

BGCI's Annual Member's Review 2017

Policy & advocacy • Connecting people • Sharing knowledge • Saving plants



BGCI

Plants for the Planet



30
YEARS
1987-2017

Message from BGCI's Secretary General



Welcome to BGCI's Member's Review for 2017, our annual report that summarises BGCI's work supporting our professional community of botanic gardens, and alerting you to new benefits and opportunities.

2017, our 30th anniversary, has been a very productive year for BGCI and for our community of

botanic gardens. The highlight of the year for me was **BGCI's 6th Global Botanic Gardens Congress**, held in Geneva in June. We are very grateful to Pierre-André, Michelle, Danièle and the team at the **Conservatoire et Jardin Botaniques** in Geneva for the excellent job they did hosting this meeting. We received a great deal of positive feedback, many saying it was like a family reunion (in a good way) - a great achievement with 500 delegates present!

BGCI's work **supporting policy** and as an **advocate for botanic gardens** in 2017 has encompassed a study on our relevance to the Sustainable Development Goals, support for a number of regional and national networks of botanic gardens and a technical review examining **the essence of what a botanic garden is** and how to measure success. BGCI's International Advisory Council now comprises 26 botanic garden directors who are playing **a strategic role in guiding BGCI's agenda and botanic garden policy**.

BGCI's role **connecting people** was epitomized by the **6th Global Botanic Gardens Congress** but also at several other BGCI-led meetings in South East Asia and the Americas. This was an epic year for BGCI participation in meetings with **BGCI staff attending meetings on every continent**, promoting the role of botanic gardens in the conservation and management of plant diversity to foresters, crop scientists, restoration ecologists and conservationists. This year also saw the launch of the **BGCI/ArbNet Botanic Garden Partnership Programme** with grants made to support new partnerships.

2017 was a very significant year for one of BGCI's most important functions – **sharing knowledge**, especially through **BGCI-led vocational training**. In total, BGCI trained **957 people** from **310 institutions** from **48 countries** (see Table 1). 2017 was also a big year for BGCI's databases. ThreatSearch (www.bgci.org/threat_search.php)

was promoted by the CBD Secretariat to all CBD national focal points as the **authoritative source of information** on threatened plants towards achieving **Targets 2 and 8** of the Global Strategy for Plant Conservation. In addition, Advanced PlantSearch was launched on the new Member's area (<https://members.bgci.org/>) of the BGCI website in March, enabling users to see **which gardens have which collections** for the first time. GlobalTreeSearch (www.bgci.org/global_tree_search.php), BGCI's newest database, was launched in April via a paper published in the *Journal of Sustainable Forestry*. The story derived from this paper – How many tree species are there in the world? – generated **72 news stories** around the world and achieved an **Altmetric score of 751**, putting it in the **top 5%** of all outputs scored by Altmetric. The paper has been viewed over **9,000** times online, and is our most used resource on the BGCI website.

BGCI is not just a facilitating organization. A substantial proportion of our work is in leading projects that aim to **save plants**, either directly through conservation practice or through policy and public engagement. The publication of GlobalTreeSearch mentioned above forms the backbone of the **Global Tree Assessment**, and will enable BGCI to significantly scale up red listing efforts in 2018. Our technical plant conservation networks – the **Global Seed Conservation Challenge**, the **Ecological Restoration Alliance** and the **International Plant Sentinel Network** - continue to grow, and the **Global Trees Campaign** has supported the integrated (*in situ* and *ex situ*) conservation of **120 tree species in 17 countries**, generating **over 450,000 seedlings** for reintroduction and reinforcement planting. BGCI is also very proud of the progress its two large public engagement projects, **Learn to Engage** and the **Big Picnic**, have made. The latter project, focusing on engaging the public on food security, has been identified as an **exemplar project** by the funder, Horizon 2020.

Finally, BGCI disbursed funds totaling **US\$ 1,048,250** to botanic gardens and other botanical institutions in 2017 (see Table 2). As always, this figure is many times what we receive in subscriptions from you, our members, and I hope is an indication that your membership of BGCI is a good investment in our community of botanic gardens. Thank you for your support. It is greatly appreciated!

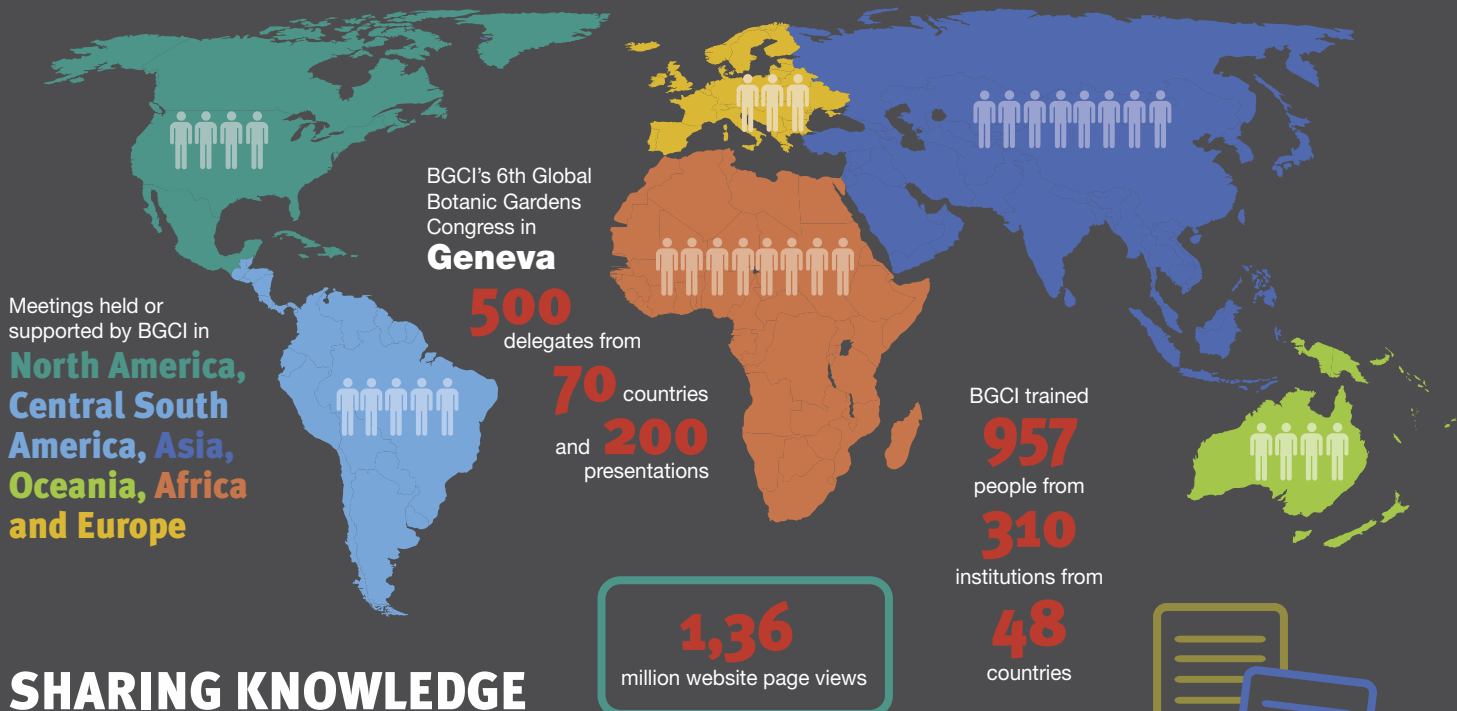
Dr Paul Smith,
BGCI Secretary General

Contents

Policy and advocacy	3
Global Partnership for Plant Conservation	3
Regional and National Botanic Garden Networks	3
The European Botanic Gardens Consortium	3
The Southeast Asia Botanic Garden Network	4
The African Botanic Garden Network	4
The Chinese Union of Botanic Gardens	4
The Mexican Association of Botanic Gardens	4
Botanic Gardens of Australia and New Zealand	4
BGCI's International Advisory Council	4
BGCI Technical Review on defining the botanic garden and how to measure performance and success	5
The Marsh Awards for international plant conservation and botanic garden education	5
BGCI's Global Seed Conservation Challenge Awards	5
Connecting people	6
Meetings and symposia	6
BGCI's 6th Global Botanic Gardens Congress	6
South East Asian Botanic Garden Network (SEABG) meeting	7
Oaks of the Americas Conservation Network meetings	7
Other meetings attended or supported by BGCI	7
Partnerships	8
Botanic Garden Partnership Programme	8
The Global Oak Conservation Partnership	8
Sharing knowledge	9
Data services	9
Publications	9
Training courses	12
Public engagement and education	14
Resources	15
Saving plants - leading innovative projects in plant conservation policy, practice and education	16
The Global Tree Assessment	16
The Global Seed Conservation Challenge	17
The Global Trees Campaign	17
The International Plant Sentinel Network	18
The Ecological Restoration Alliance of Botanic Gardens	19
Big Picnic Big Questions – engaging the public with Responsible Research and Innovation on Food Security	19
Learn To Engage – a modular course for botanic gardens	19
Fundraising and funds disbursed	20

BGCI disbursed funds totaling US\$ 1,048,250 to botanic gardens and other institutions in 2017, which is many times what we receive in subscriptions from our members.

CONNECTING PEOPLE



SHARING KNOWLEDGE



Two new databases launched ThreatSearch and GlobalTreeSearch

1,380 new Twitter followers



Two editions of **BGjournal** were published
Two issues of **Roots** were published



Two scientific papers published in top 5% of all Altmetric scores

SAVING PLANTS



120 tree species conserved in **17** countries

450,000 seedlings generated for reintroduction and restoration



932 species conservation assessments submitted to the IUCN Red List



POLICY AND ADVOCACY

Barney Wilczak

Global Partnership for Plant Conservation

The Global Strategy for Plant Conservation (GSPC) and its 16 outcome-oriented targets to be achieved by 2020 provides a clear focus for plant conservation work within the framework of the Convention on Biological Diversity (CBD). BGCI supports the implementation of the GSPC through on-the-ground action, capacity building initiatives and policy support. BGCI also provides the Secretariat to the Global Partnership for Plant Conservation (GPPC) an informal grouping of institutions with international plant conservation programmes. During 2017, BGCI worked with the GPPC to initiate a discussion on the future of the GSPC in the post-2020 biodiversity framework. It is clear that

post-2020 plant conservation targets need to be closely linked to higher level biodiversity targets (Aichi targets) and the Sustainable Development Goals (SDGs). A discussion paper prepared by BGCI for the GPPC on plant conservation and the SDGs in 2016 was further refined in 2017 and published in the Annals of the Missouri Botanical Garden. During 2017, BGCI also worked with the GPPC on a submission to the CBD Secretariat calling for a specific focus on plants to be maintained in the post-2020 biodiversity framework. BGCI will continue to advocate for plant specific targets or indicators as the post-2020 biodiversity discussion continues amongst the international community.

www.plants2020.net/global-implementation/

Regional and National Botanic Garden Networks

The European Botanic Gardens Consortium

BGCI convenes the European Botanic Gardens Consortium, which consists of one representative from each of the European countries. The Consortium meets twice yearly, with meetings in 2017 hosted in Bulgaria (the University of Sofia Botanic Garden) and Hungary (Hungarian Association of Arboreta and Botanic Gardens). Key issues addressed by the Consortium this year focused on the botanic garden response to the introduction of the European Regulation on Access and Benefit Sharing (implementation of the Nagoya Protocol) and the updating of the Action Plan for Botanic Gardens in Europe. BGCI, through the Consortium, also supported the Hungarian Association of Arboreta and Botanic Gardens in hosting the 3rd Conference of Eastern and Central European Botanic Gardens (EastCentGard III) in Budapest from 9-11 October. The conference attracted 78 participants from 24 countries.

Heather McHaffie





The South East Asia Botanic Garden Network

The Southeast Asia Botanic Garden Network has gained momentum in 2017 after the appointment of Jean Linsky the network coordinator at the Dr. Cecilia Koo Botanic Conservation Center. Major activities include the successful organization of the 6th SEABG Network conference in Bidoup-Nuiba National Park, Vietnam in April; the development and coordination of the network communications strategy, including the new SEABG website and newsletter; leading funding proposals for the development of the SEABG programme of activities and presenting BGCI and the SEABG's work at regional meetings such as the International Conference on Tropical Plant Conservation and Utilization and Bogor Botanic Garden's 200th Anniversary in May. The network will continue to advance in the coming year through the development of regional projects to secure threatened species in *ex situ* collections.

The African Botanic Garden Network

At the start of 2017, BGCI set up a new office in Nairobi, Kenya. One of the aims is to provide increased support to botanic gardens across Africa. The African Botanic Garden Network (ABGN) was established in 2002, but unfortunately, due to a lack of funding, the network became largely inactive. At the 6th Global Botanic Garden Congress in Geneva, BGCI held a meeting about reviving ABGN. The 29 meeting participants agreed it was a good idea to revive the network and discussed what was needed from the network. BGCI and Jardins Botaniques de Frances et des Pays Francophones (JBF) committed to providing a joint Secretariat role for the network. A survey has been developed for botanic gardens across Africa to complete to ensure that their views are incorporated into the revival of the network and further progress towards reviving the network will be made in 2018.

The Chinese Union of Botanic Gardens

BGCI signed a 5 year Memorandum of Understanding with the Chinese Union of Botanical Gardens in Shenzhen on July 25th, 2017 agreeing to work together in areas such as data exchange, capacity building, botanic garden management and plant conservation.

The Mexican Association of Botanic Gardens

BGCI signed a Memorandum of Understanding with the Asociación Mexicana de Jardines Botánicos (AMJB) on December 12th 2017, agreeing to work together on joint funding applications, training, botanic garden management and the sharing of data and protocols.

Botanic Gardens of Australia and New Zealand

Initial discussions took place between BGCI and the Botanic Gardens of Australia and New Zealand (BGANZ) Council on 25th October 2017 about developing a Memorandum of Understanding encompassing activities such as data exchange, botanic garden accreditation, red listing and tree conservation.

BGCI's International Advisory Council

BGCI's International Advisory Council (IAC), comprising 26 botanic garden directors from six continents, met in Geneva on June 25th 2017. The main agenda items were:

- I. The selection process for BGCI's 7th Global Botanic Garden Congress and future Congresses. The IAC concluded that the selection criteria are clear, and it is helpful to have a transparent process in place with the selections being made by a sub-set of the IAC (i.e. a group outside BGCI).
- II. Defining the botanic garden and how to measure performance and success. The Technical Review on this topic carried out by BGCI at the IAC's request was discussed (see below), and BGCI was congratulated on the Review.
- III. BGCI's Botanic Garden Accreditation Scheme. The proposed accreditation scheme was discussed following review by a sub-set of the IAC, and further development of the Scheme was endorsed by the IAC.
- IV. Establishment of a Global Botanic Garden Fund. The IAC supported the idea of developing a plant conservation fund and noted the need to develop criteria and guidelines for its use.

In 2018, the IAC has requested that BGCI carry out a Technical Review on:

- Return on Investment case studies in which botanic gardens make the case that they are net financial, social and environmental contributors to society.

This study will be built into BGCI's 2018 work plan.



BGCI Technical Review on defining the botanic garden and how to measure performance and success



There is some evidence that the activities that botanic gardens do uniquely well – particularly to do with documenting, understanding, growing and conserving plant diversity across the taxonomic array – are not sufficiently recognised by policymakers and funders, leading to the erosion of the values and activities that define a botanic garden.

Some countries have legislation, charters or other legal instruments that formally define and recognise the role of ‘botanic gardens’ and differentiate them from public parks, historic gardens and other horticultural attractions. However, most do not, and even within our professional community, botanic gardens are established and managed for many different purposes, including visitor attraction, public education, science and conservation. Given their multi-functional role, gardens can easily neglect some of their most important functions in favour of other, more immediate priorities.

Recognising that the botanic garden community encompasses many different kinds of gardens but also has a set of clear, defining characteristics, in May 2016 BGCI’s International Advisory Council requested that BGCI carry out a technical



Adam Harrower

review looking at (a) how botanic gardens define themselves, and (b) how botanic gardens measure success. This Technical Review is based on the results of an online survey that BGCI carried out early in 2017 entitled ‘Defining botanic gardens and key performance indicators’. In addition, a literature survey of botanic garden annual reports was undertaken to gather further data on how gardens measure success. In total, this review incorporates data from over 200 botanic gardens in more than 50 countries. The Technical Review can be downloaded from www.bgci.org/files/IAC/IAC%202017/medres.pdf

The Technical Review has been translated into Chinese, and is available in this language from the Chinese Union of Botanical Gardens.

The Marsh Awards for international plant conservation and botanic garden education

In 2017, BGCI was delighted to announce that the **Marsh Award for International Plant Conservation** was awarded to **Olukunye Olasupo** from the International Institute of Tropical Agriculture. Kunye’s skills and commitment have been crucial in developing Nigeria’s first arboretum for the *ex situ* conservation of threatened trees, and in guidance and capacity building for staff, conservation partners, teachers, students and postgraduates.



The **Marsh Award for Botanic Gardens Education** was awarded to **Amy Padolf** of Fairchild Tropical Botanic Garden in Florida, USA. Amy has led Fairchild’s innovative Growing Beyond Earth and Million Orchids projects, and has demonstrated extraordinary leadership and innovation over many years.

BGCI would like to congratulate both recipients on their richly deserved awards.

BGCI’s Global Seed Conservation Challenge Awards

Prizes were also awarded at the 6th Global Botanic Gardens Congress to gardens that excel in seed banking; there were five categories. Australian PlantBank made the greatest progress in seed conservation. Bok Tower Gardens conserved the greatest proportion of threatened species in their collection. Oman Botanic Garden conserved the most useful species, *Aloe dhufarensis*. Conservatoire et Jardin Botaniques de la Ville de Genève conserved *Typha minima*, the most difficult to collect species and Harold L. Lyon Arboretum conserved *Silene perlmani*, the most threatened species.



CONNECTING PEOPLE

Meetings and symposia

BGCI's 6th Global Botanic Gardens Congress



6GBGC was held in Geneva from 26-30 June, hosted by the Conservatoire et Jardin Botaniques de la Ville de Genève (CJBG). It was attended by **>500 delegates from 70 countries**. Over **200 presentations and posters** were given at the Congress, which had the theme

'Botanic gardens in society: visions for the future'. As well as a varied and stimulating scientific programme, participants enjoyed a range of social activities, including a gala dinner that celebrated the 200th anniversary of CJBG and the 30th anniversary of BGCI. Plenary speakers discussed the importance of botanic gardens in engaging with and addressing major societal issues – including



“I have to tell you again - the meeting was among the best, if not the best I've ever attended. Very well organized, a great size and diversity of participants, and a positive and engaging community.”

“Congratulations on a fantastic botanical congress. I found it really inspiring, thank you so much.”

“Ce congrès était magnifique : très bien organisé, utile pour tous et chaleureux.”

food security, climate change, sustainability and biodiversity conservation. Tuesday 27 June was designated **'Tree Tuesday'** at the Congress. Sponsored by The Morton Arboretum and organised by the Global Trees Campaign, the day was dedicated to highlighting the latest developments towards ensuring zero tree species extinctions. Sessions focused on the importance of trees to humankind, tools that are available to support tree conservation, the opportunities and challenges for botanic gardens in conserving tree species and progress towards the Global Tree Assessment. During the Congress, awards were made to the winners of the 2017 Marsh Awards for excellence in International Plant Conservation and Botanic Garden Education and to the winners of the Global Seed Conservation Challenge awards (see p 5).

Further information about the congress, including videos of the plenary talks and abstracts of all presentations are available at: www.bgci.org/news-and-events/6gbgc



South East Asian Botanic Garden Network (SEABG) meeting



The Southeast Asia Botanic Gardens Network, in conjunction with BGCI, hosted the 6th SEABG Network conference at Bidoup-Nuiba National Park, Vietnam in April. Forty-nine participants representing 17 countries came together to discuss

issues of importance to the functioning of the network such as botanic garden coordination at the national level, updating the SEABG Working Practices document, network communications and internet visibility, and fundraising for network project activities. Participants had a chance to present the structure of the national network of botanic gardens in each country represented, and identify national representatives to improve communications from SEABG to the national level. Methods for effective internal network communications were also discussed. A key section of the conference was a working group session to develop funding proposals for the conservation of Dipterocarp species. The ideas developed during this session will drive the advancement of the SEABG Network programme of work in the coming year. A training course on 'Methods for *ex situ* conservation of exceptional species' was also run in association with the network conference.

Barney Wilczak



Oaks of the Americas Conservation Network meetings

As part of its role in the Global Oak Conservation Partnership, an initiative of the Global Trees Campaign, The Morton Arboretum organized two oak-focused conservation workshops in Latin America this year. In September, a two-day workshop was held at Puebla Botanic Garden on the taxonomy and conservation of rare Mexican oak species. The workshop brought together 30 oak experts from seven institutions across Mexico to untangle challenging taxonomic problems and discuss themes like morphology, biogeography, hybridization and conservation for this incredibly diverse and threatened tree group. The group was able to create a working checklist of Mexican oak species and review and update IUCN Red List assessments for 16 Mexican oak species. Another two-day workshop was held in October at Zamorano University in Honduras entitled, "Workshop on the Conservation of *Quercus insignis* and its Habitat". Sixteen researchers and conservation practitioners attended from ten institutions in five different countries in North and Central America to develop a conservation strategy for threatened *Quercus insignis* and its disappearing cloud forest habitat. As a result of this workshop, a data-sharing protocol is being developed for this species, collecting work is being planned, and reforestation experiments are being designed. These two workshops represent the third and fourth meetings of the Oaks of the Americas Conservation Network (OACN), a regional, cross-sector conservation consortium established by The Morton Arboretum and BGCI in March 2016. OACN now has 105 members from 8 countries.



Deb Brown

Other meetings attended or supported by BGCI

In addition to the meetings above, BGCI staff presented BGCI's work at:

- Sixth meeting of the Ad Hoc Open-ended Working Group to Enhance the Functioning of the Multilateral System of Access and Benefit-sharing (Rome, March).
- The Directors of Large Gardens annual meeting (New Orleans, LA, March)
- Puebla Botanic Garden's 40th anniversary meeting (Puebla, May)
- The American Public Gardens Association annual conference (Hamilton, May)
- The annual meeting of the Center for Plant Conservation (San Diego, CA, May)
- The Association of The Taxonomic Study of the Flora of Tropical Africa (AETFAT) (Nairobi, May)



- International Conference on Tropical Plant Conservation and Utilization and Bogor Botanic Garden's 200th Anniversary (Bogor, May)
- The International Botanical Congress (Shenzhen, July)
- The Association for Tropical Biology and Conservation (ATBC) annual conference (Merida, July)
- Society for Ecological Restoration (SER) World Congress (Foz do Iguazu, August)
- The Mexican Association of Botanic Gardens annual meeting (Xalapa, September)
- CGIAR Genebank Managers Meeting (Brussels, September)
- EastCentGard III (Budapest, October)
- Shanghai's International Nature Conservation conference (Shanghai, October)
- The Botanic Gardens of Australia and New Zealand conference (Adelaide, October)
- The IUCN Plant Conservation Committee meeting (Cape Town, October)
- The American Public Gardens Association's Plant Conservation & Native Plants Symposium (Framingham, MA, October)
- International Maple Symposium 2017 (Roscoff, October)
- PlantNetwork, Plant Pests and Disease Management, Detection and Treatment (Cambridge, October)
- International Symposium of Baekdudaegan National Arboretum (Baekdudaegan, October)
- Tropical Plant Identification and Forest Management Workshop (Nay Pyi Taw, October)
- The CBD Secretariat (Montreal, November)
- International Union of Forest Research Organizations (IUFRO) Fagaceae Genetics and Genomics Symposium (Shanghai, November)
- Advancing Implementation of the Nagoya Protocol (Brussels, November)

Partnerships

Botanic Garden Partnership Programme

BGCI is committed to supporting collaboration between gardens, the sharing of resources and mutual capacity building. To achieve this, BGCI, in partnership with The Morton Arboretum, has launched the BGCI/ArbNet Botanic Garden Partnership Programme. This programme aims to support mutually beneficial, long-term partnerships between gardens based on shared interests and capacities. In 2017 BGCI and ArbNet established a small grants fund to provide grants for partnership activities. Five pilot partnerships were established in 2017 and small grants were awarded to four of these:

- The Tasmanian Arboretum, Australia and Vilnius University Botanical Garden, Lithuania: Grant to develop social media videos to promote the plant conservation role of botanical institutions.
- Brackenhurst Botanic Garden, Kenya and Missouri Botanical Garden, USA: Grant to develop an African botanical garden in Kenya.
- Montgomery Botanical Center, Inc. USA and Belize Botanic Garden, Belize: Grant for staff exchange visits in support of palm conservation.
- South London Botanical Institute, UK and Botanic Garden of Sapienza University of Rome, Italy: Grant for staff exchange visits in support of garden development and enhanced plant conservation activities.
- Stellenbosch University Botanic Garden, South Africa and Shanghai Chenshan Botanic Garden, China

This programme will be expanded in 2018.

www.bgci.org/joinin/partnership-programme/.

The Global Oak Conservation Partnership

The Global Oak Conservation Partnership was established in 2016 between BGCI, Fauna & Flora International, and The Morton Arboretum to integrate tailored *in situ* protection and management activities with coordinated, genetically diverse *ex situ* conservation collections of living trees to ensure that no oak species goes extinct and that all species are secure within healthy ecosystems. 2017 has seen many successful achievements for this Partnership, including the publication of *The Red List of US Oaks* (see *Red List assessments*), two entirely oak-focused training and expertise networking workshops (see *Oaks of the Americas Conservation Network meetings*), oak-focused sessions or talks presented at ten international conferences (see *Meetings and Symposia*), the completion of a Conservation Gap Analysis of US Oaks (in press), and the expansion of the Oaks of the Americas Conservation Network to include over 100 members from 8 countries. Targeted species conservation projects have supported research, population surveys, and/or seed collecting for nearly 30 priority oak species in Latin America (see Project example: *Quercus brandegeei* in *Global Trees Campaign*).



Natacha Frachon

SHARING KNOWLEDGE



Barney Wilczak

Data services



ThreatSearch (www.bgci.org/threat_search.php) was launched in December 2016. It has over 240,000 conservation assessments of plants, with about 30,000 species considered globally threatened. 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**.

Advanced PlantSearch (<https://members.bgci.org/>) was launched on the Member's Area of BGCI's website in March. PlantSearch and ThreatSearch were used as the basis for a paper published in *Nature Plants* in September revealing, for the first time, the proportion of plant diversity and threatened plant diversity conserved in the world's botanic gardens. **The paper generated 31 news stories around the world and achieved an Altmetric score of 386, putting it in the top 5% of all outputs scored by Altmetric.**

GlobalTreeSearch (www.bgci.org/global_tree_search.php) was launched in April via a paper published in the *Journal of Sustainable Forestry*. The database is the first comprehensive list of the world's tree species and their country distributions and reveals there are 60,065 tree species across the globe. The story derived from this paper – How many tree species are there in the world? – **generated 72 news stories around the world and achieved an Altmetric score of 751, putting it in the top 5% of all outputs scored by Altmetric. The paper has been viewed over 9,000 times online.**

GardenSearch (www.bgci.org/garden_search.php), BGCI's digital directory of botanic gardens, now contains information on staff, facilities, and expertise at 3,424 botanical institutions worldwide.

Publications

BGCI journals, newsletter and social media

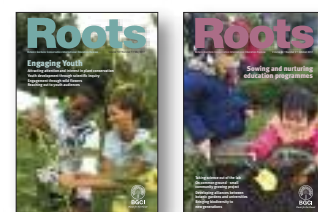
BGjournal

In 2017, two issues of *BGjournal* were published, one focusing on Red Lists: *Plant conservation assessments and the role of botanic gardens* (January 2017) and the other on Conservation horticulture (July 2017). The January issue of *BGjournal* provides a useful resource to support Red list workshops as it includes an introduction to the why, who and what of plant conservation assessments, as well as providing examples of the ways in which botanic gardens around the world are contributing to an increased understanding of which plant - and also fungal - species are under threat, and where. The July issue of *BGjournal* focused on conservation horticulture, highlighting the importance of the specialist skills required to grow a wider range of plant species and celebrating the horticulturists with such skills and the institutions that value them.



Roots

BGCI produced two issues of *Roots* in 2017. The first, published in May, was entitled *Engaging Youth*. The articles in this issue provided case studies about projects and activities that botanic gardens, and other organisations, have developed to reach young people both in and out of school hours, to support others to engage this often hard-to-reach audience. The second, published in October, tackled how to go about starting an education programme from scratch. This issue showcased the variety of strategies and approaches that have been employed by botanic gardens and other outdoor learning sites to establish new learning programmes, large and small.



Twitter	BGCI	GlobalTrees	IPSN	Total
Number of tweets	332	213	55	600
Profile Views	18,421	10,225	2,569	31,215
Followers	4,390	2,800	631	7,821
New followers in 2017	811	427	142	1,380

Cultivate

In 2017 six issues of BGCI's e-newsletter Cultivate were published. Each issue contained a round-up of recent news, events and publications and was sent to around 7,200 recipients. You can sign up to Cultivate or view previous issues at www.bgci.org/news-and-events/ournewsletter/.

BGCI's website

Web page	Number of page views
Whole site	1,355,573
GlobalTreeSearch database	131,555 (9.7%)
Home page	66,124 (4.9%)
Plant Conservation day/ why plants are important	55,756 (4.1%)
Policy/climate change and plants	25,707 (1.9%)
PlantSearch database	21,989 (1.6%)

Red list assessments

In 2017 BGCI and partners submitted 932 species conservation assessments to the IUCN Red List, of which over 600 have been published online on the IUCN Red List. Key red list projects this year have been the *The Red List of US Oaks* (www.bgci.org/files/Global_Trees_Campaign/Oaks/USOaks.pdf) and the soon to be published *The Red List of Theaceae*. Alongside the publication of conservation assessments for all the European trees online (www.iucnredlist.org/initiatives/europe), work continues on the production of conservation assessments for timbers,



Paul Smith

covering at least 250 species per year. *The Red List of Fraxinus* is also near completion indicating the plight faced by US *Fraxinus* species in the wake of the invasive Emerald Ash Borer. IUCN highlighted the threats to ash species in their global press release for the September update of the Red List. The story received extensive media coverage, including an article by news syndicate the Associated Press (AP), which was picked up by noteworthy outlets such as Popular Science magazine, The Washington Post, NPR, U.S. News & World Report, the BBC and the Guardian. In total, more than 360 media outlets around the globe ran the ash assessment news. 2017 also saw the start of a collaborative project, assessing species of agarwoods (*Aquilaria*) in collaboration with TRAFFIC. Head way was made on the assessment of endemic trees of Haiti, and genera such as *Nothofagus* and *Acer*; this work will continue throughout 2018.

Ex situ surveys

The Red List of Theaceae included an *ex situ* survey of the family. The survey collated information from 350 institutions in 49 countries, with 2,267 records of Theaceae species. Perhaps unsurprisingly there were a further 8,065 records of cultivar or hybrid collections of the family which were excluded from the analysis. The majority of these collections were from the genus *Camellia*, showing the importance of this family in the horticultural world. Only 51% of threatened Theaceae species are held in collections, with many held in very few collections. More work is needed to ensure that all threatened Theaceae species are protected *ex situ* and that collections are diversified to increase the genetic diversity within collections.

A conservation gap analysis for all 91 U.S. native oaks was completed in partnership with The Morton Arboretum. One key component was a global *ex situ* survey of U.S. native oaks, which will be used to direct conservation actions and resources based on individual species' needs. A total of 165 *ex situ* collections from 27 countries submitted accessions data for analysis.



Ed Hedborn



One oak species is completely unrepresented in *ex situ* collections, with 6 additional species unrepresented within the United States. One third of species are present in more *ex situ* collections outside the United States than within the U.S.

An *ex situ* collections assessment of orchids was completed by BGCI-US in partnership with the United States Botanic Garden, using a list of 30,477 orchid species from the World Checklist of Orchids and information from 468 plant and seed collections of orchids reported in BGCI's PlantSearch database. Of 789 orchid genera, 516 (65%) are reported in *ex situ* collections. The majority (64%) of the 604 globally threatened orchid species are not yet reported in any *ex situ* collections, and 20% are reported in five or fewer collections.

An *ex situ* gap analysis of North American threatened species was conducted by BGCI-US in partnership with the United States Botanic Garden. Data from BGCI's PlantSearch and ThreatSearch databases identified 3,598 (47%) of 7,662 globally threatened species in North America are currently reported in 706 *ex situ* collections around the world. One-third (1,100) of those species are reported by only one *ex situ* collection.

Scientific papers

Beech, E., Rivers, M., Oldfield, S. & Smith, P. (2017). GlobalTreeSearch: The first complete global database of tree species and country distributions. *Journal of Sustainable Forestry*. Doi.org/10.1080/10549811.2017.1310049.

Blackmore, S. & Oldfield, S. (2017). *Plant Conservation Science and Practice; The Role of Botanic Gardens*. Cambridge University Press, Cambridge, U.K.

Griffith, M. P., M. Calonje, A. W. Meerow, J. Francisco-Ortega, L. Knowles, R. Aguilar, F. Tut, V. Sanchez, **A. Meyer**, L. R. Noblick, T. M. Magellan. (2017). Will the same *ex situ* protocols give similar results for closely related species? *Biodiversity and Conservation*. 26:2951-2966.

Mounce, R., **Smith, P.** & Brockington, S. (2017). *Ex situ* conservation of plant diversity in the world's botanic gardens. *Nature Plants* DOI: 10.1038/s41477-017-0019-3

Nic lughadha, E., Canteiro, C., Bachman, S., Baines, D., Gardiner, L., Meagher, T., **Rivers, M.**, Schuiteman, A., Williams, E. & Hargreaves, S. (2017). *Extinction Risk and Threats to Plants*. State of the World's Plants 2017, chapter 11: pages 72-77; Royal Botanic Gardens, Kew.

O'Donnell, K. & Sharrock, S. (2017). The contribution of botanic gardens to *ex situ* conservation through seed banking. In press. doi: 10.1016/j.pld.2017.11.005.

Potter, K.M., R.M. Jetton, A. Bower, D.F. Jacobs, G. Man, V. Hipkins, **M. Westwood**. (2017). Banking on the future: progress, challenges and opportunities for the genetic conservation of forest trees. *New Forests* 48(2): 153-180.

Rivers, M.C. (2017). Conservation Assessments and Understanding the Impacts of Threats on Plant Diversity. In: *Plant Conservation Science and Practice: The Role of Botanic Gardens*. Blackmore, S. and Oldfield, S. eds., Cambridge University Press, Cambridge. DOI 10.1017/9781316556726

Sharrock, S. & Wyse Jackson, P. (2017). Plant conservation and the Sustainable Development Goals: A policy paper prepared for the Global Partnership for Plant Conservation. *Ann. Missouri Bot Gard*. 102:290-302

Smith, P. & Pence, V. (2017). The role of botanic gardens in *ex situ* conservation. In: *Plant Conservation Science and Practice: The Role of Botanic Gardens*. Blackmore, S. and Oldfield, S. eds., Cambridge University Press, Cambridge. DOI 10.1017/9781316556726

Smith, P., Beech, E., Rivers, M. & Oldfield, S. (2017) First comprehensive database of tree species. *Oryx* 07: 51(03):392-393. doi:10.1017/S0030605317000667

Gratzfeld, J. (Ed.), (2017). *From Idea to Realisation – BGCI's Manual on Planning, Developing and Managing Botanic Gardens*. Botanic Gardens Conservation International, Richmond, United Kingdom. bgci.org/resources/2016-BGCI-botanic-garden-manual ISBN-13: 978-1-905164-65-3



Training courses

In 2017 BGCI trained **957 people** from **310 institutions** from **48 countries** (see Table 1). Our courses covered a wide range of topics in plant conservation policy, practice and education. Some of the highlights are included below.

Access and Benefit Sharing

In the framework of the Darwin Initiative-funded project in Ethiopia “*Enhancing the use of plant resources in research and development*”, BGCI carried out four capacity building stakeholder consultations with *ex situ* collection holders and researchers in 2017 and two further training courses. The stakeholder consultations revealed that *ex situ* collection holders acquire plant material from a wide range of sources and supply it to many different users, including universities and other collections. Material in collections is widely used for research, including collecting and investigating traditional knowledge and half of the institutions included in the consultation work with partners outside Ethiopia. Most collection holders consulted believed that ABS legislation was relevant to the work of their institutions but only half of the institutions had any internal guidelines or policies on ABS. Particular issues identified included the need to develop capacity to manage information on collections using databases. Follow-up workshops on database and collection management were therefore held. These training courses served to highlight the importance of data management in relation to living and herbaria collections.

Red List assessment training

During 2017 several training courses were held in Red List assessments, most with a focus on increasing the capacity, engagement and output for the Global Tree Assessment. BGCI ran a full four-day IUCN Red List course collaboratively with the Royal Botanic Gardens, Kew in March this year, with participants from three botanic gardens in the United Kingdom.

In conjunction with the International Symposium of the Maple Society in October 2017 in Roscoff, France, BGCI held a Red List training and assessment workshop. This was organized together with the Maple Society and Westonbirt Arboretum, and was attended by 12 participants from 10 institutions. Both threatened and non-threatened maple species from Asia, Europe and northern Africa were assessed.



Paul Smith



Barney Wilczak

Also in October, at the American Public Gardens Association (APGA) Native Plants and Plant Conservation joint symposium, BGCI-US, The Morton Arboretum, and NatureServe ran a one-day training workshop that taught Red List methodology as well as NatureServe's Global Ranking Methodology. Workshop content was specifically geared toward public garden participation in conducting conservation status assessments for US native plants. The workshop was attended by 20 garden experts from 15 institutions.

Finally, a week-long training and assessment course took place in Les Cayes, Haiti in November this year. It was co-organised by BGCI and Le Jardin Botanique des Cayes. It had 20 participants and included training in the IUCN Red List categories and criteria, GIS mapping and next steps. At the end of the week over 66 endemic Haitian trees had been assessed. Further field work is now taking place in order to ground-truth and enhance these assessments.

Seed conservation

Three seed conservation training courses were run in 2017 through the Global Seed Conservation Challenge to support botanic gardens involved in seed banking. In May BGCI ran a seed conservation training course focused on trees in Kenya in collaboration with Kenya Forestry Research Institute, African Forest and experts from SANBI. It was attended by over 20 participants from botanic garden and forestry institutes.

In Nepal, 20 participants from 10 botanic garden institutions from Nepal, Bhutan, Pakistan and India attended training held at the National Botanic Garden in Godavari, Nepal. The training focused on seed collection and conservation of Himalayan plants with expertise provided by Kunming Institute of Botany and the Royal Botanic Gardens Edinburgh (RBGE).

At the start of November, BGCI ran a training course in Mauritius to build capacity for seed collection from Critically Endangered trees in collaboration with the Mauritian Wildlife Foundation and Missouri Botanical Garden. Participants attended from botanic gardens, NGOs, private conservation initiatives and government institutions from Mauritius, Rodrigues, Reunion and the Seychelles.



Training participants were invited to apply for fieldwork funding for projects focused on conservation through seed collecting, in order to put into practice what they learnt during the course. Two projects have been funded so far with more projects starting in 2018.

Tree conservation, nursery training & forest restoration

BGCI ran a training course on forest restoration in March 2017, hosted at Tooro Botanical Gardens in western Uganda, with trainers from Kadoorie Farm and Botanic Garden in Hong Kong. These gardens are members of the Ecological Restoration Alliance of Botanic Gardens (ERA), one of the main aims of which is to build capacity for undertaking science-based ecological restoration that uses native species. The course covered planning forest restoration, selecting species for restoration, propagation, planting and monitoring. Twenty participants attended from government, NGOs and botanic gardens from Uganda, Tanzania, Kenya, Rwanda and Nigeria.



Paul Smith

Conservation horticulture techniques for magnolias in Ecuador

A nation known for its plant diversity, Ecuador also enjoys a wealth of native and endemic *Magnolia* species. While new taxa are still being discovered, 23 species have been identified to date. Half of them have been evaluated as threatened (The Red List of Magnoliaceae, 2016) due to deforestation and limited natural reproduction. Hardly any of the Ecuadorian magnolias have been propagated in *ex situ* collections as an insurance policy against extinction in the wild. To enhance propagation success and *ex situ* cultivation, BGCI facilitated a dedicated training course in essential and advanced horticultural approaches and techniques for Ecuador's magnolias. In collaboration with Quito Botanic Garden (JBQ) and the Nature Reserve 'El Refugio', Dagua, Colombia, a two-day training course was held at JBQ from 28-29 November 2017. Delivered in a series of theoretical and technical

modules covering various propagation techniques (seed germination, vegetative propagation including cuttings, air layering and grafting) as well as best-practice in managing soil/media, light and water conditions, etc., the course was attended by 24 participants representing 11 institutions. The feedback from the course participants was overwhelmingly positive, including the request to BGCI to offer further training opportunities on conservation horticulture.



Alvaro Pérez

Tropical Plant Identification and Forest Management in Southeast Asia

This five day capacity building workshop was hosted by the Southeast Asia Biodiversity Research Institute in Nay Pyi Taw, Myanmar, in collaboration with The Morton Arboretum and the Global Trees Campaign. The workshop was composed of a series of lectures and hands-on training workshops that taught attendees how to identify specific tropical plant groups, with a focus on keystone groups in Indochinese forests, including Fagaceae. Biodiversity monitoring techniques were also taught. The workshop included a one day tour of the Forest Research Institute in Yezin. The 21 participants were primarily recent graduates and current students at five university and biodiversity research facilities including Mandalay and the Forestry University of Myanmar.

Exceptional plant species conservation techniques

In association with the 6th Southeast Asia Botanic Gardens (SEABG) Network conference, a workshop on 'Methods of *ex situ* conservation for exceptional species' was held in Bidoup-Nuiba National Park, Vietnam in April. This training workshop builds on the on-going programme of the SEABG network to build regional capacity in conservation of exceptional species native to the region. Exceptional species are those which cannot be conserved long-term using conventional seed banking methods. During the training course, sessions on current practices in regional exceptional species conservation were led by members of the network and technical theory and practical sessions were guided by expertise from Fairchild Tropical Botanic Garden, Cincinnati Zoo and Botanical Garden and the Morton Arboretum. Forty-four attendees from 29 institutions participated in sessions on: *in vitro* methods and cryopreservation for long-term preservation, strategies for capturing genetic diversity for conservation in living collections and the conservation of regionally important 'exceptional' plant groups such as the Dipterocarpaceae and Fagaceae families.

Plant pest monitoring and prevention

The International Plant Sentinel Network held three workshops in South Africa in November. These were held at Pretoria National Botanical Garden, Kirstenbosch National Botanical Garden and KwaZulu-Natal National Botanical Garden. More than 120 delegates attended the 2 day workshops on 'Plant Pest Monitoring and Prevention'. A series of lectures on the importance of sentinel plants, main groups of invertebrate plant pests, future plant threats to South Africa, major plant pathogens, biosecurity and garden maintenance were provided. Particularly enjoyable were the practical sessions on identifying tree health problems, tree-injection and pruning. There was excellent engagement and networking by the participants.

A UK workshop was also held in collaboration with the Royal Botanic Gardens, Edinburgh to provide an opportunity for garden staff to network, share knowledge and increase their understanding of current threats. The discussions clearly demonstrated botanic gardens and arboreta can not only play an important role in detecting new and emerging pests and diseases, but also help to initiate and support research into new threats, as well as engaging the public.

Funding for these workshops was provided by Defra and the BigGive.

Public engagement and education

Interpretation

A 12 week blended learning module on the subject of interpretation was developed and delivered by BGCI and our LearnToEngage partners between October and December 2017. LearnToEngage is a suite of professional development modules for botanic garden staff and museum educators in the UK, Portugal and Italy. Ten students from Italy, 5 from Portugal and 5 from the UK took part in this module, representing 20 botanic garden or museum institutions. The students studied online for



11 weeks and were provided with a series of videos, presentations, reading and assignments. They also attended an on-site week in Trento, Italy hosted by Muse Science Museum on 9-13th October 2017. In 2018 further modules will be developed for Working with Diverse Audiences, Science Communication and Research and Evaluation.

Co-creation and responsible research and innovation (RRI)

As part of the BigPicnic project, training was provided to 14 botanic garden partners in co-creation techniques, data gathering and evaluation (team based inquiry) and responsible research and innovation. Training took place at project partner meetings in Edinburgh (May 2017) and Meise (November 2017). The project partners are working with local audiences, some of which are considered hard-to-reach, on the subject of food security. Following on from the training received, partners have been co-creating exhibitions and science cafes with their selected audiences, generating dialogue on this important topic. This approach aims to bring new perspectives to research and innovation on food security, empowering people to take ownership of scientific research and contributing to the development of responsible actors and institutions. Data gathered from these events will be collated and used to provide recommendations for ethically acceptable, sustainable and societal research and innovation, helping to shape the future of our food.

BGCI provided short, co-creation training sessions at two further events. The first was during the annual networking event run in collaboration between BGCI, the Botanic Garden Education Network (BGEN) and London Environmental Educators' Forum (LEEF) in London (August 2017). This year the theme was *Building Strong Partnerships*. BGCI ran a co-creation training session to highlight this approach as an effective method to build relationships with new audiences and stakeholders. The event was attended by 31 individuals from Learning Outside the Classroom sites. Finally, during the LearnToEngage Train the Trainer course in Edinburgh (August 2017), BGCI provided LearnToEngage partners with co-creation training to support them to deliver elements of the LearnToEngage Interpretation module (see above) that focused on co-creating interpretation with school children.



Paul Smith



Barney Wilczak

Communities in Nature

In 2016, in response to the evaluation of the first phase of Communities in Nature, BGCI developed a series of webinars to offer an online training opportunity focused on the social role of botanic gardens. The webinars focused on accessibility, research and evaluation, fundraising and organizational change. After the final webinar was run in January, 2017, recordings of each were made available through the BGCI website. So far, the webinars have received a combined total of 414 views. www.bgci.org/public-engagement/communities_in_nature_webinars/.

Resources

Care for the Rare

As part of the Care for the Rare interpretation program, BGCI-US, in partnership with the United States Botanic Garden, launched a multi-site mobile app for gardens to use to highlight the important plants in their collections. The app is currently being piloted across 10 gardens in the United States with plans to expand to a global user group in 2018. More information can be found at www.bgci.org/usa/carefortherareapp

Collection assessments and conservation benchmarking

In 2017, BGCI-US, in partnership with the United States Botanic Garden and the American Public Gardens Association, developed a system for establishing and tracking botanic garden conservation programme benchmarks. Using information about plant conservation annual commitments and outputs of botanic gardens, scalable standards for success will be established. This online tool will be launched in North America in January 2018 with plans to expand to a global audience soon.

Directories of expertise

A global directory of expertise in seed banking was created this year to support the Global Seed Conservation Challenge and the IUCN Species Survival Commission's Seed Conservation Specialist Group. So far around 500 individual experts have provided information on their skills and institutional facilities. BGCI-US, in partnership with the United States Forest Service, the Lyon Arboretum, and the National Tropical Botanical Garden, conducted a focused survey of U.S. seed conservation capacity, gathering information on expertise, facilities, and interests for 276 seed conservationists. Additional individuals will continue to be added in 2018. The directory will be made available in early 2018 on the BGCI website.

BGCI's Botanic Garden Accreditation Scheme

BGCI has been testing accreditation scheme methodologies for much of this past year, and has consulted widely on the best approach to take in order to ensure that (a) basic botanic garden standards are adhered to, and (b) that accreditation doesn't unfairly discriminate against smaller gardens. In particular, discussion has centered on whether a tiered accreditation scheme would be discriminatory and would penalize gardens assessed at lower tiers. This possibility needed to be balanced against the desire to encourage gardens to be aspirational and improve their conservation practices. The result is that BGCI has tested three accreditation standards

- I. BGCI Botanic Garden Accreditation. This accreditation depends on botanic gardens meeting the range of basic criteria that define a botanic garden (see Technical Review, page 5 above).
- II. BGCI Conservation Practitioner Accreditation. This accreditation depends on botanic gardens meeting a number of conservation-focused criteria and actions, including *ex situ* conservation activities.
- III. BGCI Advanced Conservation Practitioner Accreditation. This accreditation depends on botanic gardens meeting a number of more advanced conservation-focused criteria and actions, including *in situ* conservation activities.

These BGCI accreditations will be launched in 2018, and BGCI will work with national and regional associations wherever possible in rolling out this scheme.



Paul Smith

SAVING PLANTS - LEADING INNOVATIVE PROJECTS IN PLANT CONSERVATION POLICY, PRACTICE AND EDUCATION



Franklinia alatamaha
(Arboretum Wespelaar)

The Global Tree Assessment



The Global Tree Assessment has made significant progress this year with the publishing and launch of GlobalTreeSearch, the first georeferenced database of the world's tree species (see above). A gap-analysis showed that over one third of all trees have a conservation assessment. In addition, a **fast throughput Least Concern methodology has been developed by the IUCN Global Tree Specialist Group for tree species not at risk of extinction**. In 2018, tree red listing efforts will be significantly accelerated, with ca. 16,000 global tree species assessments projected, and new partnerships in key countries established.

GTA project example: Red listing Theaceae – the tea family

In 2017 BGCI's Global Tree Assessment team found that more than a third of the world's Theaceae species are threatened with extinction. Sadly, two species from the tea family, *Franklinia alatamaha* and *Camellia amplexicaulis* are already Extinct in the Wild, highlighting the urgent need for conservation action. The report also found that *Camellia sinensis*, the source of much of the world's tea, has been assessed as Data Deficient, due to a lack of available information on the species' wild populations, despite its global cultivation.



Franklinia alatamaha
(Arboretum Wespelaar)

The Global Seed Conservation Challenge



The Global Seed Conservation Challenge now comprises **189** botanic gardens. **BGCI** provides the secretariat for

the new **IUCN Seed Conservation Specialist Group**, recently approved by the **IUCN Species Survival Commission**. A global directory of seed conservation expertise, facilities and training resources has been developed and will be expanded in 2018.

GSCC award example: Conserving seed from one of Hawai'i's most threatened species

Harold. L. Lyon Arboretum's Seed Conservation Laboratory (LASCL), of the Hawaiian Rare Plant Program has banked the seeds of *Silene perlmanii*, which is a Hawai'ian endemic species. It is extinct in the wild, and was known only from a small population of fewer than 20 plants on a single cliff face in the southern Wai'anae Mountains of O'ahu. *S. perlmanii* habitat experiences ongoing threats due to impacts of invasive species and climate change. Luckily, fruits and cuttings were



Silene perlmanii
(O'ahu Plant Extinction Prevention Program)

collected from the population before the species became extinct, and these were propagated by the Nature Conservancy of Hawai'i and the Pahole Rare Plant Facility. In total, LASCL have now banked 63 accessions of *S. perlmanii* seeds from 2008-2016, a total of over 44,000 seeds. Over 2,300 have been sown at LASCL for viability testing and propagation for restoration, and 200 plants have been reintroduced to the wild so far.

The Global Trees Campaign



Through the Global Trees Campaign (GTC), which BGCI manages in partnership with Fauna & Flora International, BGCI has supported the conservation of **120** tree species in **17** countries in 2017, raising **>450,000** seedlings, and employing an integrated (*ex situ* and *in situ*) conservation

approach, working closely with local communities. BGCI-led GTC projects are active in **Armenia, Bhutan, Chile, China, Cuba, Fiji, Georgia, Japan, Kenya, Madagascar, Malawi, Mexico, Nepal, Tanzania, Uganda, USA** and **Zimbabwe**. GTC funding has been secured from Franklinia Foundation, Mohamed Bin Zayed Species Conservation Fund, Darwin Initiative, Ashden Trust, Keidanren Foundation, Klorane Botanical Foundation / Pierre Fabre Argentina, Critical Ecosystem Partnership Fund and Rufford Foundation.



Water pine
(Sun Weibang)

GTC project example: Integrated conservation of Critically Endangered *Glyptostrobus pensilis*



Water pine
(Sun Weibang)

Partners of the 'Integrated conservation action for the Critically Endangered *Glyptostrobus pensilis*' project met for a workshop at South China Botanical Garden in October. *G. pensilis* is a threatened species found in remnant populations in China, Laos and Vietnam. This meeting was an opportunity for project partners from China, Laos and Vietnam to present results from the first year of the project. Outcomes from initial surveys in Vietnam and seed collecting and propagation in China were presented and training in techniques for propagation was conducted. Successful propagation at South China Botanical Garden and plans for subsequent collecting and propagation of the species at botanic gardens in Laos and Vietnam are showing great promise in this innovative international tree conservation project.



GTC project example: Population demographics and seed collection of *Quercus brandegeei*, Baja California Sur, Mexico

As part of the Global Trees Campaign, The Morton Arboretum and BGCI are leading an integrated research and conservation project on the narrowly endemic and Endangered species, *Quercus brandegeei* in Baja California Sur, Mexico. In 2017, this project successfully included two field trips for collection of data and acorns. Approximately 2,000 acorns were collected from 27 maternal trees in 8 different populations. Acorns were distributed to 11 different gardens within Mexico and one garden in the United States. Acorns were also sent to the National Autonomous University of Mexico in Morelia, Michoacán for propagation experiments, the results of which will inform future *in situ* reforestation efforts.

GTC project example: Re-introducing the Mulanje Cedar, *Widdringtonia whytei*



Mulanje Cedar (*Widdringtonia whytei*) is endemic to Mulanje Mountain in Malawi. In 2016, the Global Trees Campaign embarked on a project to save this species, which is on the brink of extinction in

its natural habitat. Working in collaboration with Mulanje Mountain Conservation Trust (MMCT) and the Forestry Research Institute of Malawi (FRIM), this project, funded by the UK government's Darwin Initiative, will restore populations of Mulanje Cedar on Mulanje Mountain.



Ten community nurseries have been established around the base of the mountain. Collectively, these nurseries have raised 400,000 cedar seedlings, and planting commenced in December 2017.



The International Plant Sentinel Network (IPSN)



The International Plant Sentinel Network Phase 2 is under way and was

launched with 41 partners involved. UK Department of Environment, Food and Rural Affairs (Defra) funding has been received for the next 3 years. Through the Euphresco network 15 partners in Europe, Australia, New Zealand and the US are involved in research activities on future pest threats. The IPSN continues to build capacity in botanic gardens with over 100 people trained in 2017.

The Ecological Restoration Alliance



The **Ecological Restoration Alliance of Botanic Gardens (ERA)** now comprises **33 gardens**, **>150 projects**, and has **>600 professionals** involved. A Prospectus has been published,

and BGCI and its ERA members have submitted proposals for 7 ecological restoration projects this year. A workshop on forest restoration was held in Uganda in March 2017 and two further training courses are planned for early 2018, in Kenya and Fiji. Work has also been ongoing during 2017 to develop online resources to support ecological restoration, including a species recovery manual and forest restoration training modules, which will be available in early 2018.



ERA project example: Restoring Hong Kong's montane forests

In 2013 an ambitious restoration project was established on the upper slopes of Kadoorie Farm and Botanic Garden's premises called: "Ecological restoration of the original montane forest of Hong Kong". In order to be able to monitor the project from the first planted tree throughout the evolution of the forest, a 20 x 20 m grid was established over the total project area of 10 ha. Every planted and already existing shrub and tree was identified and tagged with a unique number. As well as measuring climatic conditions, experiments include the use of different types of tree guards, different types of weeding mats, different types of fertilizers, soil amendments with compost and biochar and different weeding regimes. The results, now being gathered from around 300 native species, suggest that appropriate horticultural techniques are at least as important as autecology in getting the trees to establish.

Big Picnic Big Questions – engaging the public with Responsible Research and Innovation on Food Security



The BigPicnic project, a consortium of **19** institutions, successfully completed its first

year and has been **identified as an exemplar project by Horizon 2020**.

BigPicnic aims to bring together the public, scientists, policy-makers and industry to help tackle the global challenge of food security. Botanic garden partners, with training and support, are co-creating a range of exhibitions and participatory events with people from all walks of life, to generate dialogue and build greater understanding of food security.

The exhibitions created come in all shapes and sizes. Examples include the Botanic Garden and Botanical Museum Freie Universität Berlin which has been conducting stop-motion workshops with school classes themed around food waste. The Royal Botanic Gardens, Edinburgh have been using digital storytelling to tell the food stories of local communities around Edinburgh, and the Botanic Garden Meise have co-created a series of events on African food with people of African heritage now based in Brussels. More information is available at www.bigpicnic.net.

Learn To Engage – a modular course for botanic gardens



LearnToEngage is a three year project funded by the European Commission's Erasmus + programme. It involves the

development of a suite of professional development modules for botanic garden staff and museum educators in the UK, Portugal and Italy. The modules are being developed in partnership between BGCI, the Royal Botanic Gardens Edinburgh, Nottingham Trent University, National Museum of Natural History and Science, Lisbon and Muse Science Museum, Italy.

The aim of the project is to pilot a blended learning approach to professional development in order to enhance public engagement across Europe and beyond. The project will result in four modules focussed on different areas of public engagement at botanic gardens: Interpretation, Working with Diverse Audiences, Science Communication and Research and Evaluation. In this first year of the project the first of the four modules on Interpretation was developed and successfully delivered. 20 students from institutions in Italy, Portugal and the UK took part. In addition resources have been developed for the second module in the series – Working with Diverse Audiences which will begin in January 2018.

Fundraising and funds disbursed

BGCI disbursed funds totaling US\$ 1,048,250 to botanic gardens and other institutions in 2017 (see Table 2). This figure is many times what we receive in subscriptions from our members.

Table 1: Participants in BGCI training courses, 2017

Institution	Country	Topic
Adama Science & Technology University	Ethiopia	Access and Benefit Sharing
Addis Ababa University	Ethiopia	Access and Benefit Sharing, Managing <i>ex situ</i> collections Database training course
Afar Pastoral & Agro-pastoral Research Institute	Ethiopia	Access and Benefit Sharing
African Forest	Kenya	Seed conservation
Agencia Estatal Consejo Superior De Investigaciones Cientificas	Spain	Co-creation and RRI
Alage ATVET College	Ethiopia	Access and Benefit Sharing, Managing <i>ex situ</i> collections
Alape Agricultural College	Ethiopia	Access and Benefit Sharing
All About Plants	UK	Co-creation
American Public Gardens Association	USA	Red List Training
Anna Cullum Associates	UK	Co-creation
APD Proyectos e Innovación	Ecuador	Conservation horticulture of magnolias
Arba Minch University	Ethiopia	Access and Benefit Sharing, Managing <i>ex situ</i> collections
Arderne Gardens	South Africa	Plant Pest Monitoring and Prevention
Areka Agricultural Research Centre	Ethiopia	Managing <i>ex situ</i> collections
Arnold Arboretum of Harvard University	USA	Red List Training
Assistant, Garbers & James	UK	Co-creation
Associação Botânica dos Açores	Portugal	Interpretation
Associazione Naturalmente Interconnessi	Italy	Interpretation
Assosa Biodiversity Centre	Ethiopia	Access and Benefit Sharing, Managing <i>ex situ</i> collections
Atlanta Botanical Garden	USA	Red List Training
Axum Agricultural Research Center	Ethiopia	Access and Benefit Sharing
Bahir dar University	Ethiopia	Access and Benefit Sharing, Managing <i>ex situ</i> collections
Baili Azalea National Park	China	Propagation techniques
Baishanzu National Nature Reserve	China	Propagation techniques
Balkan Botanic Garden of Kroussia	Greece	Co-creation and RRI
Benemérita Universidad Autónoma de Puebla Botanical Garden	Mexico	Taxonomy of rare Mexican oaks
Bidoup-Nuiba National Park	Vietnam	<i>Ex situ</i> conservation of exceptional plant species
Bogor Botanic Gardens	Indonesia	<i>Ex situ</i> conservation of exceptional plant species; propagation techniques
Botanic Garden of Smith College	USA	Red List Training
Botanic Gardens Education Network	UK	Co-creation
Botanical Garden of Casa da Cerca	Portugal	Interpretation
Botanical Society of Zhejiang	China	Propagation techniques
Brackenhurst Botanic Garden	Kenya	Seed conservation
Cambridge University Botanic Garden	UK	Co-creation
Caoyutang Forestry Station	China	Magnolia reintroduction
Cape Peninsula University of Technology	South Africa	Plant Pest Monitoring and Prevention
CBN- CPIE- Mascarin	Reunion	Seed conservation
Center for Plan Conservation, Vietnam Union of Science and Technology	Vietnam	<i>Ex situ</i> conservation of exceptional plant species
Chelsea Physic Garden	UK	Co-creation
Chengdu Botanical Garden	China	Propagation techniques
Chester Zoo	UK	Co-creation
China Wild Plants Conservation Association	China	Magnolia reintroduction
City of Cape Town	South Africa	Plant Pest Monitoring and Prevention
Compagnie Sucriere de Bel Ombre	Mauritius	Seed conservation
Commune di Bergamo	Italy	Co-creation and RRI
Conservatoire Botanique National de Mascarin	Reunion	Seed conservation
CREDA Associazione di educazione ambientale - Monza	Italy	Interpretation
DAFM Agrilabs	UK	Plant Pest Monitoring and Prevention
Debratabor University	Ethiopia	Managing <i>ex situ</i> collections
Debre Markus University	Ethiopia	Access and Benefit Sharing, Managing <i>ex situ</i> collections
Debrebirhan Agricultural Research Center	Ethiopia	Access and Benefit Sharing
Department of Agriculture, Forestry and Fisheries	South Africa	Plant Pest Monitoring and Prevention
Department of Biodiversity	Cambodia	<i>Ex situ</i> conservation of exceptional plant species
Department of Botany, University of Jammu	India	Seed conservation
Department of Plant Resources	Nepal	Seed conservation

Institution	Country	Topic
District Plant Resource Office, Jumla	Nepal	Seed conservation
Dong Nai Culture and Nature Reserve	Vietnam	<i>Ex situ</i> conservation of exceptional plant species
Dr. Cecilia Koo Botanic Conservation Center	China	<i>Ex situ</i> conservation of exceptional plant species
Durham University	UK	Co-creation
Eastern Cape Invasive Species Programme	South Africa	Plant Pest Monitoring and Prevention
Ebony Forest	Mauritius	Seed conservation
Eburru Community Forest Association	Kenya	Seed conservation
Emeishan Botanical Garden	China	Propagation techniques
Emeishan Forestry Bureau	China	Propagation techniques
Emeishan Forestry Management Institute	China	Propagation techniques
Emeishan Scenic Area Management Committee	China	Propagation techniques
Empresa Pública Metropolitana de Movilidad y Obras Públicas (EPMMOP), Quito municipality	Ecuador	Conservation horticulture of magnolias
Entebbe Botanic Garden	Uganda	Forest restoration
Escuela Nacional de Ciencias Forestales, Honduras	Honduras	Conservation of <i>Quercus insignis</i>
Estación Biológica Jatun Sacha	Ecuador	Conservation horticulture of magnolias
Ethekwini Municipality	South Africa	Plant Pest Monitoring and Prevention
Ethekwini Parks	South Africa	Plant Pest Monitoring and Prevention
Ethiopian Biodiversity Institute	Ethiopia	Access and Benefit Sharing, Managing <i>ex situ</i> collections Database training course
Ethiopian Environment & Forest Research Institute	Ethiopia	Access and Benefit Sharing
Ethiopian Institute for Agricultural Research	Ethiopia	Access and Benefit Sharing
Fairylake Botanical Garden	China	Magnolia reintroduction
Fengyangshan National Nature Reserve	China	Propagation techniques
Ferney Vallee	Mauritius	Seed conservation
Fiche Biodiversity Genebank	Ethiopia	Access and Benefit Sharing, Managing <i>ex situ</i> collections
Forest Research Centre, Sabah Forest Department	Malaysia	<i>Ex situ</i> conservation of exceptional plant species
Forest Research Institute, Forest Department	Myanmar	<i>Ex situ</i> conservation of exceptional plant species
Forest Science Institute of Central Highlands and South of Central Vietnam (FSIHS)	Vietnam	<i>Ex situ</i> conservation of exceptional plant species
Forestry and Agricultural Biotechnology Institute	South Africa	Plant Pest Monitoring and Prevention
Forestry Service	Mauritius	Seed conservation
Francois Leguat Cave and Tortoise Reserve	Rodrigues	Seed conservation
Free State National Botanical Garden	South Africa	Plant Pest Monitoring and Prevention
Freie Universitaet Berlin	Germany	Co-creation and RRI
Garbers & James	UK	Co-creation
GC University Lahore (Botanic Garden)	Pakistan	Seed conservation
Giardino botanico Villa Carlotta - Como	Italy	Interpretation
Giardino della Flora Appenninica - Capracotta	Italy	Interpretation
Giardino delle Essenze dei Castelli di Lagnasco - Saluzzo	Italy	Interpretation
Goba Biodiversity Centre	Ethiopia	Access and Benefit Sharing, Managing <i>ex situ</i> collections
Green Mountain College	USA	Red List Training
Guangdong Longwen-Huangtian Nature Reserve	China	Propagation techniques
Guangdong Provincial Forestry Department	China	Propagation techniques
Guangdong Zhaoqing Forestry Department	China	Propagation techniques
Guangdong Zhuhai Hexing Water Pine Nursery	China	Propagation techniques
Guangxi Institute of Botany, CAS	China	Horticulture training
Guiyang Medicinal Plants Garden	China	Propagation techniques
Guizhou Botanical Garden	China	Propagation techniques
Guizhou Forestry Bureau	China	Propagation techniques
Guizhou Minzu University	China	Propagation techniques
Guizhou Normal University	China	Propagation techniques
Gullele Botanic Garden	Ethiopia	Access and Benefit Sharing, Managing <i>ex situ</i> collections Database training course
Hackney Community Gardeners	UK	Co-creation
Haramaya University	Ethiopia	Access and Benefit Sharing
Harar Biodiversity Centre	Ethiopia	Managing <i>ex situ</i> collections
Haru-Sebu Agricultural Research Centre	Ethiopia	Access and Benefit Sharing
Hawassa University	Ethiopia	Access and Benefit Sharing, Managing <i>ex situ</i> collections
Herbarium at Centro Universitario Regional de Litoral Atlántico, Honduras	Honduras	Conservation of <i>Quercus insignis</i>
Herbarium at Universidad Nacional Autónoma de Honduras	Honduras	Conservation of <i>Quercus insignis</i>
Holland Park Ecology Centre	UK	Co-creation
Horizon	Portugal	Interpretation
HSP	Ecuador	Conservation horticulture of magnolias
Instituto de Ecología, Xalapa	Mexico	Taxonomy of rare Mexican oaks, Conservation of <i>Quercus insignis</i>
Instituto Nacional de Estadística y Geografía	Mexico	Taxonomy of rare Mexican oaks
Instituto Politécnico Nacional CIIDIR, Durango	Mexico	Taxonomy of rare Mexican oaks
Island Conservation Society	Seychelles	Seed conservation
IUCN Rwanda	Rwanda	Forest restoration

Institution	Country	Topic
IUCN Uganda	Uganda	Forest restoration
Jardim Botânico do Faial	Portugal	Interpretation
Jardín Botánico de Quito	Ecuador	Conservation horticulture of magnolias
Jardín Botánico Padre Julio Marrero, Pontificia Universidad Católica del Ecuador, Santo Domingo (PUCE SD)	Ecuador	Conservation horticulture of magnolias
Jardín Botánico Piatua	Ecuador	Conservation horticulture of magnolias
Jardín Botánico Yachay, Ciudad Yachay	Ecuador	Conservation horticulture of magnolias
Jardin Botanique de Ouanaminthe	Haiti	Red listing
Jardin Botanique des Cayes	Haiti	Red listing
Jardin Botanique National d'Haiti	Haiti	Red listing
Jiande Forestry Bureau	China	Propagation techniques
Jimma University	Ethiopia	Access and Benefit Sharing, Managing <i>ex situ</i> collections
Jingning Forestry Bureau	China	Magnolia reintroduction
Kenya Forestry Research Institute	Kenya	Seed conservation
Kenya Wildlife Service	Kenya	Forest restoration
Kepong Botanic Garden, FRIM	Malaysia	<i>Ex situ</i> conservation of exceptional plant species
Kulumsa Agricultural Research Center	Ethiopia	Access and Benefit Sharing
Kunming Botanical Garden	China	Red listing, propagation techniques
Kunming Institute of Botany	China	<i>Ex situ</i> conservation of exceptional plant species
Kwelara National Botanic Garden	South Africa	Plant Pest Monitoring and Prevention
La Vallee D'Osterlog Botanical Garden	Mauritius	Seed conservation
Lae Botanic Gardens	Papua New Guinea	<i>Ex situ</i> conservation of exceptional plant species
Landeshauptstadt Hannover	Germany	Co-creation and RRI
Las Cañadas Cooperative, Mexico	Mexico	Conservation of <i>Quercus insignis</i>
Leigongshan National Nature Reserve	China	Propagation techniques
Leshan Forestry Bureau	China	Propagation techniques
Libo Forestry Bureau	China	Propagation techniques
Lincoln Park Zoo	USA	Red List Training
Lishui Forestry Bureau	China	Magnolia reintroduction
Lowveld National Botanic Garden	South Africa	Plant Pest Monitoring and Prevention
Makerere University	Uganda	Forest restoration
Makiling Botanic Gardens	Philippines	<i>Ex situ</i> conservation of exceptional plant species
Maolan National Nature Reserve	China	Propagation techniques
Maramasa University	Ethiopia	Access and Benefit Sharing
Mashpi Lodge	Ecuador	Conservation horticulture of magnolias
Mauritian Wildlife Foundation, Rodrigues	Rodrigues	Seed conservation
Meise Botanic Garden	Belgium	Co-creation and RRI
Mekele Biodiversity Centre	Ethiopia	Managing <i>ex situ</i> collections
Melkassa Agricultural Research Centre	Ethiopia	Managing <i>ex situ</i> collections
Metu Biodiversity Centre	Ethiopia	Access and Benefit Sharing, Managing <i>ex situ</i> collections
Ministere de L'Environnement (MDE) Haiti	Haiti	Red listing
Ministry of Agro Industry	Mauritius	Seed conservation
Mirijjawil Dry Zone Botanic Gardens	Sri Lanka	<i>Ex situ</i> conservation of exceptional plant species
Morris Arboretum of the University of Pennsylvania	USA	Red listing
Mount Holyoke College Botanic Garden	USA	Red List Training
Mount Kenya Environmental Conservation	Kenya	Seed conservation
Mount Kenya Trust	Kenya	Seed conservation
Multiplant International Medicinal Conservation	Kenya	Seed conservation
MUSE – Museo delle Scienze	Italy	Co-creation
Museo A come Ambiente - Torino	Italy	Interpretation
Museo di Storia Naturale - Piacenza	Italy	Interpretation
Museu Nacional de História Natural e da Ciência	Portugal	Interpretation, Co-creation
Myanmar Floriculturist Association	Myanmar	<i>Ex situ</i> conservation of exceptional plant species
Nairobi Arboretum	Kenya	Seed conservation
Nairobi Botanic Garden	Kenya	Seed conservation
Naples Botanical Garden	USA	Red List Training
National Authority of Preah Vihear	Cambodia	<i>Ex situ</i> conservation of exceptional plant species
National Botanic Garden, Godavari	Nepal	Seed conservation
National Botanical Garden Foundation	Seychelles	Seed conservation, <i>Ex situ</i> conservation of exceptional plant species
National Forestry Authority	Uganda	Forest restoration
National Herbarium and Plant Laboratories (NHPL), Godavari	Nepal	Seed conservation
National Parks and Conservation Services	Mauritius	Seed conservation
National Trust - Threave	UK	Plant Pest Monitoring and Prevention
National University of Laos	China	Propagation techniques
Natural Resources Research Institute of Sichuan	China	Propagation techniques
Nature Design, Haiti	Haiti	Red listing
Nature Palace Botanic Garden	Uganda	Forest restoration
Ness Botanic Gardens	UK	Interpretation

Institution	Country	Topic
New England Wild Flower Society	USA	Red List Training
Ocean Flower Island Botanical Garden	China	<i>Ex situ</i> conservation of exceptional plant species
Omo UNESCO Man & Biosphere Reserve	Nigeria	Forest restoration
Oromia Agricultural Research Institute	Ethiopia	Access and Benefit Sharing
Oromia Forest and Wildlife Enterprise	Ethiopia	Access and Benefit Sharing
Orto botanico - Università di Bologna	Italy	Interpretation
Orto botanico - Università di Napoli	Italy	Interpretation
Orto botanico - Università di Urbino	Italy	Interpretation
Orto botanico "L. Rota" - Bergamo	Italy	Interpretation
Paignton Zoo Environment Park	UK	Co-creation
Penang Botanic Gardens	Malaysia	<i>Ex situ</i> conservation of exceptional plant species
Pha Tad Ke Botanical Garden	Laos	<i>Ex situ</i> conservation of exceptional plant species, propagation techniques
Phuoc Binh National Park	Vietnam	<i>Ex situ</i> conservation of exceptional plant species
Plantentuin Esveld	Netherlands	Red listing
PlantNetwork	UK	Co-creation
Pretoria National Botanic Garden - GPTA	South Africa	Plant Pest Monitoring and Prevention
Queen Sirikit Botanic Garden	Thailand	<i>Ex situ</i> conservation of exceptional plant species
Reserva Tesoro Escondido	Ecuador	Conservation horticulture of magnolias
RHS Garden Hyde Hall	UK	Co-creation
Royal Botanic Garden Edinburgh	UK	Red listing, Plant Pest Monitoring and Prevention, Co-creation and RRI
Royal Botanic Garden Serbithang	Bhutan	Seed conservation
Royal Botanic Gardens Kew	UK	Red listing, Plant Pest Monitoring and Prevention; Co-creation
Royal Botanic Gardens, Kew Wakehurst Place	UK	Co-creation
Royal Horticultural Society	UK	Plant Pest Monitoring and Prevention
SANBI	South Africa	Plant Pest Monitoring and Prevention
SANBI Harold Porter	South Africa	Plant Pest Monitoring and Prevention
SANBI Herbarium	South Africa	Plant Pest Monitoring and Prevention
SANBI Invasive species programme	South Africa	Plant Pest Monitoring and Prevention
SANBI Karoo	South Africa	Plant Pest Monitoring and Prevention
SANBI Kirstenbosch	South Africa	Plant Pest Monitoring and Prevention
Sanchahe Management Station	China	Propagation techniques
Santa Barbara Botanic Garden	USA	Red List Training
Sarah P. Duke Gardens	USA	Red List Training
Sarawak Forestry Corporation	Malaysia	<i>Ex situ</i> conservation of exceptional plant species
Shashamene Botanical Garden	Ethiopia	Access and Benefit Sharing, Managing <i>ex situ</i> collections
Sichuan Forestry Academy	China	Propagation techniques
Singapore Botanic Gardens	Singapore	<i>Ex situ</i> conservation of exceptional plant species
Sofiiiski Universitet Sveti Kliment Ohridski	Bulgaria	Co-creation and RRI
South Agricultural Research Institute	Ethiopia	Access and Benefit Sharing
South China Botanical Garden	China	Propagation techniques
South West Sub-Alpine Botanical Garden	China	Propagation techniques
SSR Botanical Garden	Rodrigues	Seed conservation
St Andrews Botanic Garden	UK	Plant Pest Monitoring and Prevention; interpretation
State Forestry Administration	China	Magnolia reintroduction
Stellenbosch University Botanic Garden	South Africa	Plant Pest Monitoring and Prevention
Subtropical Forestry Institute of Chinese Academy of Forestry	China	Propagation techniques
Taizhou College, Zhejiang	China	Propagation techniques
Tanzania Coastal Forest Botanical Garden	Tanzania	Forest restoration
Tepi National Spices Research Center	Ethiopia	Access and Benefit Sharing
The Arboretum Univ. of Guelph	USA	Red List Training
The Maple Society	France, USA, UK	Red listing
The Royal Parks	UK	Co-creation
The University of Bristol Botanic Garden	UK	Interpretation
The Yorkshire Arboretum	UK	Interpretation
Thoyondau Botanic Garden	South Africa	Plant Pest Monitoring and Prevention
Tiantai Forestry Bureau	China	Propagation techniques
Toledo Botanical Garden	USA	Red List Training
Tooro Botanical Gardens	Uganda	Forest restoration; co-creation and RRI
Treborth Botanic Garden	UK	Interpretation
Tropical Rainforest Conservation & Research Centre	Malaysia	<i>Ex situ</i> conservation of exceptional plant species
Tropismo	Ecuador	Conservation horticulture of magnolias
Tsukuba Botanic Gardens	Japan	<i>Ex situ</i> conservation of exceptional plant species
Universidad Autónoma Agraria Antonio Narro, Saltillo	Mexico	Taxonomy of rare Mexican oaks
Universidad de Alcalá	Spain	Co-creation and RRI
Universidad de San Carlos de Guatemala	Guatemala	Conservation of <i>Quercus insignis</i>
Universidad Nacional Autónoma de México, Ciudad de México	Mexico	Taxonomy of rare Mexican oaks
Universidad Nacional Autónoma de México, Morelia	Mexico	Taxonomy of rare Mexican oaks, Conservation of <i>Quercus insignis</i>

Institution	Country	Topic
Universiti Brunei Darussalam	Brunei	<i>Ex situ</i> conservation of exceptional plant species
University of Gondar	Ethiopia	Access and Benefit Sharing, Managing <i>ex situ</i> collections
University of Guadalajara	Mexico	Red listing
University of Leiden	Netherlands	Co-creation and RRI
University of Lisbon	Portugal	Co-creation and RRI
University of Oslo	Norway	Co-creation and RRI
University of Pretoria	South Africa	Plant Pest Monitoring and Prevention
University of Warsaw	Poland	Co-creation and RRI
Utrecht University Botanic Gardens	Netherlands	Red listing
Vietnam National University of Forestry	Vietnam	<i>Ex situ</i> conservation of exceptional plant species
Wallega University	Ethiopia	Access and Benefit Sharing
Walter Sisulu National Botanic Garden	South Africa	Plant Pest Monitoring and Prevention
Wespelaar Arboretum	Belgium	Red listing
Westonbirt National Arboretum	UK	Red listing; Co-creation
Wolaiifa Sodo University	Ethiopia	Access and Benefit Sharing
Wolkite University	Ethiopia	Access and Benefit Sharing
Wondo Genet Agricultural Research Centre	Ethiopia	Access and Benefit Sharing
Wondo Genet College of Forestry and Natural Resource Management	Ethiopia	Access and Benefit Sharing, Managing <i>ex situ</i> collections
Xi'an Botanical Garden	China	Magnolia reintroduction
Xishuangbanna Tropical Botanical Garden, CAS	China	<i>Ex situ</i> conservation of exceptional plant species
Xiwang Primay School of Libo County	China	Propagation techniques
Ya'axche Conservation Trust, Belize	Belize	Conservation of <i>Quercus insignis</i>
Yangdangshan National Park	China	Magnolia reintroduction
Yorkshire Arboretum	UK	Plant Pest Monitoring and Prevention
Zamorano University, Honduras	Honduras	Conservation of <i>Quercus insignis</i>
Zhejiang Agriculture and Forestry University	China	Propagation techniques, Magnolia reintroduction
Zhejiang Forestry Academy	China	Propagation techniques
Zhejiang Forestry Bureau	China	Propagation techniques, Magnolia reintroduction
Zhejiang Natural History Museum	China	Propagation techniques
Zhejiang University	China	Propagation techniques
Zhoushan Forestry Academy	China	Propagation techniques

Table 2: Institutions supported by BGCI with funding in 2017

Institution	Country	Institution	Country
Brackenhurst Botanic Garden	Kenya	Mulanje Mountain Conservation Trust	Malawi
Cardiff University	United Kingdom	National Botanic Garden of Georgia	Georgia
Chengdu Botanical Garden, Sichuan	China	National Tropical Botanical Garden	United States
Chengdu Institute of Biology, CAS	China	NatureFiji-MareqetiViti	Fiji
Chicago Botanic Garden	United States	Reserva Natural El Refugio, Dagua	Colombia
Cienfuegos Botanic Garden	Cuba	Royal Botanic Garden, Edinburgh	United Kingdom
College of Humanities and Sciences, Guizhou Minzu University	China	Royal Botanic Gardens, Kew	United Kingdom
College of Life Science, Zhejiang University	China	Shangri-La Alpine Botanical Garden	China
Dr Cecilia Koo Botanic Conservation Center, Taiwan	China	Shenzhen FairyLake Botanical Garden, Shenzhen and CAS	China
Ethiopian Biodiversity Institute	Ethiopia	Sichuan Provincial Academy of Natural Resource Sciences, Chengdu	China
Forestry Research Institute of Malawi	Malawi	South China Botanic Garden	China
Guilin Botanical Garden, Guangxi and CAS	China	South London Botanical Institute	United Kingdom
Institute of Botany Ilia State University	Georgia	Stone Lane Gardens	United Kingdom
Institute of Botany of the Armenian National Academy of Sciences	Armenia	Tasmanian Arboretum	Australia
Instituto de Investigaciones Agropecuarias	Chile	The Morton Arboretum	United States
Jardín Botánico Carlos Thays	Argentina	Tooro Botanical Gardens	Uganda
Jardín Botánico de Quito	Ecuador	Tsenden Steering Committee	Bhutan
Les Cayes Botanic Garden	Haiti	University of Fort Hare	Zimbabwe
Lyon Arboretum	United States	Zhejiang Forestry Academy	China
Mauritian Wildlife Foundation	Mauritius		

Reasons to be a member in 2018

- A major discount on registration for the 8th Eurogard Congress, in Lisbon, 7-11th May, 2018
- A major discount on registration for the 10th International Congress on Education in Botanic Gardens, in Warsaw, 9-14th September, 2018
- Tailored support and advice on request
- Preferential access to BGCI project funding
- Access to the Member's Area of BGCI's website, which includes advanced features on our databases: PlantSearch, ThreatSearch and GlobalTreeSearch
- Access to BGCI's Conservation Accreditation Scheme and Directories of Expertise in seed conservation, ecological restoration, conservation arboriculture and public engagement.
- The opportunity to join BGCI's technical networks, including the Global Trees Campaign and the Ecological Restoration Alliance
- Preferential opportunities to participate in BGCI training courses in plant conservation techniques and public engagement (200 training places are available)
- Eligibility for BGCI's Botanic Garden Partnership Programme

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