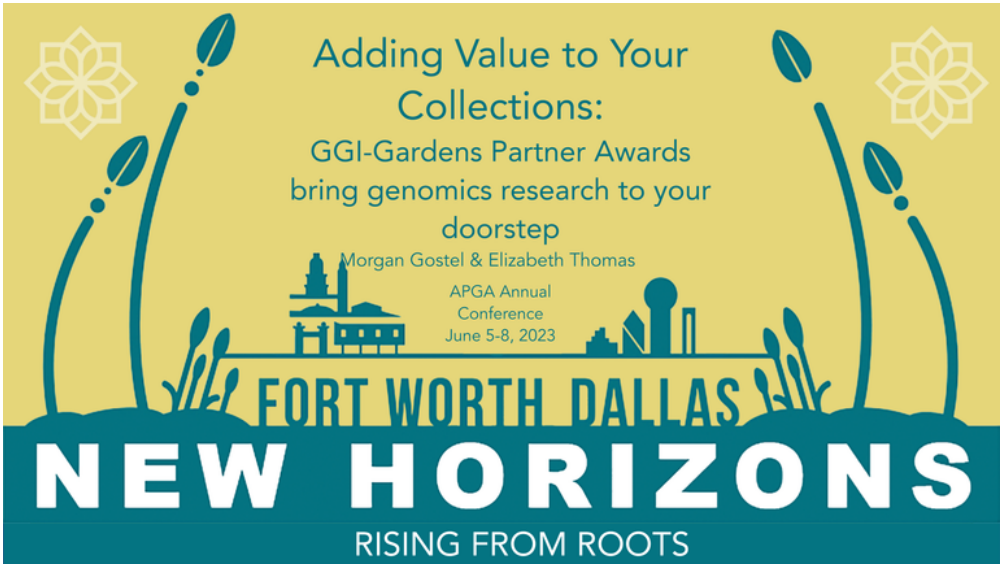
# GGI-Gardens Newsletter

## Issue 12 | July 2023

**News, highlights, & opportunities from the botanic garden community**

*Global Genome Initiative for Gardens is an international partnership dedicated to collecting and preserving genome quality tissues for all species of plants on Earth*




## GGI-Gardens Presents at APGA 2023 Conference

Last month, GGI-Gardens Director Dr. Morgan Gostel and Program Coordinator Elizabeth Thomas presented at the 2023 Annual Conference of the American Public Gardens Association, New Horizons: Rising from Roots. This opportunity was made special by its location: Fort Worth, Texas, the home turf of the GGI-Gardens program! The program's parent institution, Fort Worth Botanic Garden, was a Host Garden for the event, offering tours, workshops, and dinners for APGA conference attendees.

On the third morning of the conference, June 7th, Morgan and Liz hosted a session titled "Adding value to your collections: GGI-Gardens Partner Awards bring genomics research to your garden's doorstep". The presentation began with a discussion of the growing importance of genomics research more broadly, and its direct relevance to the living and preserved collections of gardens around the world. Following was an explanation of how the GGI-Gardens program helps to link gardens with the global research community, and supports best practices and resource sharing that enhances the conservation value of these collections. [...]

*Continued on page 2*

American Public Gardens Association
PublicGardens.org

**GGI-Gardens: Impact to Date**

>15,000 voucher collections

339 vascular plant families (73%)

> 3,000 vascular plant genera (20%)

Generated 1st reference barcode sequences for 29 families and 309 genera

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*Continued from page 1*

To demonstrate how different gardens might use a Partner Award to build capacity and meet their specific goals, two North American GGI-Gardens Partners were highlighted: San Diego Botanic Garden, who used their Award Project to launch an herbarium and initiate membership into the Global Genome Biodiversity Network (GGBN), and Mercer Botanic Gardens, who are using GGI-Gardens funds to mitigate disaster losses by collecting new germplasm. Afterwards was a discussion with the audience, many of whom had not been familiar with the program but expressed significant interest in future participation and promotion.

In addition to his presentation with GGI-Gardens, Morgan also presented with colleagues from Fort Worth Botanic Garden. In addition to his presentation with GGI-Gardens, Morgan also presented with colleagues from Fort Worth Botanic Garden in a session entitled Collection Use, Integration, and Access at FWBG/BRIT. The session introduced the various types of collections at the Fort Worth Botanic Garden, including the living collections, herbarium, DNA and genetic tissue, seed/germplasm, and libraries and then highlighted how collections are accessed and used by the public and other researchers. The Fort Worth Botanic Garden is developing a resource that will integrate the data from all of these separate collections in a cohesive and unified framework.


*GGI-Gardens team members, old and new, unite at the 2023 APGA Conference: Dr. Morgan Gostel and Elizabeth Thomas (middle) are flanked by previous GGI-Gardens Program Coordinators, Adam Black (left) and Jean Linsky (right)*

# GGI-Gardens Award Partner Highlight

THE HUNTINGTON

*Intern Riley Scaff pressing a specimen in the field*

**GGI-Gardens Project Collections**

**Total Samples:** 108

**Total Genera:** 106

**Genera New to GGBN:** 67

**Total Families:** 46

**Families new to GGBN:** 2

## Interns gain valuable experience and contribute to GGBN mission at The Huntington

by Brian Dorsey, Ph.D.

*Riley carefully glues an herbarium specimen*

We at The Huntington Library, Art Museum and Botanical Gardens were delighted to receive support through the GGI-Gardens Awards Program from Botanic Gardens Conservation International and the United States Botanic Garden to increase our GGBN tissue and DNA banks. The Huntington holds over 20,000 taxa of plants from across the globe and among these are approximately 900 genera not represented in the GGBN. This funding has helped us to further our goals of increasing access to our collections and training budding botanists.

Like many things during the past three years our project was affected by precautions taken to mitigate the COVID-19 outbreak, including limited on-site work and cancellation or delay of volunteer and intern positions. Despite these setbacks our first intern, Riley Scaff, began in July of 2021. Riley is a student at Pitzer College studying Botany and Geology. Even with a shortened time period Riley was able to collect and document nearly 50 taxa and extract DNA from most of these.

*Continued on page 4*

# Upcoming Events

## GGBN Annual Conference

Global Genome Biodiversity Network
International Conference
17-20 October 2023
Universidad Autónoma de Aguascalientes
Aguascalientes, Mexico

*Continued from page 3*

Our second intern, Sydney Kaye, a master's student in Regenerative Studies at Cal Poly Pomona, worked on the project from April through June 2022. Sydney added another 60 taxa to our collections. Both of these excellent interns learned new skills for making field collections, curating specimens, extracting DNA, and data management.

While our biorepository is still relatively small compared to our living collections, **our GGI-Gardens interns doubled the size of our tissue and DNA banks over two collecting seasons.** Further, through their work we have been able to streamline our protocols and now have a robust system to efficiently build our biorepository. Interns have long made important contributions at The Huntington and the GGI-Gardens program has been a great opportunity for beginning botanists to both learn skills and contribute to a meaningful conservation initiative.

# News & Resources

## BGCI Announces New Pedigree Tool

Botanic Gardens Conservation International (BGCI) is developing a pedigree management module for its revamped PlantSearch database. Once released, this tool will generate pedigrees allowing curators to know the relatedness of plants in their collections relative to all other plants held across institutions. The new pedigree management module will generate output files compatible with PMxceptional, a pedigree management software program developed to track and manage the genetic diversity of conservation collections of exceptional plant species, based off the original PMx software used in the zoo community to manage breeding programs for endangered animals.

## GGI-Gardens Partners Featured in BG Journal

Earlier this year, GGI-Gardens Award Partners Northwestern University Ecological Park and Botanic Gardens (NUEBG) and Jawaharlal Nehru Tropical Botanic Garden both had articles published in BGCI's BGJournal Volume 20, Number 1. To read their articles describing their epic Partner Award projects and other inspiring conservation work being done around the world with the help of global botanic garden funds, you can access the issue for free here.