



**BOTANIC  
GARDENS**  
CONSERVATION  
INTERNATIONAL

# 2021 Year in Review



LETTER  
FROM PAUL

# Welcome to BGCI's 2021 Year in Review

Welcome to BGCI's new look Year in Review which, as we look back at 2021, replaces the Member's Review format of the past five years. Feedback we received from our recent member's survey suggested that a more user-friendly, news-based format would be welcome, and that is what we have tried to provide. Another important difference is that we aim to give you, our members, much more of a voice. In this spirit, we would welcome any feedback on the new format and its contents.

As with most years, 2021 had its fair share of challenges and opportunities as well as delivering much of what we expected. The challenge of the COVID-19 global pandemic was very much a feature of 2021, as it was in 2020. The difference was that

we were better prepared to meet the challenge, and adapt to it. One way we were able to do this was to move our meetings and training courses online

An undoubted highlight of 2021 was the three-day virtual conference in February on "Reforestation

**Through BGCI's training programmes and outreach, we were able to engage with more than 3,500 people in 2021.**

for Biodiversity, Carbon Capture and Livelihoods" co-hosted by BGCI and Kew. This event was attended by 2,260 people from 113 countries, and generated 1,172 questions/comments on the Zoom Q & A and comments platforms, making

this a far more effective way to reach and interact with a wide range of people than via a face-to-face conference. Similarly, through BGCI's webinar and training modules, we were able to engage with more than 3,500 people in 2021.

Related to the reforestation conference and the '10 golden rules for reforestation' paper that preceded the conference, the idea of developing a Global Biodiversity Standard that could assess impacts on biodiversity in tree-planting/restoration programmes came from the realisation that our community has the data, expertise and responsibility to help ensure that biodiversity is not damaged and that the right trees are planted in the right places. We did not expect to be working on a biodiversity standard at the beginning of 2021, but this ended up being a major focus later in the year, culminating in the announcement of the development of the Standard at COP-26 in Glasgow.

In contrast, the release of the State of the World's Trees report in September had been long planned, although the amount of interest it attracted did take us by surprise. This interim report from the Global Tree Assessment announced to the world that >17,500 tree species (30% of the total) are threatened with extinction. The Report and associated press release generated nearly 1500 news articles in traditional media, and more than 70 million people were reached on social media.

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Other highlights of the year were: the publication of BGCI's Technical Review on the susceptibility of botanic gardens, and their responses, to natural and man-made disasters; our projects working to conserve >150 threatened tree species; the launch of BGCI's GlobalTree Portal; supporting 48 projects from 23 countries and 36 institutions via our Global Botanic Garden Fund; significantly strengthening BGCI's Board with directors from Asia, Africa and Latin America, and; growing our membership by nearly 14%.

In case I am painting too rosy a picture, I should record that 2021 had its challenges too. We lost friends and colleagues to COVID (in my case two people that I had worked particularly closely with over many years), and the pandemic continued to damage many gardens financially. However, as the spring approaches here in the northern hemisphere, I see causes for optimism. There are signs that the pandemic is receding, and perhaps because of our isolation, there is renewed interest in nature, the environment and biodiversity, which can only bode well for the world's botanic gardens. We look forward to meeting you again in person in 2022!

*Sincerely,  
Paul Smith*

# Big Stories of 2021

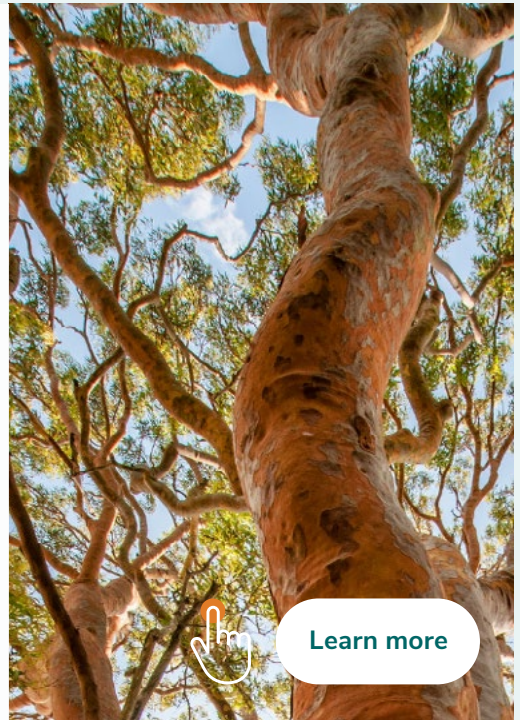
## State of the World's Trees

The State of the World's Trees was the first report to document the conservation status of the world's 58,487 known tree species and provide a roadmap for their conservation. It found that a startling 30% of tree species are threatened with extinction in the wild, and 142 species are already extinct.

*“The ultimate goal of this report and the work of the Global Tree Assessment is to inspire, catalyse, and enable conservation action to ensure that no tree species becomes extinct”*

– Malin Rivers, Head of Conservation Prioritisation, BGCI

The release of the State of the World's Trees Report garnered much global news attention and had a huge global impact. So far, at least 1,495 news articles have been produced in 39 languages. More than 70 million people engaged with the report release on twitter (including Greta Thunberg).



[Learn more](#)



[Buy the bottle](#)

## The Botanist's Plant Conservation Edition

The Botanist, an artisanal Islay Dry Gin, [launched a new limited-edition Plant Conservation Edition bottle](#). The pack will raise money for BGCI, with every bottle donating £5 to supporting plant biodiversity and conservation projects worldwide, enabling 20 botanic gardens to safeguard endangered plant species through the Global Botanic Garden Fund.

*“Biodiversity is at the heart of The Botanist. Our botanicals are hand-foraged sustainably to protect our Hebridean home so we understand a little of the work that the BGCI is doing globally to protect the world's biodiversity.”*

– Douglas Taylor, CEO, Bruichladdich Distillery

The Botanist Plant Conservation Edition is limited to 5,000 bottles and is available exclusively from The Botanist online store.

## Reforestation Conference, Kew Declaration, and the Ten Golden Rules

BGCI and the Royal Botanic Gardens, Kew, hosted a three-day virtual conference in February on “Reforestation for Biodiversity, Carbon Capture and Livelihoods”. [The Kew Declaration](#) was developed in response to the many large-scale tree planting initiatives, often monocultures of non-native species.

*“Kew and BGCI are natural partners, sharing the same passion for conserving the world’s plants and using them sustainably. By collaborating we were able to deliver the highly successful reforestation conference, declaration and 10 golden rules paper in 2021. We now need to keep the momentum going and continue working together to save what’s left of our botanical heritage.”*

– Kate Hardwick, Conservation Partnership Coordinator (Asia), Royal Botanic Gardens, Kew

Signed by over 3,000 global experts and concerned citizens from 114 countries, the declaration aims to promote policies and frameworks to ensure the protection of intact forests and the adoption of effective restoration strategies to protect biodiversity, mitigate climate change and improve livelihoods.

BGCI co-authored the “[Ten golden rules](#) for reforestation to optimize carbon sequestration, biodiversity recovery and livelihood benefits,” which was published in *Global Change Biology* in January 2021 to encourage better practices in reforestation projects.



[Watch the conference](#)

## BGCI co-authored the top paper of 2021 in *Global Change Biology* with more than 45,000 downloads.



## BGCI's Global Biodiversity Standard Announced

At COP-26, in Glasgow, BGCI announced the Global Biodiversity Standard, the world’s first and only standard to specifically recognise and promote the protection, restoration, and enhancement of biodiversity.

The Standard is being developed as a response to the climate crisis and the damaging impact tree planting schemes are having on global biodiversity.



[Register your interest and learn more](#)

# Saving Plants

## 2/3 of Madagascar's Endemic Tree Species Threatened with Extinction

In 2021, BGCI released the *Red List of Trees of Madagascar*, documenting the conservation status of the 3,118 trees native to Madagascar. 93% of these are endemic to the island, making it one of the most speciose countries in terms of endemic trees across the world. The document provides the first comprehensive assessment of the conservation status of Malagasy trees, helping to set conservation priorities for the country's tree flora.

The report revealed that 63% of Madagascar's endemic tree species are threatened with extinction, and a shocking 320 native tree species are assessed as Critically Endangered.

*“The Red List of Trees of Madagascar aims to both provide information to prioritise conservation efforts and inspire action to improve the conservation status of those trees most at risk of extinction, to maintain this unique diversity for years to come.”*

– Emily Beech, Tree Red List Manager, BGCI

More positively, 83% of threatened endemic tree species are recorded in at least one protected area. This is not surprising as protected areas represent where much of the remaining natural vegetation is. However, as these species remain threatened in protected sites, more action needs to be taken to save the species in the wild. Watch the webinar on the Red List of Trees of Madagascar [here](#).



[Learn more and see the webinar](#)

## By the Numbers



**155 plant species**

with targeted conservation action in 2021



**35,382 tree species**

on the IUCN Red List



ThreatSearch

**284 data sources**

**367,851 assessments listed**

**44,718 assessments for trees**



**GCC**

**8 Global Conservation Consortia**

with 203 affiliates from 40 countries



**216 members**



**GSCC**

Global Seed Conservation Challenge



**48 members**



**ERA**

Ecological Restoration Alliance of Botanic Gardens



**70 members**



**IPSN**

International Plant Sentinel Network

## Global Conservation Consortium for Oak

BGCI is coordinating a suite of Global Conservation Consortia, which catalyse groups of institutions and experts to collaboratively develop and implement comprehensive strategies to prevent extinction of priority threatened plant groups. Here are some highlights from the Global Conservation Consortium for Oak (GCCO) in 2021.

“Building collaboration with partners in California and Mexico was the biggest conservation win of 2021,” said Christy Powell of the San Diego Zoo Wildlife Alliance. “The collaborations resulted in an increase in the genetic diversity of species protected in ex situ collections, as well as seven meetings of the Channel Islands and Southern California Oak Group in 2021.”

Dr. Joseph Ree of the Alliance explained how the GCCO assembled many people with diverse backgrounds and strength, but all united with the concern for the future of endangered oaks. “I am hoping that this is signs of a growing network of people and organizations that, not only just meet

together, but also actively work with each other to further conservancy efforts,” said Dr. Ree.

### On big steps made towards the conservation of oak species in 2021:

*“2021 saw the first comprehensive surveys, mapping efforts, and monitoring of the entire U.S. population of Q. cedrosensis, providing valuable ecological context for the planning related to conservation of this species. The first known ex situ living conservation accessions of this species from the U.S. population are currently being grown and are slated for distribution to partnering gardens early in 2022.”*

– Tony Gurnoe, San Diego Botanic Garden



## Saving *Drypetes porteri* through the Global Trees Campaign

*Drypetes porteri* is an endangered tree found only in the remote, rocky, Tropical Dry Evergreen Forests of Tamil Nadu, south India. BGCI and Auroville Botanical Gardens launched a 3-year project in Tamil Nadu, with 2021 representing the final year of the project cycle.

Prior to the project, less than 250 mature individuals of *D. porteri* were recorded in the wild. However, with extensive surveys carried out across the Pakkamalai Reserve Forest and Megamalai Wildlife Sanctuary, that number has increased to approximately 5,000 mature individuals. Based on germination and propagation trials at Auroville Botanical Gardens, about 4,500 seedlings of *D. porteri* were established for use in integrated in situ and ex situ conservation programmes.

*“The increased awareness generated by the actions of this project have raised the profile of the forest area within the forest department. They have now begun the process of upgrading the status of the area from reserve forest to sanctuary. This, coupled with the raised awareness in the local villages of the rarity of this species, will hopefully lead to a more secure future for the trees.”*

– Paul Blanchflower, Auroville Botanical Gardens



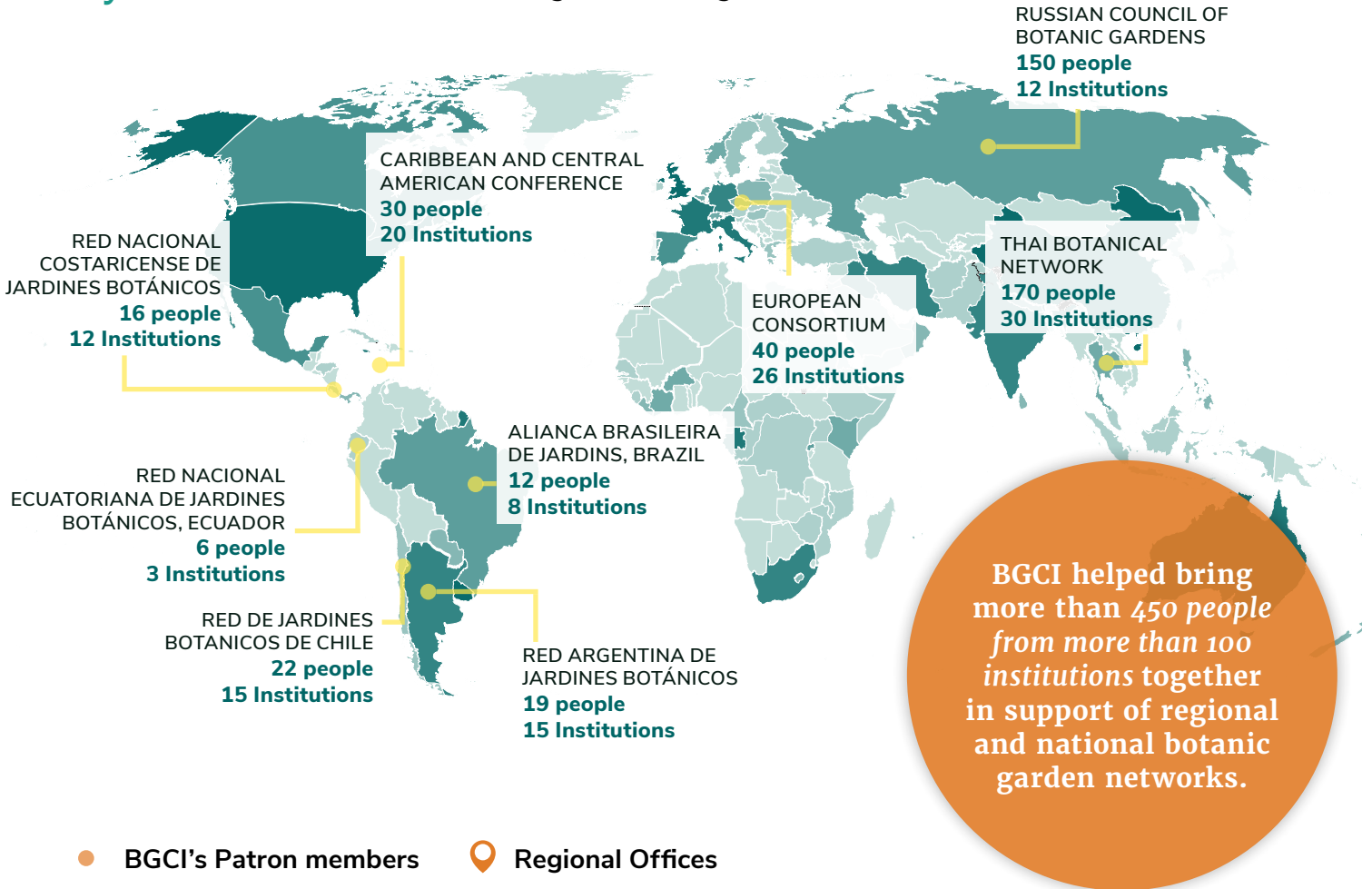
Learn more and to watch the video

# Inspiring and Leading People

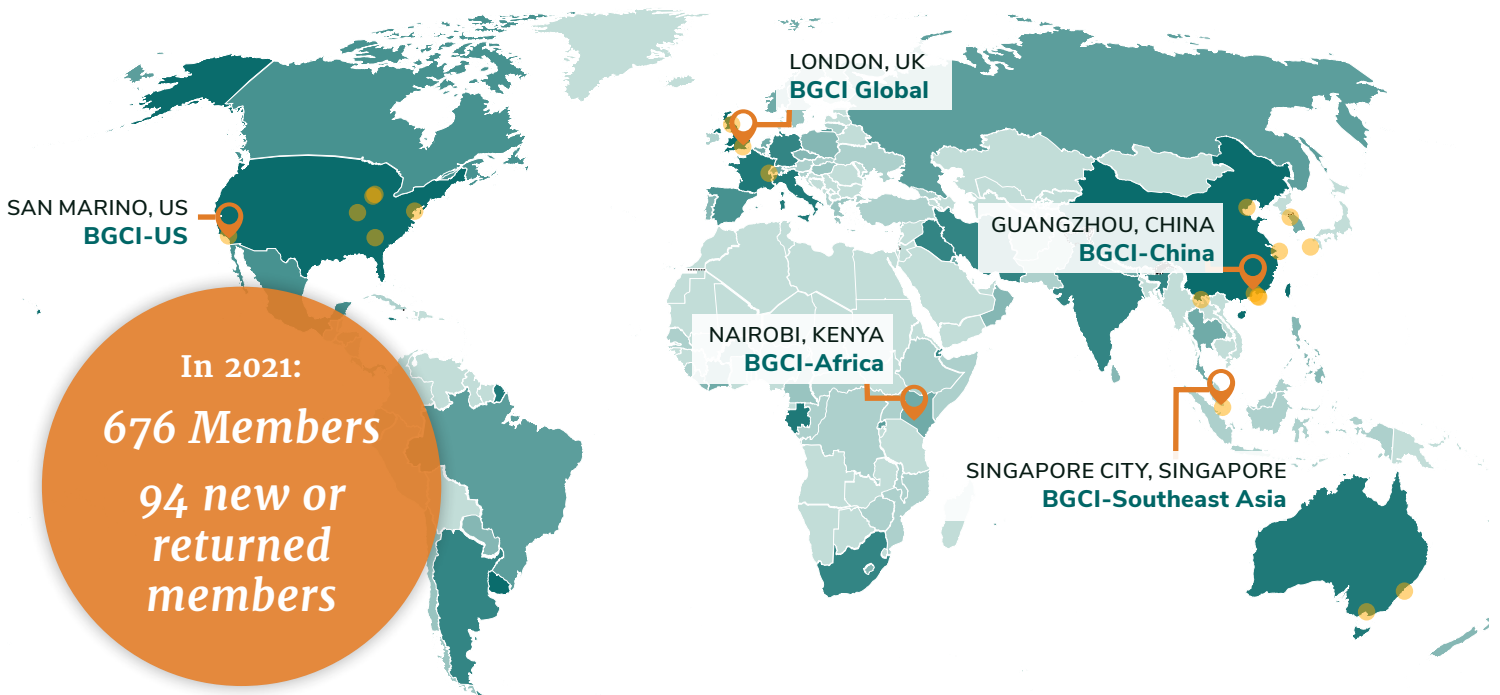
Number of BGCI Members



## By the Numbers ● BGCI's Regional Meetings



## ● BGCI's Patron members 📍 Regional Offices







## Supporting the formation of Aliança Brasileira de Jardins Botânicos

The idea of forming Aliança Brasileira de Jardins Botânicos started in 2018 as an initiative led by Guaraci M. Diniz Jr., Director of the Jardim Botânico Araribá, São Paulo, Brazil. Together with the support of BGCI, seven Brazilian botanic gardens became members of BGCI jointly as a network in 2021. The aim of the Aliança is to collaborate towards the conservation and ecological restoration of threatened plant species and to share knowledge and experiences between its members.

The network is growing from strengths to strengths. In 2021 they were successful in receiving funds from the BGCI Global Botanic Garden Fund in a joint project to create a seed exchange network across the gardens of the Aliança.

*“We expect that this project will also stimulate work outside of the network... and we are already seeing this as two more gardens will be joining the Aliança in 2022.”*

– Guaraci M. Diniz Jr., Director, Jardim Botânico Araribá

## Strengthening collaboration between regional networks

One of BGCI's strengths is our global reach, which allows us to share learnings and best practices across countries and cultures. In November 2021, BGCI brought together the Southeast Asia Botanic Gardens Network (SEABG), the South American Botanic Gardens Network (RSAJB) and the Mexican Botanic Gardens Association (AMJB).

This inter-regional virtual meeting created a platform to share experiences, knowledge and needs. The hope is that it will further facilitate regular and continuing inter-regional and national collaboration to address collective interest on plant conservation between botanic garden networks. Many of the issues and barriers that botanic gardens face in Latin America are also shared in Southeast Asia.

The meeting was well attended with 40 participants representing more than 20 organisations from 13 countries.

*“The national botanic gardens networks in most Southeast Asian countries are still at developmental stage; in this context, regional integration could play a crucial role in sharing experiences, learning from each other, and building capacity.”*

– Dr. Greetha Arumugam, Southeast Asia Botanic Gardens Network Coordinator, BGCI



Read more about the network and watch the interview with Guaraci



Read the full article

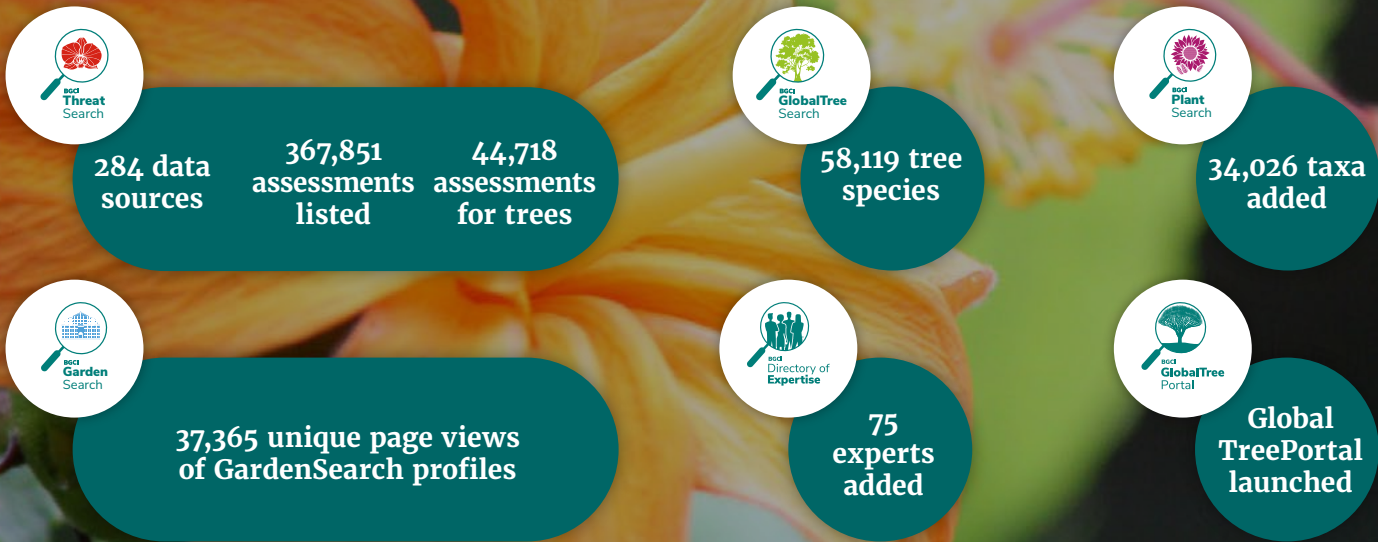
# Sharing Knowledge and Resources

## By the Numbers

### Engagement and Training in 2021



### Databases



### Publications



### BGCI Accreditation Scheme



### BGCI Global Botanic Garden Fund



## BGCI's Technical Review: the susceptibility of botanic gardens, and their responses, to natural and man-made disasters

This review examines the nature, frequency, and impacts of natural and man-made disasters in botanic gardens over recent years. We reached out to Anne Ashby Damon at Jardín Etnobiológico de las Selvas del Soconusco (Mexico), one of the case studies of the review, to learn about their progress.

There were positives following the 2017 hurricane that destroyed much of the garden. "Despite the heavy damage we suffered during the 2017 hurricane, we went on to be selected to represent Chiapas in the newly formed national Network of Ethnobiological Gardens," said Anne. "This has contributed to increased visibility and impact for our garden, on both local and national levels."



### On the biggest win of 2021:

*"The loss of so many trees and the corrective pruning of damaged trees opened up many unplanned spaces and permitted us to use them to diversify and increase plant collections. Fallen trees blocked or destroyed paths so we created new ones. One of the destroyed paths we now consider as a respectful "tomb" for our fallen 'Zope Negro' (Vatairea lundellii, Fabaceae)."*

There were some clear lessons learnt in 2021 as result of the work on the technical review and following the hurricane. "For a garden such as ours, seeking to represent local plants, we realized that with interest, commitment, and the necessary knowledge of local conditions and local plants, living collections can be recovered," said Anne. "Above all, we conclude that it is of vital importance to maintain a disaster fund to cover the immediate recovery costs"



[Read the full article](#)

## A Reflection on BGCI's Advanced Conservation Practitioner Accreditation

Having already completed BGCI's Botanic Garden Accreditation and Conservation Practitioner Accreditation, the National Tropical Botanic Garden began their journey towards earning their Advanced Conservation Practitioner Accreditation at the start of 2020. They received their accreditation in August 2021.

Nina Rønsted, the Director of Science and Conservation at NTBG, reflected on the accreditation process. Most beneficially, the accreditation process revealed areas of the garden that had previously received less thought and attention. "It is like food for thought and something that you could model for future possibilities," said Rønsted.

Regarding future plans, the NTBG will be striving to maintain their high levels of conservation standards and lead the way for smaller gardens. Being a flagship garden, as Nina puts it, requires them to set standards and innovate.

***"You have to lift. Lift up and try to do your best and be an inspiration for others."***

***– Nina Rønsted, National Tropical Botanic Garden***

Congratulations to all staff at the National Tropical Botanic Garden.



[Read the interview](#)

## BGCI's Global Botanic Garden Fund

BGCI's Global Botanic Garden Fund (GBGF) aims to drive plant conservation, especially in smaller gardens. In 2021, 48 projects from 23 countries and 36 institutions received a total of \$133,677 funding through the GBGF. These include BGCI/ArbNet Partnership Programme Grants, BGCI/MLA Grants, and the GGI-Gardens Awards Program Grants.

Projects funded through the GBGF in 2019 and 2020 finalised or nearing completion. Projects varied enormously from general maintenance to the gardens, support during the pandemic, sustainability, horticultural, activities, seed banking, etc.

The Anthony Hitchcock Species Recovery Fund which supported a project for the conservation of *Eleutharrhena macrocarpa*, an Endangered Species in China.



[Read the story](#)

The COVID-19 support grant which financially backed work across three areas of the Puebla Botanic Garden (Mexico) across the herbarium, propagation and seed bank.



[Read the story](#)

# Addressing Global Challenges through Public Engagement and Education

## BGCI's Food Waste Challenge

In 2021, BGCI launched the Food Waste Challenge, a one-year pilot project that aims to challenge visitors of botanic gardens to take on a 30-day challenge to reduce their fruit and vegetable food waste. BGCI developed the project using a [website](#) which allowed individuals to track their food waste with a particular focus on plant-based foods. Users could track their progress, gain access to resources (recipes and food initiatives), ask questions from the partnerships, and compete against others in how much food waste they produce. Through the project, BGCI created an awareness of food waste reduction in over one million people.

Some of BGCI's own staff participated in the challenge, including Patricia Malcolm, Membership and Conservation Services Officer.

*“As a mum of 3 children and the person in the house that makes dinner for 5 every day, cooking is a big part of my day. And as someone that has worked in the plant conservation sector for many years, our impact on the environment is a big part of my decision on what we eat; as well as giving my children a balanced diet. So, ideas on new recipes and tips on how to reduce our waste at home are always welcome and the reason we joined the Food waste 30-day challenge!”*

– Patricia Malcolm, Membership and Conservation Services Officer, BGCI



Read Patricia's food diary



# An Effective and Resilient BGCI

## BGCI's Southeast Asia Botanic Garden Network Moved to Singapore

BGCI-Southeast Asia and our Southeast Asia Botanic Garden Network (SEABG) moved to Singapore in 2021. The SEABG Network was established in 2004, with BGCI as secretariat, to acknowledge, support and promote the work of botanic gardens in the region. We are grateful for Singapore Botanic Gardens for hosting us! Contact Greetha Arumugam to join SEABG or learn about our activities in Southeast Asia.



Contact Greetha

## By the Numbers



**1500 articles**

about BGCI in the media



**70 million reached**

on social media



**30 staff**

**14 board members**

## BGCI Community Wide Survey

In October 2021, BGCI conducted a survey to its members and the wider botanical community, to help guide BGCI's implementation of our strategic plan and inform our programmes. We received **361 responses from 43 separate countries**. If you would like to provide more feedback, please [contact us](#).

### Main findings

- 1** High satisfaction with BGCI membership - 80% of members.  
The two most valuable membership benefits highlighted by members were being part of an international network and access to education materials and resources.
- 2** The main barrier for becoming BGCI member is financial.  
The three main areas respondents would like BGCI to provide capacity building were Conservation Horticulture, Managing Collections and Threatened species conservation.
- 3** High satisfaction of the online courses once people know they exist.

### Recommendations that BGCI can take forwards based on these results

- 1** Increase our audience to our Cultivate newsletter outside of the US and UK.
- 2** Encourage members to register with our SheepApp to access membership benefits.
- 3** Encourage more engagement of members of staff from member organisations across Africa, West Asia and China.
- 4** Encourage more gardens to take part in regional networks.
- 5** Our online training platform needs more promotion across the board, with many respondents wanting more technical/ advanced courses.

## BGCI Board

BGCI recruited and welcomed three new members to BGCI's Board in 2021:



### **Carmel Mbizvo**

Carmel Mbizvo has over 20 years' experience in conservation at community, national and regional levels. For the past 15 years, she has held senior management positions in various government and non-governmental organizations.



### **Kirtida Mekani**

Kirtida is an established environmentalist, educator, businesswoman and artist. Kirtida is an active supporter of urban greening, tree planting, biomimicry and biodiversity. Kirtida was bestowed with the President's Award for the Environment – Singapore in 2015.



### **Maricela Rodriguez**

Maricela is founder and former Director of the Herbarium and Botanical Garden of the Benemérita University of Puebla, Mexico. She served as President of the Mexican Association of Botanic Gardens and as Vice President of the Association of Latin American and Caribbean Botanic Gardens.

[BGCI's Board](#) of 14 outstanding individuals, chaired by Professor Stephen Blackmore, supports BGCI through advice, fundraising, finance and investment advice, legal advice, and much more.



### **Professor Stephen Blackmore**

Chair of the BGCI Board



### **Martin Gibson**

Chair of the Finance Committee



### **Michael Murphy**

Chair of the Development Committee



### **Gerard T. Donnelly**

Chair of the International Advisory Council

## BGCI Staff



**Paul Smith**



**Suzanne Sharrock**



**Joachim Gratzfeld**



**Brian Lainoff**



**Nicole Lee**



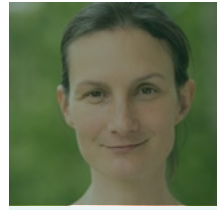
**Helen Miller**



**Malin Rivers**



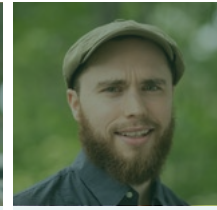
**Kirsty Shaw**



**Noelia Alvarez**



**Emily Beech**



**Dan Crowley**



**Dominic Grantley-Smith**



**Alex Hudson**



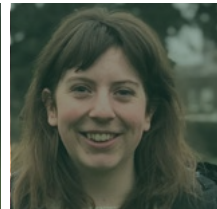
**Meirion Jones**



**Katherine O'Donnell**



**Galena Woodhouse**



**Megan Barstow**



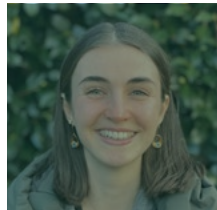
**Gail Bromley**



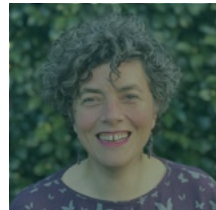
**Yvette Harvey-Brown**



**Vivien Isaac**



**Alba Landra**



**Patricia Malcolm**



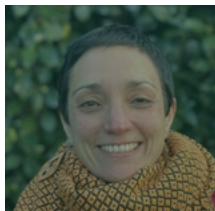
**Katharine Davies**



**Ryan Hills**



**Kate Marfleet**



**Lara Salido**



**Liz Smith**

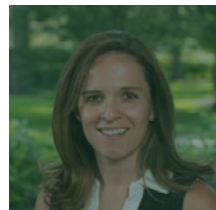
## BGCI International Staff



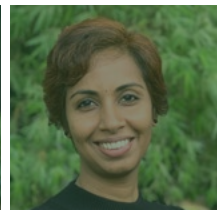
**Abby Meyer**



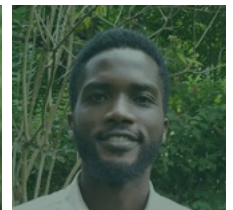
**Xiangying Wen**



**Silvia Alvarez-Clare**



**Greetha Arumugam**



**Herbert Ongubo**



# Take Action

## Join BGCI

Our members represent a diverse network of organisations, from botanic gardens and arboreta to universities and NGOs, who work in plant conservation and restoration. Be part of the largest network of botanic gardens and plant conservation experts in the world by joining BGCI today!



[Become a member](#)

## Donate

Plants are essential for all life on earth, yet at least one-fifth of all plant species are threatened with extinction! In 2021, BGCI found that at least one-third of tree species are threatened with extinction.

No matter what size donation, every contribution makes a real difference to us.



[Donate today!](#)

## Sign up to our newsletter

Get updates about BGCI's work and more in our monthly newsletter.



[Sign up today!](#)

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United Kingdom

Email: [info@bgci.org](mailto:info@bgci.org) · Web: [www.bgci.org](http://www.bgci.org)

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