NYBG

IMPACT REPORT 2021

NEW YORK BOTANICAL GARDEN



Engaging Local Communities

Growing New Audiences

Advancing Biodiversity and Conservation



Welcome





Dear Friends:

At this time in human history, one of the primary roles of a botanical garden—to teach people about plants and their foundational importance to all life on Earth—has never been more crucial. Since 1891 The New York Botanical Garden, a major force in the cultural fabric of New York City, has been dedicated to serving this purpose. Looking ahead, we rededicate and expand our efforts in all aspects of our mission areas to continue to make a difference in the lives of our neighbors around the corner and visitors around the world.

We would like to extend our sincere appreciation to JV Cossaboom for his exemplary dedication as Interim CEO during the challenging time at the onset and ensuing months of the pandemic. His visionary leadership touched every aspect of the Garden's operations. He retired in September 2021 leaving a strong and stable institution poised for a bright future.

This Impact Report highlights just a few of the Garden's current programs and initiatives that illustrate our commitment to engaging local communities, growing new audiences, and advancing biodiversity and conservation, among other institutional priorities. And it is only with the commitment of our Board, the generosity of our donor constituencies, and the partnership of the city, state, and federal governments that we can continue this consequential work.

We hope you will enjoy reading the pages that follow—whether learning about a program for the first time or reinforcing what you already know. The Garden is an unparalleled resource of opportunities to help advance knowledge and understanding of the critical importance of plants as well as explore the cultural, scientific, and artistic connections we all share with the natural world.

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J. Barclay Collins II Chair of the Board of Trustees

Jennifer Bernstein

Jennifer Bernstein CEO & The William C. Steere Sr. President

KUSAMA: Cosmic Nature Exhibition Milestones



"Cosmic Nature was the art exhibition we needed this year its whimsical and larger-thanlife nature pulled us outside of ourselves (and our homes). With installations across the entire garden, it most definitely deserves the top spot as the best art exhibition we saw this year."

-*Time Out New York*'s 2021 Best of the City Award Winners (Selected as "Best Exhibition")



Participants Transformed Greenhouse Installation with Floral Stickers

390,000

Despite the pandemic restrictions, KUSAMA: Cosmic Nature, which was on view from April 10 through October 31, 2021, attracted 846,000 visitors, making it the highestattended exhibition in NYBG history.

Visitors 846,000

Children and Families in the Kids Get Cosmic! Program

144,300



Through the Community Partner Day initiative, NYBG and local elected officials worked together to engage constituents from underserved communities to visit outdoor cultural spaces. Thanks to this collaboration, thousands of Bronx neighbors throughout our diverse borough received free access to NYBG.

Highest Grossing Membership





Bronx Neighbors Passes Distributed

10,400

Community Partner Day Tickets Distributed

11,140

Bronx Green-Up Community Gardening and Urban Farming Programs



"What's going to get us through is local relationships, cultivating those relationships...and cultivating community."

-Raymond Figueroa, Jr., Youth Farm Director, Brook Park



Community partnerships have always been at the heart of NYBG's Bronx Green-Up (BGU) program, and these past two challenging years have demonstrated the strength of this core principle. At the start of the pandemic in New York City, BGU staff came together with community gardens and urban farm leaders to see what we could do together to help during this critical time. We knew Bronx residents already face many challenges in an area with one of the highest rates of food insecurity in the nation, which would only be exacerbated by the pandemic. The result was the Bronx Community Farm Hubs network, coordinated by Bronx Green-Up and comprising more than 18 community gardens and urban farms as well as NYBG's Edible Academy.



"Right to food is a human right and we're here to feed the people in our community."

-Karen Washington, NYBG Trustee, Bronx Farmer, and Community Activist

The Edible Academy has grown more than 25,000 seedlings for the network, while BGU distributes the plants and provides technical assistance to the sites. And on the bi-weekly zoom calls, garden and farm leaders consistently shared resources, advice, and problem solve together. Since spring 2020, the Bronx Community Farm Hubs network has grown and harvested more than 34,000 lbs. of produce for community distribution, supplementing with an additional 171,000 lbs. from local farmers and serving more than 41,000 people. The network has continued its regularly biweekly meetings to coordinate, plan, and continue to share knowledge and resources for the 2022 growing season as well as assist each other at on-site workdays. While we continue to be an important part of this community work, we know that this community work has also impacted NYBG, providing key connections and influencing



THRIVE: Engaging Veterans Through Gardening

"In this space, I feel a connection with my surroundings. I am overwhelmed with a feeling of calm. Nothing needs to be said. Nature has choreographed a symphony of peace and harmony."



NYBG continues to sow the seeds of its new horticulture therapy program for Veterans called THRIVE: Therapeutic Horticulture & Rehabilitative Interventions for Veterans Engagement. Research supports therapeutic horticulture as an effective intervention for the treatment of anxiety, depression, PTSD, and social isolation. THRIVE calls its home within the restorative space of the Edible Academy, the Garden's three-acre fruit and vegetable teaching garden.

The program, facilitated by Anne Meore, LMSW, HTR, is funded by a grant from the Institute of Museum and Library Services, and is presented in collaboration with the Resilience and Wellness Center (RWC) at the James J. Peters VA Medical Center in the Bronx. The RWC provides personalized care through a spectrum of complementary therapies and life skills classes that help Veterans to take greater charge over their life and health.

Over four weekly, three-hour sessions, groups explore the healing benefit of the person-plant relationship. Activities include seasonal gardening projects such as seed-sowing and saving, creating a restorative container garden, planting, watering, and harvesting. Each session centers on a focus question that is supported by therapeutic activities promoting a personal relationship with the natural environment and group cohesion.

We have already begun to see the impact of the program:



-THRIVE Participant

Data collected from preliminary assessments of participants who volunteered to complete a self-evaluation before and after each of the sessions showed reduction in symptoms of stress, pain, depression, and loneliness (see bars for session 1). These gains were sustained in subsequent sessions comparing symptoms in sessions 2–4 to baseline symptoms at session 1 (see bars for session 2–4).

These findings are also reported in Complementary Therapies in Medicine 2021 (DOI: 10.1016/j.ctim.2021.102728)



"This program has affected so many different areas of my life personally. I would like to see more of my fellow Veterans enjoy what I have enjoyed."



Adult Education Online Registration Expands to Global Audiences



NYBG's Education division underwent a major transformation during the pandemic—from robust on-grounds, in-person programs that were running at full enrollment to an exclusively online and digital presence. Staff transitioned educational offerings in exciting and meaningful ways. Adult Education pivoted quickly to turn offerings online via Zoom.

Student reception has been outstanding, and we now have an active international student body, growing from just two in 2019 to 101 in 2021.





Canada

"In many ways it is better than being in the classroom. Every student has a close-up view on the screen of the instructor demonstrations and the work of other students that is better than everyone clustering around a desk. It is also great not to have to lug heavy supplies to a classroom. I am also enjoying having classmates from all over, hearing about their different experiences, and seeing the different plants available to them in different regions."

-Sheila Brown



Canada

"What an exciting surprise to find out that NYBG is offering online instruction, and with a Certificate program! The content keeps me engaged while learning new techniques from helpful, experienced artists. I really appreciate the opportunity to learn from a distance and at my own pace."

—Kathryn Macdonald

Japan

"It is a miracle for me to be able to take classes at NYBG online now. There is no program in Japan that offers a Certificate in Botanical Art & Illustration like NYBG. I am so glad that there are so many teachers from different backgrounds and they are all so passionate about teaching."

—Yumi Narita



United Kingdom

"The journey afforded by your online sessions in Botanical Art & Illustration was of immense value to a beginner such as myself. Your very talented instructors made the whole experience an enjoyable learning event. As a chemical engineer whose current vocation is a thriving business in the design, making, and selling of gingerbread cookies, I appreciate the wonders of nature-based arts."

—Klara Repas

Australia

"Nothing is beyond NYBG for online presentation and teaching. The Botany subjects helped to encourage self-reliance as we had to go into the field and locate the plants to study. I could do this in Australia as we have both local natives and global weeds! The experience has increased my appreciation of and expertise in botany."

—Sandra Worrall-Hart

Explainer Program Diversifies the Pathway to Careers in Science



"I didn't know what my career would be when I became an Explainer. Working with an amazing outdoor science educator like Tavion affected how I approach teaching and learning. I want to be a great teacher like him."

-Jose, Explainer Program, 2018-2021, current GreenSchool intern

For more than 20 years, the Everett Children's Adventure Garden's **Explainer Program** has provided nearly 3,500 local high school students with opportunities to deepen their understanding about the living and preserved collections and science research at NYBG through a tiered youth development program with an emphasis on service learning. Explainers begin their internship with a 25-hour orientation and training program. These teens learn about basic botany, child development, teaching, and public speaking skills before they are paired with more experienced volunteer and paid Explainers to lead hands-on activity stations for families on weekends and during school breaks.

Upon completion of the 125-hour volunteer internship, Explainers can apply for one of 46 paid positions. Opportunities include conducting citizen science research as an Advanced Explainer, learning about teaching and classroom management as a Camp Explainer, working as a mentor and family program facilitator as a Master Explainer, and taking on leadership responsibilities at the Adventure Garden as a Senior Explainer.

Current Demographics:







Explainers live in NYC City Council Districts



Explainers living in NYC represent every borough except Staten Island and 25 out of 51 City Council districts

Majority of Explainers live in Bronx City Council districts surrounding the Garden:



Explainers live in districts 13 and 15



Explainers live in districts 11, 12, 14, 16, 17, and 18



New Species Discoveries and Virtual Herbarium Digitization

"Digital collections are of extreme conservation value as they can be viewed instantaneously by a global audience. Digitized herbarium specimens have yielded previously unknown distribution records for species. These records inform sitebased conservation and can lead to rediscoveries of long-lost species."

-Wesley Knapp, Chief Botanist, NatureServe

The William and Lynda Steere Herbarium's 7.8 million specimens document the diversity of life through time and across geographic space, directly impacting conservation and biodiversity research. These specimens are used to describe and name new species, and devise conservation solutions for endangered species.

Systematics is the science of classifying biodiversity, with direct impacts on conservation: we cannot conserve a species if we do not recognize it as distinct and do not have a name for it. A 2010 paper estimated there are approximately 70,000 plant species that remain to be described, and that biodiversity collections such as the Steere Herbarium are a primary source for finding new species. Over the past 20 years, NYBG Curators have described an average of 34 new species per year, and in 2021 we described 18 new species, from orchids and sedges to mushrooms and lichens. Digitization of the Steere Herbarium impacts systematics by allowing for easier and quicker access to our specimens, and the digitized data from specimens impacts analyses that address evolution, extinction, conservation, and climate change.

Steere Herbarium Specimens Freely Available on the C.V. Starr Virtual Herbarium

Plant Species That Remain

to be Described

4,300,000



Species Descriptions Added to The World Flora Online Project

40,000





Most of the new species NYBG Curators describe face acute conservation threats and are very rare. One example is *Meriania penningtonii*, described in 2021 by Fabian Michelangeli, Ph.D., and two colleagues from Peru and Brazil. This small tree, which bears brilliant reddish-purple flowers, is only known from three localities in Peru, all of which face conservation threats from agriculture. Similarly, digitized herbarium specimens allowed Matthew Pace, Ph.D., to document the decline of newly described *Spiranthes bightensis* over the last 150 years, leading to a NatureServe ranking of Critically Imperiled.

In addition, 4.3 million Steere Herbarium specimens are freely available on the C.V. Starr Virtual Herbarium, and are shared with global biodiversity aggregators such as iDigBio and GBIF. Strong support from many foundations and The National Science Foundation has facilitated digitization over the past 25 years. The impact of these digitized Steere Herbarium specimens is felt across the full scope of science, including more than 980 literature citations in the past five years. For example, NYBG digitized and contributed 40,000 species descriptions to The World Flora Online project, and we are a leader in Artificial Intelligence-based plant identification, in partnership with Google.









FY 2021 Financial Highlights

Fiscal Year (FY) 2021, which ended on June 30, 2021, marked the 33rd consecutive year that The New York Botanical Garden has balanced its operating budget. Despite many challenges caused by the COVID-19 pandemic, we ended the year in a strong position. The financial year came a long way since the budget was developed the prior spring when COVID-19 restrictions made reopening and mounting exhibitions uncertain. With the aid of the Paycheck Protection Program, the goal was to keep full-time staff intact, so that once restrictions eased, the Garden could quickly reopen and welcome back visitors.

Government support stood steady at the City level through the Department of Cultural Affairs. State funding through the Zoos, Botanical Gardens, and Aquariums Program, and funding for research grants awarded by the Federal National Science Foundation remained in place. The Garden also obtained Federal relief from the Employee Retention Credit program. Our generous donors delivered Annual Fund support plus additional funding through the Recovery & Restoration Fund.

Because our staff was intact and able to respond to easing restrictions, earned income performed better than expected. We reopened the Garden in July 2020, with highly reduced capacity; however, visitation through the balance of the summer and early fall was higher than anticipated. A highly limited *Holiday Train Show*[®] was offered for Members only and *NYBG GLOW*, a fully outdoor light show, was launched. *KUSAMA: Cosmic Nature* opened in April 2021 after being postponed from 2020.

In aggregate, FY 2021 revenue reached \$93.1 million, due to extraordinary support from both the public and philanthropic sectors and improvements in earned income. In aggregate, FY 2021 expenses totaled \$74.7 million. Due to the loosening of COVID-19 restrictions, only a portion of pandemic contingency funds were utilized. Recruiting and filling open positions was a challenge and resulted in significant payroll savings. The mix of expenses remained constant with approximately 77% going toward programs and public services and 23% toward administration, special events, and fundraising. Additional revenue and expense savings generated a surplus that will support long-standing needs and promote future growth. With Board approval, reserve funds will be used in fiscal years 2023, 2024, and 2025 to: expand fundraising and stabilize the operating budget; fund deferred maintenance of facilities; and meet needs on active capital projects.

Standard & Poor's

On April 21, S&P reaffirmed the NYBG A+ underlying rating and the outlook improved to stable from negative. Like many cultural institutions, NYBG was placed on negative outlook in the early days of the pandemic. The revision to stable outlook reflects S&P's view of the Garden's navigating pandemic pressures with resilience.

Net Assets

Net assets represent all assets less all liabilities. Net assets include the total book value of land, buildings, and equipment constructed or purchased by the Garden net of accumulated depreciation and debt, as well as endowment funds and other long-term investments. In FY 2021, the net assets of the Garden increased by \$136.1 million, from \$521.3 million to \$657.4 million, due primarily to investment performance.



- **19%** Annual Fund
- **13%** Recovery & Restoration Fund
- **11%** NY State and City
- **10%** Admissions & Parking
- **10%** Federal Pandemic Relief
- 7% Membership
- 4% Retail & Food
- 3% Tuition & Fees
- 1% Federal Grants
- **0.3%** Misc. & Other



- 17% Horticulture
- **15%** Maintenance, Security, Operations & Energy
- 14% Administration
- **13%** Saving the Plants of the World
- **12%** Education and Outreach
- **11%** Earned Income Activities
 - 9% Exhibitions
 - **7%** Fundraising
 - 2% Special Events

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