Karang Taruna Desa Sekonyer	Indonesia	Propagation, assessments, <i>in situ</i> restoration
Kesatuan Pengalolaan Hutan Produksi Kotawaringin Barat	Indonesia	Propagation, assessments, in situ restoration
Kunming Botanical Garden	China	Conservation technical training, development training
La Huerta Inquieta	Spain	Co-creation, TBI, science cafés, stop motion workshops
Land Morphology	USA	Red list training & assessments
Lee Valley Regional Park	UK	Interpretation, science communication, evaluation
Naturalis Biodiversity Center	Netherlands	Red list training & assessments
LIFE Vidalia	Portugal	Interpretation, science communication, evaluation
Longwood Fellowship Program	USA	Management of <i>ex situ</i> collections
Longwood Periowship Program  Longwood Gardens	USA	Red list training & assessments
Ludus Association	Portugal	
		Interpretation, science communication, evaluation
Madagascar Plant Specialist Group	Madagascar	Red list training & assessments
Mae Fah Luang University Botanical Garden	Thailand	Species reintroductions, collection management of genetic resources

Institution	Country	Topic(s)
Makiling Botanic Gardens	Philippines	Species reintroductions, collection management of genetic resources
Malva Permaculture Farm	Turkey	Co-creation, TBI, science cafés, stop motion workshops
Marriott's Way Heritage Trail	UK	Interpretation, science communication, evaluation
Meise Botanic Garden	Belgium	Co-creation, TBI, science cafés, stop motion workshops
Milan Botanic Garden	Italy	Co-creation, TBI, science cafés, stop motion workshops
Ministerio del Medio Ambiente	Chile	Network development
Ministry of Fisheries and Forests	Fiji	Dry forest restoration planning
Ministry of Forestry and Research - Herbarium and Botanic Gardens	Samoa	Red list training & assessments
Ministry of Forests and Environment	Nepal	Red list training & assessments
Ministry of Natural Resources and Environment	Samoa	Red list training & assessments
Minzu University of China	China	Strategic planning workshop and training
Morton Arboretum	USA	Red list training & assessments
Moscow State University Botanical Garden	Russia	Co-creation, TBI, science cafés, stop motion workshops
Mount Aloysius College, Pennsylvania	USA	Red list training & assessments
Mount Auburn Cemetery	USA	Red list training & assessments
Municipality of Bergamo	Italy	Co-creation, TBI, science cafés, stop motion workshops
MUSE - Trento Science Museum	Italy	Co-creation, TBI, science cafés, stop motion workshops
Museo Botanico DSV - Università di Siena	Italy	Interpretation, science communication, evaluation
Museo Nacional de Costa Rica	Costa Rica	Red list training & assessments
Museo Orto Botanico - Università di Bari	Italy	Interpretation, science communication, evaluation
Museo Orto Botanico di Roma	Italy	Interpretation, science communication, evaluation
Museo y Jardín Botánico Prof. Atilio Lombardo Montevideo Uruguay	Uruguay	Network development
Museum of Mechanic Music (Palmela)	Portugal	Interpretation, science communication, evaluation
Museums of the Technical Institute (University of Lisbon)	Portugal	Interpretation, science communication, evaluation
Myanmar Floriculturist Association	Myanmar	Species reintroductions, collection management of genetic resources
Nairobi Physic Garden	Kenya	Management of <i>ex situ</i> collections
Nanjing Sun yat-sen Botanical Garden,CAS	China	Strategic planning workshop and training
Nanling Botanical Garden	China	Reintroduction technique training
Naples Botanical Garden	USA	Red list training & assessments
National Agriculture and Forestry Research Institute	Laos	Species reintroductions, collection management of genetic resources
National Authority for Preah Vihear	Cambodia	Species reintroductions, collection management of genetic resources
National Botanic Garden of Wales	UK	Interpretation, science communication, evaluation
National Botanic Gardens of Ireland	Ireland	Co-creation, TBI, science cafés, stop motion workshops
National Botanical Gardens Foundation	Seychelles	Species reintroductions, collection management of genetic resources
National Herbarium of Suriname (BBS)	Suriname	Network development
National Museum of Natural History and Science (University of Lisbon)	Portugal	Interpretation, science communication, evaluation
National Museum of Natural History and Science, University of Lisbon	Portugal	Co-creation, TBI, science cafés, stop motion workshops
National Museum of Nature and Science	Japan	Species reintroductions, collection management of genetic resources
National Museums of Kenya	Kenya	Management of <i>ex situ</i> collections
National Trust of Fiji	Fiji	Dry forest restoration planning
National University of Samoa	Samoa	Red list training & assessments
Natural History Museum, University of Oslo	Norway	Co-creation, TBI, science cafés, stop motion workshops
Natural park connected to UIZA (Italian Network Zoo and Aquariums)	Italy	Interpretation, science communication, evaluation
NatureFiji-MaregetiViti	Fiji	Dry forest restoration planning
NatureServe	USA	Red list training & assessments
New York Botanical Garden	USA	Red list training & assessments
Nong Nooch Botanical Garden	Thailand	3
	UK	Species reintroductions, collection management of genetic resources
Northumbria University  Northwestern University Ecotourism Park & Botanic Gardens	Philippines	Interpretation, science communication, evaluation
	1	Species reintroductions, collection management of genetic resources
Observatorio para una Cultura del Territorio	Spain	Co-creation, TBI, science cafés, stop motion workshops
OMA - Observatrorio do mar dos azores ONG-NCI-PERU	Portugal	Interpretation, science communication, evaluation
	Peru	Seed and vegetative propagation, tissue culture, cryo preservation
Orangutan Foundation International	Indonesia	Propagation, assessments, <i>in situ</i> restoration
Orto Botanico - Università di Catania	Italy	Interpretation, science communication, evaluation
Orto Botanico - Università di Padova	Italy	Interpretation, science communication, evaluation
Orto Botanico - Università di Palermo	Italy	Interpretation, science communication, evaluation
Orto Botanico - Università di Parma	Italy	Interpretation, science communication, evaluation
Orto Botanico "G. E. Ghirardi" di Toscolano Maderno (BS)	Italy	Co-creation, TBI, science cafés, stop motion workshops
Orto Botanico "Giardino dei Semplici" SMA - Università Firenze	Italy	Interpretation, science communication, evaluation
Orto Botanico 'Angelo Rambelli' - Associazione di promozione sociale Humus Sapiens - Università della Tuscia di Viterbo	Italy	Interpretation, science communication, evaluation
Orto Botanico Città Studi - Università degli Studi - Milano	Italy	Interpretation, science communication, evaluation
Orto Botanico delle Alpi Apuane "Pellegrini – Ansaldi" - Associazione Aquilegia Natura e Paesaggio Apuano Onlus	Italy	Interpretation, science communication, evaluation
Orto botanico dell'Universitá di Siena	Italy	Interpretation, science communication, evaluation
Orto Botanico del Oniversità di Sieria  Orto Botanico di Bergamo "Lorenzo Rota"	Italy	Interpretation, science communication, evaluation
Orto Botanico di Bergamo Ecoretzo nota  Orto Botanico di Brera - Università degli Studi di Milano	Italy	Interpretation, science communication, evaluation
Orto Botanico di Brera - Università degli studi di Ferrara	Italy	Interpretation, science communication, evaluation
Onto Solumo ou Erbano Oniversità degli stadi di i citala	itury	interpretation, solicinos communication, evaluation

Institution	Country	Topic(s)
Orto Botanico Genova - ADM (Associazione Didattica Museale)	Italy	Interpretation, science communication, evaluation
Orto Botanico Hanbury - Università di Genova	Italy	Interpretation, science communication, evaluation
Orto Botanico Pavia	Italy	Interpretation, science communication, evaluation
Orto Botanico Selva di Gallignano (AN) - Università Politecnica delle Marche	Italy	Interpretation, science communication, evaluation
Orton Botanical Di Siena	Portugal	Interpretation, science communication, evaluation
Osa Conservation, Costa Rica	Costa Rica	Red list training & assessments
Parco Nazionale della Majella	Italy	Interpretation, science communication, evaluation
Pasque Tena Nostra	Portugal	Interpretation, science communication, evaluation
Penang Botanic Gardens	Malaysia	Species reintroductions, collection management of genetic resources
Pha Tad Ke Botanical Garden	Laos	Species reintroductions, collection management of genetic resources
Philippine Native Plants Conservation Society Inc.	Philippines	Red list training & assessments
Plant Conservation and Research Foundation	Bangladesh	Species reintroductions, collection management of genetic resources
PNG Forest Authority - Port Moresby	Papua New Guinea	Red list training & assessments
PNG Forest Research Institute - Lae	Papua New Guinea	Red list training & assessments
PNG University of Technology-Forestry Department	Papua New Guinea	Red list training & assessments
Prefectura de Itatiba	Brazil	Seed conservation
Presidente gruppo Orti	Italy	Interpretation, science communication, evaluation
Qinghai Academy of Agriculture	China	Strategic planning workshop and training
Qinling National Botanical Garden	China	Strategic planning workshop and training
Queen Sirikit Botanic Garden	Thailand	Species reintroductions, collection management of genetic resources
Real Jardin Botáncio De Madrid	Spain	Co-creation, TBI, science cafés, stop motion workshops
Reardon Russian Services	UK	Co-creation, TBI, science cafés, stop motion workshops
Reforma de la U.A	Portugal	Interpretation, science communication, evaluation
Regional Forest Agency	Italy	Interpretation, science communication, evaluation
Regional Network of Botanic Gardens	Italy	Interpretation, science communication, evaluation
Reserva Natural El Refugio, Dagua	Ecuador	Seed and vegetative propagation, tissue culture, cryo preservation
Rete degli Orti Botanici della Lombardia	Italy	Interpretation, science communication, evaluation
Rete Orti Botanicindella Lombardia	Italy	Co-creation, TBI, science cafés, stop motion workshops
Reykjavik Botanic Garden	Iceland	Co-creation, TBI, science cafés, stop motion workshops
Ringve Botanical Garden	Norway	Co-creation, TBI, science cafés, stop motion workshops
Royal Botanic Garden Edinburgh	UK	Co-creation, TBI, science cafés, stop motion workshops
Royal Botanic Gardens Kew	UK	Co-creation, TBI, science cafés, stop motion workshops
Royal Horticultural Society	UK	Interpretation, science communication, evaluation
Royal Observatory Greenwich	UK	Interpretation, science communication, evaluation
RPPN Reserva Ecologica Amadeu Botelho	Brazil	Seed conservation
Sabah Forestry Department	Malaysia	Red list training & assessments
Sabah Parks	Malaysia	Species reintroductions, collection management of genetic resources
Samoa Conservation Society	Samoa	Red list training & assessments
San Diego Zoo Global	USA	Red list training & assessments
Sanya Academy of Forestry	China	Strategic planning workshop and training
Sarawak Energy Berhad	Malaysia	Species reintroductions, collection management of genetic resources
Sarawak Forestry	Malaysia	Red list training & assessments
Sarawak Forestry Corporation	Malaysia	Species reintroductions, collection management of genetic resources
School Biology Centre Hannover	Germany	Co-creation, TBI, science cafés, stop motion workshops
Sefton Park Palm House	UK	Interpretation, science communication, evaluation
Serralves Foundation	Portugal	Interpretation, science communication, evaluation
Shashemene Botanical Garden	Ethiopia	Management of ex situ collections
Shenyang arboretum, CAS	China	Strategic planning workshop and training
Shuttleworth Trust	UK	Interpretation, science communication, evaluation
Singapore Botanic Gardens	Singapore	Red list training & assessments
Sito Duas Cachoeiras/Jardim Botanico Arariba	Brazil	Seed conservation
SKW II Balai Konservasi Sumber Daya Alam Kalimantan Tengah	Indonesia	Propagation, assessments, in situ restoration
Smartincircles circklo	Spain	Co-creation, TBI, science cafés, stop motion workshops
Sofia University "St. Kl. Ohridski"	Bulgaria	Co-creation, TBI, science cafés, stop motion workshops
South China Botanical Garden, CAS	China	Strategic planning workshop and training, Conservation technical training
South London Botanical Institute	UK	Interpretation, science communication, evaluation
Southwest Forestry University	China	Strategic planning workshop and training
State Botanical Garden of Kentucky	USA	Red list training & assessments
State Capital of Hannover	Germany	Co-creation, TBI, science cafés, stop motion workshops
Stavanger botanic garden	Norway	Co-creation, TBI, science cafés, stop motion workshops
SureData Consulting	UK	Interpretation, science communication, evaluation
Szkoła na Widelcu Trust	Poland	Co-creation, TBI, science cafés, stop motion workshops
Tallinn Botanical Garden	Estonia	Co-creation, TBI, science cafés, stop motion workshops
Tanjung Putting National Park	Indonesia	Propagation, assessments, in situ restoration
Tecnológico de Antioquia, Institución Universitaria, Medellín	Colombia	Seed and vegetative propagation, tissue culture, cryo preservation, Network development
The Foodbridge vzw	Belgium	Co-creation, TBI, science cafés, stop motion workshops
The Huntington, Art Collections, and Botanical Gardens	USA	Seed and vegetative propagation, tissue culture, cryo preservation

Institution	Country	Topic(s)	
The Indonesia Institute of Sciences	Malaysia	Red list training & assessments	
The Pacific Community (SPC)	Fiji	Dry forest restoration planning	
The Royal Parks	UK	Interpretation, science communication, evaluation	
The Yorkshire Arboretum	UK	Interpretation, science communication, evaluation	
Tianmushan National Nature Reserve	China	Strategic planning workshop and training	
Tooro Botanical Gardens	Uganda	Co-creation, TBI, science cafés, stop motion workshops	
Tropical Rainforest Conservation & Research Centre	Malaysia	Propagation, assessments, in situ restoration, Species Reintroductions, collection management of genetic resources, Red list training & assessments	
Tropologic	Samoa	Red list training & assessments	
United States Botanic Garden	USA	Red list training & assessments	
United States Forest Service	USA	Red list training & assessments	
Univeristy of San Carlos (Philippines)	Philippines	Red list training & assessments	
Universidad Autonoma Chapingo	Mexico	Seed and vegetative propagation, tissue culture, cryo preservation	
Universidad Autonoma de Chiapas	Mexico	Seed and vegetative propagation, tissue culture, cryo preservation	
Universidad Autonoma de Tamaulipas	Mexico	Seed and vegetative propagation, tissue culture, cryo preservation	
Universidad de Alcalá	Spain	Co-creation, TBI, science cafés, stop motion workshops	
Universidad de Guadalajara	Mexico	Seed and vegetative propagation, tissue culture, cryo preservation	
Universidad Nacional Autónoma de Honduras	Honduras	Red list training & assessments	
Universidad Nacional Autonoma de Mexico	Mexico	Red list training & assessments	
Universidad Politécnica de Madrid	Spain	Co-creation, TBI, science cafés, stop motion workshops	
University College London	UK	Co-creation, TBI, science cafés, stop motion workshops	
Università di Firenze	Italy	Interpretation, science communication, evaluation	
Università di Milano	Italy	Interpretation, science communication, evaluation	
Universiti Brunei Darussalam	Brunei	Red list training & assessments, Propagation, assessments, <i>in situ</i> restoration	
University Botanic Garden -Bulgaria			
	Spain	Co-creation, TBI, science cafés, stop motion workshops	
University College for Agrarian and Environmental Pedagogy University of Antananarivo	Austria	Co-creation, TBI, science cafés, stop motion workshops	
	Madagascar	Red list training & assessments	
University of Denver	USA	Seed and vegetative propagation, tissue culture, cryo preservation	
University of Gondar	Ethiopia	Management of <i>ex situ</i> collections	
University of Innsbruck	Austria	Co-creation, TBI, science cafés, stop motion workshops	
University of Malaysia Sabah	Malaysia	Red list training & assessments	
University of Osnabrück	Germany	Co-creation, TBI, science cafés, stop motion workshops  Red liet training & assessments	
University of Papua New Guinea	Papua New Guinea	Red list training & assessments  Seed and vegetative propagation, tissue culture, cryo preservation	
University of San Carlos	Guatemala	Dry forest restoration planning, Red list training & assessments	
University of South Australia	Australia UK		
University of South Wales		Interpretation, science communication, evaluation	
University of the South Pacific	Fiji	Dry forest restoration planning	
University of Vienna Botanic Garden	Austria	Co-creation, TBI, science cafés, stop motion workshops	
University of Warsaw Botanic Garden	Poland	Co-creation, TBI, science cafés, stop motion workshops	
University Vechta	Germany	Co-creation, TBI, science cafés, stop motion workshops	
Urban Gardens Network Madrid	Spain	Co-creation, TBI, science cafés, stop motion workshops	
Vallarta Botanical Gardens	Mexico	Seed and vegetative propagation, tissue culture, cryo preservation	
Villa Carlotta	Italy	Interpretation, science communication, evaluation	
Vilnius University Botanical Garden	Spain	Co-creation, TBI, science cafés, stop motion workshops	
Viveiro Valle Encantado	Brazil	Seed conservation	
VMU Botanical Garden	Lithuania	Co-creation, TBI, science cafés, stop motion workshops	
Vytautas Magnus University Botanical Garden	Lithuania	Co-creation, TBI, science cafés, stop motion workshops	
Waag	Netherlands	Co-creation, TBI, science cafés, stop motion workshops	
Wasaa Conservation Centre	Kenya	Management of ex situ collections	
Water Museum (Museu da Água, Lisbon)	Portugal	Interpretation, science communication, evaluation	
Wild Earth Allies - Missouri Botanical Garden	USA	Red list training & assessments	
Wissenschaftsladen Bonn	Germany	Co-creation, TBI, science cafés, stop motion workshops	
Woldia University	Ethiopia	Management of ex situ collections	
Wollega University World Forestry Center	Ethiopia USA	Management of <i>ex situ</i> collections Red list training & assessments	
Wuhan Botanical Garden, CAS	China	Propagation, pollination technique training, Strategic planning workshop and training	
WWF España	Spain	Co-creation, TBI, science cafés, stop motion workshops	
Xishaungbannan Tropical Botanical Garden	China	Conservation technical training	
Zhejiang Academy of Forstry	China	Evaluation, Strategic planning workshop and training	
Zhoushan Academy of Forestry	China	Strategic planning workshop and training	
Zoological Society of London	UK	Interpretation, science communication, evaluation	
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#### **BGCI INSTITUTIONAL MEMBERSHIP**

Established in 1987, BGCI currently links more than 600 botanic gardens and conservation organisations in over 100 countries, working together to secure plant diversity for the well-being of people and the planet.

As an institutional member of BGCI, you are part of the largest network of botanic gardens in conservation, and have access to a range of dedicated services:

- Grants through the Global Botanic Garden Fund
- The Botanic Garden Accreditation Scheme
- Botanic Garden technical support and advisory services
- Subsidised training courses when available
- Prizes and awards
- Discounted Congress attendance (BGCI Global and **Education Congresses**)
- BGCI's electronic publications, including BGjournal (conservation) and Roots (education)
- Members' Area and extra features to our global database resources: PlantSearch, ThreatSearch and GlobalTreeSearch
- Use of the BGCI website to promote your events, news, and job listings
- Permission to use BGCI's logo and name
- A membership pack and Certificate of Membership

### 2020 Institutional Membership Categories

### The Global Botanic Garden Fund 2020 Call for **Applications**

The Global Botanic Garden Fund aims to drive plant conservation, especially in smaller gardens. The fund will aim to disburse 15-20 small grants of USD 1,000 to 2,500 each in 2020.

Grants must be framed within the Global Strategy for Plant Conservation, and will include plant conservation practices, plant conservation policy and education, infrastructure development, training for plant conservation, international partnerships, and mentoring botanic gardens in efforts to achieve success through BGCI's Botanic Garden Accreditation Scheme.

The 2020 Global Botanic Garden Fund will have an additional focus on sustainability and support to attend the 7th Global Botanic Garden Congress in Melbourne, Australia.

Botanic Gardens can apply for grants from the BGCI Global Botanic Garden Fund through a simple application form on the BGCI website. Applicants will be required to provide information on the proposed rationale, activities, outcomes, timeline and budget. BGCI will issue a call for applications for the 2020 Global Botanic Garden Fund in April/May 2020.

Cate	egory	GBP	USD	EUR
F	Institution Member (budget below USD 100,000)	£ 125	\$ 150	€ 135
Е	Institution Member (budget USD 100,000 - 750,000)	£ 270	\$ 350	€ 325
D	Institution Member (budget USD 750,000 - 1,500,000)	£ 500	\$ 650	€ 575
C	Institution Member (budget USD 1,500,000 - 2,250,000)	£ 675	\$ 900	€ 800
В	Institution Member (budget more than USD 2,250,000)	£ 1,250	\$ 1,500	€ 1,375

#### BGCI INDIVIDUAL MEMBERSHIP



Even if you are not an institution, you can make a difference by joining our community as an individual. BGCI offers two types of individual membership: Individual Supporter and Conservation Donor.



**BGCI** Individual Supporters and Conservation Donors make a yearly commitment to support our plant conservation activities. The membership fee individuals provide supports the services that BGCI provides to botanic gardens and conservation efforts across the globe.

As a BGCI Individual Supporter, you are part of the largest global network of botanic

gardens, institutions, and individuals in conservation, and have access to a range of dedicated services:

- Regular newsletters
- BGCI bi-annual publications: BGjournal and Roots
- · Invitations to events
- Permission to use BGCl's logo and name
- A membership pack and Certificate of Membership
- Subsidised training courses
- Prizes and awards

In addition, Conservation Donors receive:

- Discounts on registration fees to BGCI congresses
- The opportunity to get more involved in the work of BGCI on an ad-hoc basis
- Use of the BGCI website to promote your events, news, and job listings where appropriate
- A membership pack and Certificate of Membership

#### 2020 Individual Membership Categories

### GBP USD Category **EUR** Individual Supporter £ 90 \$ 115 € 95 Conservation Donor £ 310 \$ 365 € 325

#### **BGCI PATRON MEMBERSHIP**

BGCI's Patron Gardens support our work both financially and with in-kind donations. They include some of the largest, most influential gardens in the world, and are entitled to the following additional benefits:



- A seat on BGCl's prestigious International Advisory Council
- Office space and office support when visiting London
- Preferential fund raising and project development activities
- The opportunity to speak at BGCI Congresses
- Invitations to BGCI special events
- A feature on BGCI's website

BGCI Patron Gardens in 2019:

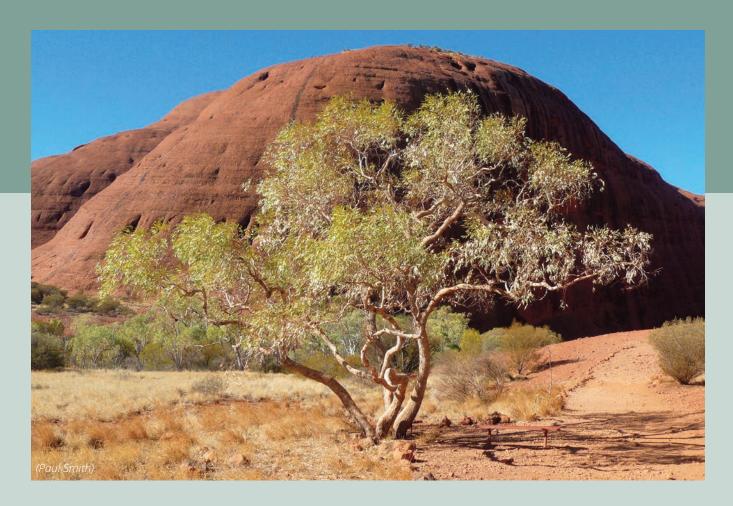
- Atlanta Botanical Garden
- Beijing (northern) Botanical Garden
- Chicago Botanic Garden
- Conservatoire et Jardin botaniques de la Ville de Genève (in kind)
- Fairylake Botanical Garden, Shenzhen & Chinese Academy of Sciences
- Huntington Botanical Gardens
- Kadoorie Farm and Botanic Garden (in kind)
- Korea Institute of Arboretum Management
- Missouri Botanical Garden
- The Morton Arboretum
- New York Botanic Garden
- The Royal Botanic Gardens Edinburgh
- The Royal Botanic Gardens, Kew
- The Royal Botanic Garden and Domain Trust, Sydney
- Royal Botanic Gardens Victoria
- Shanghai Botanical Garden
- Shanghai Chenshan Botanical Garden
- Singapore Botanic Garden
- South China Botanical Garden, CAS (in kind)
- United States Botanic Garden
- Xishuangbanna Tropical Botanical Garden, CAS

(The Morton Arboretum)



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