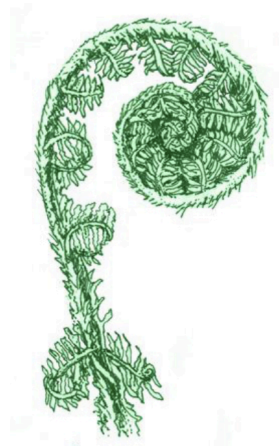

1925 - 2025

CELEBRATING the FIRST 100 YEARS
of the
WELLESLEY COLLEGE BOTANIC GARDENS



By
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Director, Wellesley College Botanic Gardens

WCBG@100



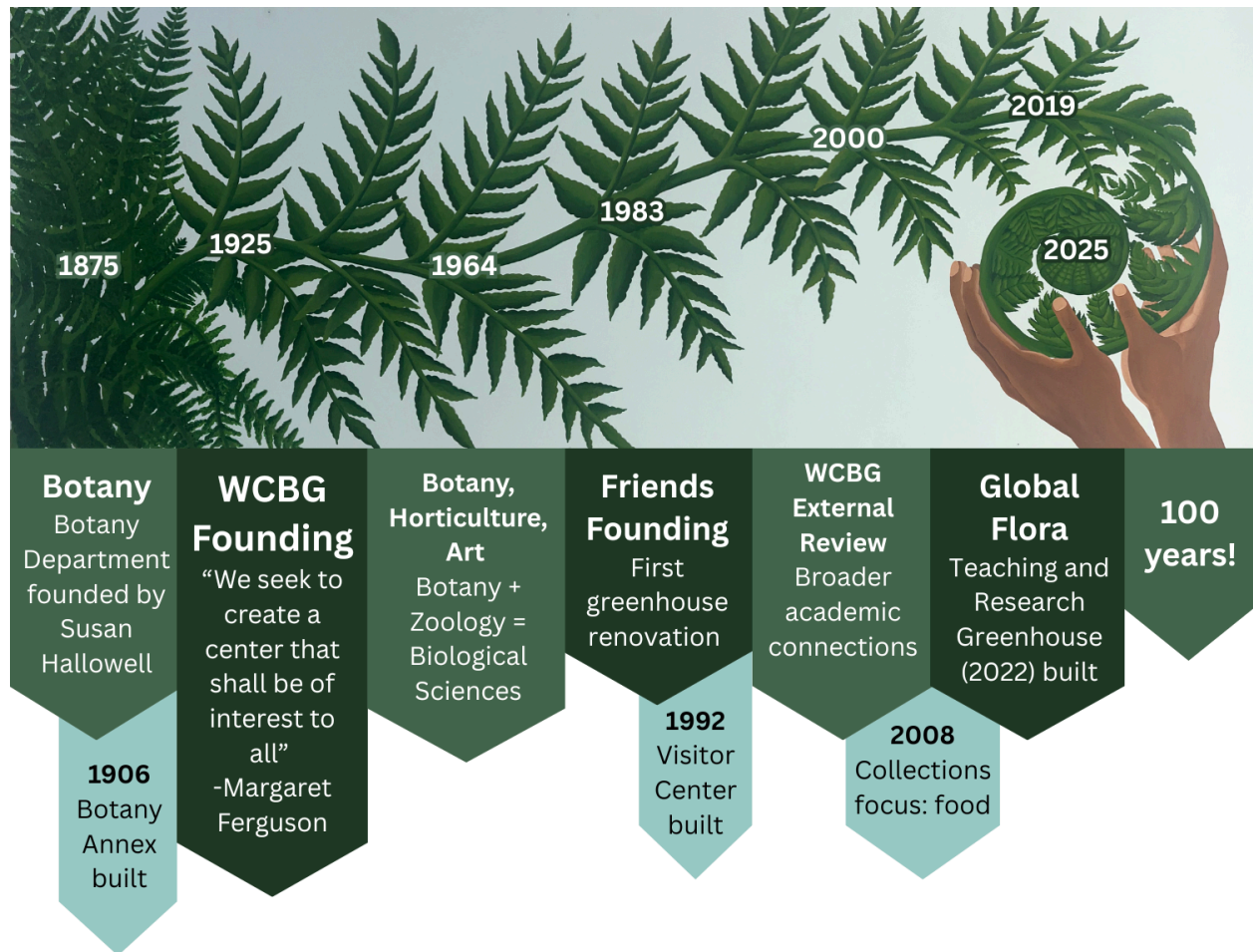
Celebrating the First 100 Years of the Wellesley College Botanic Gardens has been published to follow up on Margaret Ferguson's foundational publication *Botany at Wellesley 1875-1925* (Wellesley Alumnae Quarterly, 1925), and to commemorate the WCBG centennial as part of the Wellesley College 150th celebration. Copyright ©2025 by Wellesley College, Wellesley MA 02481.

On the covers:

Lady fern fiddlehead (front), drawing by Sarah Roche from a photograph as we developed the WCBG fiddlehead logo in 2006.

WCBG Centennial banner (back), one of 14 designed by WCBG Postbac Fellow Elise Crawford-Paz Soldán. Mounted on lamp posts throughout the outdoor botanic gardens, the banners each depict a different plant representing that area of the gardens. Photo of witch hazel by Ulrich Lorimer.

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Created for our centennial celebration, this fiddlehead timeline of milestones is a mural by WCBG Postbac Fellow Elise Crawford-Paz Soldán, on view in the Link between the WCBG Visitor Center and the Global Flora conservatory.

Foreword

We all have a favorite spot on campus. Mine is the so-called “Botany Annex”, the tiny Durant-era greenhouse standing between the 21st century marvels of Global Flora and the Science Complex, looking over towards the botanic garden and arboretum beyond the tree line. This is a place where the College’s past, present and future come together in a seamless and beautiful way. For me, the magic lies not just in what one can see there – the juxtaposition of buildings and landscapes from different eras of the College’s history – but in contemplating how successive generations of faculty, administrators, students and alums have drawn educational inspiration from this landscape and from the plants growing here and brought here.

If there is a single unifying theme of Kristina Jones’ celebration of the Botanic Gardens’ centennial, it is the consistency of the College’s commitment to botanical programs, but a consistency that has allowed for, indeed called for, continual reinvention. In asserting the centrality of botany to rigorous scientific study, the value of hands-on learning, and the aspiration to make the botanical gardens a center for all students and all members of our community, Margaret Ferguson’s founding vision in 1925 set a course that the Botanic Gardens has followed ever since. But the educational programs and the facilities have always evolved – never more so than over the past two decades, as the Botanic Gardens have been reimagined to reflect contemporary notions of interdisciplinarity, inclusiveness, and ecology. Dr. Jones rightly observes that in her day Professor Ferguson was a distinguished innovator in science education. What may be easier for others to say is that she, too, along with her colleagues in the Botanic Gardens, the Paulson Ecology of Place Initiative, and the Frost Center for the Environment, is keeping Wellesley in the forefront of educational innovation. The Wellesley of Global Flora, of the Kitchen Garden and the Edible Ecosystem Teaching Garden, of Green Gatherings, of critiquing inherited botanical practices and introducing art and music in the landscape, is placing the campus itself, the land and the plants, at the heart of a Wellesley liberal arts education. This is very much as the Durants and as Margaret Ferguson wished but also as current and incoming generations of students and faculty seem to crave – past, present and future aligned.

Andy Shennan
Professor of History and Provost Emeritus

Overview: “a center that shall be of interest to all”

One hundred years ago, Wellesley College invested considerable resources in the founding and endowing of the Alexandra Botanic Garden, H.H. Hunnewell Arboretum, and Margaret C. Ferguson Greenhouses, now collectively known as the Wellesley College Botanic Gardens (WCBG). Henry and Pauline Durant, founders of Wellesley College, had envisioned a “school of botany” at the College.¹ Botany Department Chair Margaret Ferguson drove the 1920s creation of a “center that shall be of interest to all,” designating 20+ acres of the campus landscape and building state-of-the-art greenhouses for experiential learning year-round. Reflecting on how Dr. Ferguson’s vision has played out over WCBG’s history, here we also consider how WCBG can continue to evolve and contribute towards Wellesley’s mission of service.

One hundred years in, WCBG is at an exciting inflection point, focused on the College’s strategic priority of inclusive excellence. The 2019 opening of the Global Flora conservatory and current re-visioning of outdoor spaces are timely opportunities for WCBG to work at the forefront of a global movement pushing botanic gardens to reckon with their colonial origins and privileging of Eurocentric ways of knowing. Wellesley College students are central to this work, co-leading transformations in how we curate, display, grow, and invite people to connect with the plants and land in our care.

Reliance on plants is universal. Progress on many complex issues of great interest to students, such as food justice and climate resilience, depends on understanding plants and land. Curated opportunities for hands-on learning with plants support the growth of science-based understanding, arts and humanities approaches, traditional ecological knowledge, and emerging transdisciplinary fields. Botanic gardens are distinct from other gardens in providing these opportunities with a diversity of thoughtfully chosen plants, and in archiving and sharing these plants’ stories.

In well-curated botanic gardens, one can learn in many different ways while experiencing wonder, joy and beauty. Engaging students in everything from hands-on plant care to research, art, programming and exhibit development enables WCBG to become more and more distinctly Wellesley, an increasingly valuable educational resource that reflects the diversity of student experiences and interests. Entering its second century strengthened by collaborations with the Frost Center for the Environment, the Paulson Ecology of Place Initiative, and community partners, WCBG has great opportunities for impact on the student experience at Wellesley and as a distinctive public face of the College.



Courtney Streett '09 in her student days researching the medicinal plant *Calendula*.

¹All Margaret Ferguson quotes are from her 1925 Wellesley Quarterly article *Botany at Wellesley 1875-1925*.

Founding and purpose (1920s): Botany at Wellesley

For the first 50 years after the 1875 opening of the College, botany was a popular major even without the resources of the WCBG. Professor Susan Hallowell founded the department soon after the College opened, outfitting it with a library, microscopes, and a small museum of botanical objects. These included exquisite Louis Auzoux papier maché botanical teaching models brought from the 1878 Paris Exposition by Henry and Pauline Durant. The Durants had an extensive plant collection in their own greenhouse near where the College Club is today; students were invited to look but not touch. College Hall, the original college building, had many plants, notably in a central atrium with diverse palm trees. When Stone Hall was built, it had a large laboratory and classrooms for botany, and the nearby Botany Annex included Wellesley's first greenhouse specifically for student use. This charming greenhouse was restored on its 100th birthday in 2006, and moved near the WCBG Visitor Center.



Display of antique flower models from the Durants, now in the Global Flora Link.



The "Annex" greenhouse in its original location attached to "The Barn".



After its move and restoration (photo from 2008).

Building on this foundation, Professor Margaret Clay Ferguson (Wellesley class of 1891, Cornell PhD 1901) was visionary. She chaired the Botany department in the 1920s, becoming nationally known as an innovator in science education, and the first woman to be president of the Botanical Society of America. By that time Dr. Ferguson had established the Alexandra Botanic Garden and Hunnewell Arboretum, overseen the construction of the greenhouse complex, and secured endowments to help with long term maintenance of these College assets.

In her triumphant 1925 article describing the newly established greenhouses and gardens, Dr. Ferguson attested to the value of learning directly from plants, including collaborating across disciplines to address global challenges. As one example, she wrote: "It would not have occurred to one in the middle of the last century that the problem of the world's energy supply could have a special interest for the students of plants. But today, in response to the fear that has been expressed lest the supply of energy stored in the earth should be exhausted, we are turning to the plant for a solution of the problem. Accordingly, we find the trained chemists and physicists joining with the botanists in an

endeavor to secure a knowledge of that process by which the green cells of plants are able, not only to make use of the energy of the sun in manufacturing the basal foods of the world, but, in addition, to so hold and store that energy that it becomes available for other purposes... When scientists have come to understand, and learned to apply, the complex process by which plants achieve this unique result, we need have no further fear regarding the exhaustion of the world's energy supply."

Dr. Ferguson sums up the founding purpose of the WCBG with this guiding statement: "... the department shall stand, primarily, in the future as in the past, for the dignity and educational value of its scientific work. At the same time, we shall not fail to emphasize the humanistic aspects of our subject; and we shall endeavor to create a center that shall be of interest to all."



Prof. Margaret Clay Ferguson,
class of 1891



Students in the Ferguson Greenhouse, 1936

Toward these goals, the greenhouses were designed and implemented with remarkable attention to the details of their uses for teaching, research, and public engagement. Dr. Ferguson's article describes them with great pride. The greenhouses provided "opportunity to study and compare plants that are native to different regions of the earth, and others that are found growing in a great variety of habitats." They also had equipment for plant physiology and "electric lamps of 1000 watts" that produced three generations of plants within the academic year for genetics experiments.

Like the greenhouses, the outdoor gardens provided a great diversity of plants in curated collections, along with spaces for experiments and hands-on learning. Having these right on campus, adjacent to the greenhouses and Sage Hall, meant that they could be part of students' everyday experiences - unlike at Harvard and Cornell, which otherwise served as models for the biological sciences at Wellesley (it is a field trip for Harvard students to get to the Arnold Arboretum).

The Alexandra Botanic Garden was designed as a European-style botanic garden, with collections of trees and shrubs organized primarily by their Linnean taxonomy (i.e. those understood to be most closely related, evolutionarily, were clustered together for comparison). Typically only a single specimen per species was included, with a goal



Alexandra Botanic Garden, 1949

of maximizing the diversity of the collection. While this approach prioritized educational value over aesthetics, Professor Helen I. Davis (class of 1912) designed the garden following the English picturesque style, embedding the taxonomic collections thoughtfully into the landscape's topography without formal geometry and straight lines. The Silver Thread stream, from an initial "Cascade" through most of the garden to Paramecium Pond, was designed as a connecting element that drew the visitor to meander along it through the landscape.

While the Alexandra Botanic Garden presented individual specimen trees and shrubs with mostly mowed grass in between, the adjacent Hunnewell Arboretum provided a different educational and aesthetic experience. In Margaret Ferguson's words "We hoped to bring back here... all the wild flowers and shrubs that are native to Wellesley... (and) as great a variety of trees and shrubs and vines as possible, with those wild plants beneath them that naturally seek such habitats." She also emphasized that certain areas "shall serve as bird sanctuaries as well as haunts for the more delicate and retiring wild flowers." Hence the Arboretum is less open and park-like, and more like a series of curated habitats to be explored. These include a vernal pool at the low point of a glacial kettle with a relatively undisturbed patch of woods sloping up from it, the Maple Swamp (with the "Botany Wells" from which the campus potable water supply is drawn), and the Grotto, designed as a weeping stone wall with small wetland plants below.



Planting by the "Cascade" of the Silver Thread stream, Alexandra Botanic Garden, 1926.



Lined vernal pool, 1970.



Botany class in the student garden area of the Hunnewell Arboretum, 1930s.

The vernal pool was lined and supplemented with water to become a more prominent feature. A more open sloped area served as the student garden, where horticulture students would each design, plant and maintain a small section.

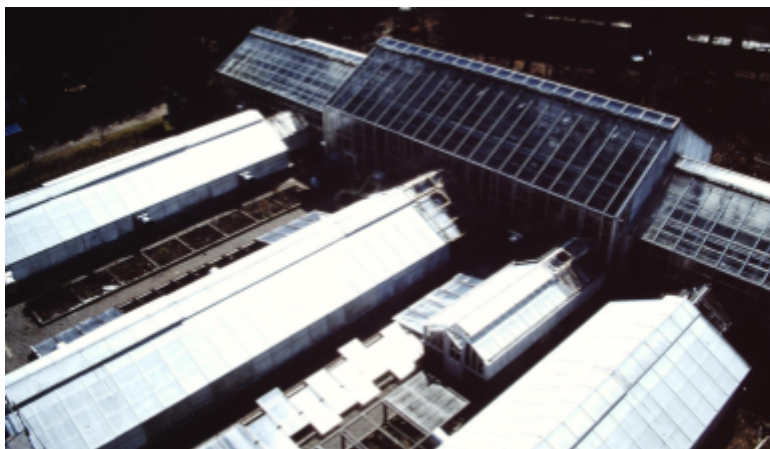
Wellesley's botany program thrived for decades with the addition of the greenhouses and gardens. One of Margaret Ferguson's protégés, Harriet Creighton (Wellesley class of 1929, PhD Cornell 1932) [worked closely with Barbara McClintock](#) at Cornell on the now-famous maize genetics project that eventually earned McClintock a Nobel Prize. Like her Wellesley mentor, Dr. Creighton was a force who returned to her alma mater, became widely recognized as an educator, and served as president of the Botanical Society of America. She led the botany department, greenhouses and gardens through many changes until retiring in 1974. Dr. Creighton stayed involved with botany at Wellesley into her nineties, endowing several funds to further support the program and lending her expertise and institutional knowledge, particularly when the Ferguson Greenhouses needed significant renovation in the early 1980s.



Prof. Harriet Creighton surrounded by Wellesley students, 1973.

Mid-century shift of focus (1960s): Elevating Horticulture and Art

Following WWII and technologies that enabled the Green Revolution, academic interest in botany waned in the U.S. and beyond. The grand challenge of feeding the world's human population seemed to be largely solved via synthetic fertilizers and pesticides, irrigation, and development of crops suited to industrial agriculture. As was happening across the country, Wellesley's Botany and Bacteriology department merged with Zoology and Physiology to become Biological Sciences in 1964. The botanic gardens and greenhouses fell under the



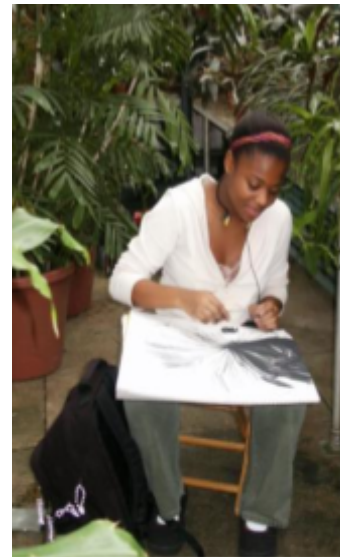
Newly renovated Margaret Ferguson Greenhouses, 1983.

purview of the new department, with a rotating faculty director overseeing the horticultural staff who managed and maintained the spaces and plant collections. The much lauded year-long introductory botany course that Margaret Ferguson had developed shrank to a single semester, relying more on the greenhouses than the outdoor gardens. Margaret Ferguson's vision of botany as an integral part of the liberal arts and WCBG as a hub of collaboration

across disciplines was at risk, especially after Harriet Creighton retired and botanical course offerings were further reduced.

Fortunately, WCBG had become a beloved public face of the College, having always been open to visitors free of charge, including the greenhouses. Staff horticulturists, led by Adelbert “Del” Nickerson, excelled at producing beautiful educational displays, including for the Massachusetts Horticultural Society’s annual Flower Show, winning dozens of prestigious awards over the years (there is a substantial endowed fund called “Flower Show Prize”). Wellesley College President Nan Keohane praised the horticulture team for “showing the flag so well for Wellesley.” When an energy-use audit showed the tremendous amount of heat being lost from the deteriorating curved-glass greenhouses, President Keohane’s endorsement along with donations from many alums enabled a major renovation. In 1983, a much tighter double-paned glass envelope was built over the existing greenhouses, then the old curved glass was removed from the inside. The Durant Camellia and other venerable large plants growing in the ground within the greenhouses stayed in place throughout, and soon visitors were back to a much safer, warmer greenhouse. Early spring bulb shows and fall chrysanthemum displays brought in crowds every year.

Along with award-winning horticulture, art became an increasingly important WCBG focus. Professional artists often drew, painted, or photographed the greenhouses, plants and landscapes. Repeat visitors such as Michael Mazur knew the greenhouses well, making several works that evoke that unique environment. Outdoors, Nancy Holt’s *Wild Spot* sculpture was installed in the Alexandra Botanic Garden in collaboration with the David Museum. Bunny Harvey’s *Field Chatter* brought the notion of communication among plants to new audiences. She, along with Joel Janowitz, Carlos Dorrien and other art faculty regularly brought classes to the greenhouses and gardens, as their successors continue to do today.



Art student in Carlos Dorrien’s class drawing with charcoal in the tropical greenhouse.



Michael Mazur, *Wellesley Greenhouse* (1970s)



Bunny Harvey, *Field Chatter* (2006)

To better provide programming for the public and build a community of support for the WCBG, the Friends of Horticulture membership group was founded in 1983, with bylaws modeled in part after the Friends of Art. Harriet Creighton had begun envisioning a Friends program in the 1970s. Following the greenhouse renovation the idea was picked up by trustees Anne Cohen Heller '41 and Betty Freyhof Johnson '44, who enlisted Mary Coyne MA '61 (then Chair of Biological Sciences) and Mary Bragg '40 to build the group and develop programs mostly focused on the greenhouses. Harriet Creighton had retired nearly a decade earlier but remained involved on the Friends steering committee. Volunteer docents received training and gave tours to school groups, garden clubs, and the public. Programs on horticulture and botanical art and illustration provided revenue as well as publicly available educational opportunities.



Docent Mary Thomas leads a greenhouse tour for a school group.

The Friends raised funds to build a Visitor Center connected to the greenhouses in 1992. This included the Creighton Room to host activities and classes along with the Friends office and restrooms. Students were hired to greet weekend visitors to the greenhouses, which were open 365 days a year. Staff were in the greenhouses every day, as the plants were watered by hand and the vents manually cranked open and closed.

Millennial refresh (2000s): New Connections, Food and Sustainability

As the end of the millennium approached, WCBG had reached an existential decision point. Del Nickerson announced his retirement and the greenhouses were once again deteriorating rapidly (the tighter envelope resulting from the 1983 work did not ventilate sufficiently, leading to corrosion of the steel supports). The College brought in an external review committee, led by Dr. Don Rakow of Cornell, to evaluate the WCBG and recommend whether and how to continue investing in these assets and programs. At the time the College also was soon to launch an Environmental Studies program. The external review emphasized the educational value and distinction for Wellesley of having botanic gardens easily accessible on campus, echoing Margaret Ferguson's arguments 75 years earlier, and with new possibilities for supporting environmental curricula. Dr. Rakow strongly advocated for rebuilding the greenhouses and for formalizing a significant administrative role for the faculty director of WCBG.

These recommendations prompted substantial new investments by the College. What had been a rotating departmental service role for Biological Sciences faculty became a new full-time position that was 67% administrative and 33% faculty, responsible for the perennially popular introductory Horticulture course and the management of the greenhouses, gardens, union horticultural staff, and Friends program. Horticulturist Tony Antonucci advanced into Del Nickerson's role, working primarily in the greenhouses while Horticulturist Tricia Diggins

maintained the outdoor gardens and new Assistant Horticulturist David Sommers supported both. Dr. Duncan Himmelman was hired as the inaugural Director in 2001. He focused primarily on the greenhouse plant collections and initiated planning for renovations before leaving in 2004. The Biological Sciences department pushed for a shift in the director's role to 50% administrative and 50% faculty. Dr. Kristina Jones, who had been a Visiting Assistant Professor in the department starting in 1994, was hired as the Director in 2005, with the understanding that the greenhouses needed to be replaced as soon as possible. In accordance with another recommendation of the external review, the Margaret Ferguson Greenhouses, Alexandra Botanic Garden and Hunnewell Arboretum were collectively rebranded as the Wellesley College Botanic Gardens. A fern fiddlehead served as the new WCBG logo.

Beyond general emphases on educational value and diversity of plants and habitats, WCBG had no formal guidelines for decisions on what and where to plant. Especially since the decline and elimination of the Botany department, choices appear to have been somewhat haphazard. The greenhouses, containing the most diverse publicly accessible plant collection under glass in the Boston area, similarly lacked clear educational collection priorities. WCBG needed a cohesive collections policy to guide the curation of plants in the greenhouses and gardens. Developing the policy went beyond consideration of the educational mission to include an analysis of the broader context of resources available: opportunities afforded by the rest of the campus landscape and available via field trips (e.g. the Arnold Arboretum has a renowned sampling of the world's winter-hardy trees and shrubs, the Massachusetts Horticultural Society spotlights the latest cultivated varieties, and Native Plant Trust's Garden in the Woods showcases native species in habitat groupings). Given these and the size and diversity of the existing WCBG collections - over 1500 different taxa in 22 acres of gardens and 7235 square feet of greenhouse - what collections focus would contribute the most towards the educational mission? And what would *not* be prioritized for inclusion? Discussions and consultations over most of 2007 resulted in an exciting new focus: plants as food, both for people and as a foundation of ecosystem food webs.



WCBG plant label.

This new focus informed management of the gardens as well as curation decisions. Rather than trying to maintain perfect horticultural specimens by fending off all animals, we would seek to understand who the gardens were feeding, responding differently if a hole in a leaf was made by a specialist beetle or a caterpillar outbreak capable of widespread damage. Prioritizing natural species (unmodified by human-imposed breeding) along with minimal pesticide use facilitates coevolved interactions that underpin ecosystems, such as pollination and seed dispersal, and makes it possible to study evolutionary adaptation and ecological resilience even in these cultivated spaces. A focus on plants as food generates gardens that support greater biodiversity. Using biological rather than chemical approaches to pest control (e.g. bringing in beneficial insects such as ladybugs to eat insects that eat plants) fosters healthy food webs even in the indoor ecosystems of the greenhouses.

Another aspect of this focus - plants as food for people - prompted the development of specialty gardens that immediately engaged new audiences and increased faculty and student use of the outdoor gardens. Professor Jacki Musacchio requested WCBG to grow Italian heirloom vegetables, herbs and fruits for her Fall 2010 art history seminar “Dining with Michelangelo: Art and Food in Renaissance Italy,” prompting the development of the Kitchen Garden behind the greenhouses, next to the E-wing of the Science Center. Students had asked for spaces to grow food on campus and, together with WCBG staff and Friends, volunteers had started a small vegetable garden in this location. Rabbits were the primary beneficiaries until local artisan Frank Hamm built a cedar twig-work fence, reinforced with wire mesh to keep the critters out. WCBG student interns grew the requested heirloom seeds, designed the garden and tended it through the summer, then



Students planting the new Kitchen Garden, 2010.

Professor Musacchio’s class took over in the fall, harvesting and cooking the specialty eggplants, tomatoes, beans and more, according to Renaissance recipes. This collaboration has been repeated multiple times, including in 2024. Because the Kitchen Garden starts anew each spring with single-season crops, it can have a different theme each year. American Studies Mellon Fellow Alex Orquiza (also a trained chef) animated his 2013 course “Contemporary Asian American Immigration and Food” with cooking demos featuring beautiful Lablab beans, hot peppers and more from the garden.

For students, the Kitchen Garden offers cultural connections as well as the kinds of practical hands-on horticulture experience that Margaret Ferguson had prioritized in war-time “victory gardens” a century before. So many Wellesley students wish to improve food systems through urban farming or sustainable agriculture, and direct experience with the rewards and challenges of growing different kinds of crops is key in these endeavors. There are alums working on growing safe baby food in industrial China, promoting urban agriculture as an approach to food access in Boston, and reviving Indigenous agricultural practices in Delaware; they and many others cite their hands-on WCBG experiences as inspirational and critical to their success.

Complementing the Kitchen Garden’s opportunities as a food garden that could be reimagined each year, the Edible Ecosystem Teaching Garden (EETG) was envisioned to be an exemplar of regenerative agriculture, i.e. a food garden that goes beyond “sustainable” (not degrading over time), aiming instead to *improve* the soil and growing conditions year over year. The idea is to mimic the structure of the ecological system most likely to grow and sustain itself in the location - in this case, a forest - while replacing key elements with edible species such as fruit and nut trees. Regenerative landscape designers Dave Jacke and Keith Zaltzberg intensively studied the site (on the slope below the Observatory) and engaged the WCBG community in workshops to design the garden in great detail in 2009-2010, build the pathways and plant the Nut Grove,

Fruit Woodland, and Fruit Thickets from 2011-2014, and add the Betsy Fitzgerald '60 Garden Classroom under a huge white oak in 2015. The EETG quickly became the most studied garden, supporting student research, theses, and class projects in art history, chemistry, geosciences and environmental studies as well as biology. Foraging for berries, plums, jujubes and many other treats brought students and the public to the garden, and its classroom has been in frequent use for meetings, music, or just taking a break in a beautiful setting.

Student interest in food, plants, and opportunities to work with WCBG rose steadily. The numbers of applications for WCBG work-study and summer internships kept climbing, with at least twice as many students applying as could be accommodated each year. A fund established in memory of dedicated Friends docent Dorothy Thorndike '75 provides internships for students to serve as WCBG ambassadors, developing plant-based



Class in the Edible Ecosystem Teaching Garden outdoor classroom.

programming for their peers and leading the Botanistas student organization. The Suzanne Kibler Morris '44 Fund supports creative interpretation projects in the greenhouses, building on the rich tradition of art-making in these spaces. A need to house water treatment facilities near the campus wells in the Maple Swamp provided an opportunity for an experimental green roof, which has yielded a senior thesis and two collaborative research publications.

To help meet demand for student research opportunities and courses in botany and ecology, WCBG funds were used to create a postdoctoral Botany Fellow position to teach one course per semester and mentor student research projects. Inaugural Botany Fellow Alden Griffith brought back a Field Botany course along with a new seminar on Global Change Biology. Dr. Griffith subsequently landed a tenure-track position at Wellesley and a CAREER research grant from the National Science Foundation. This ambitious scientist's choice to do a postdoc at Wellesley testified to the resources available for cutting-edge botanical and ecological research. Dr. Griffith has published several peer-reviewed papers with students, postdocs and other faculty on research done in WCBG.



Field Botany class (BISC 247) uses specialized photography to study tree canopy.

Professor Emerita Mary Coyne (co-founder of the Friends) designed and led the planting of the Harriet Creighton Educational Garden across the driveway from the Visitor Center. This included the beautiful fieldstone wall supporting the garden, built by Tim Ward (as were many other masonry works on campus), and featured diverse miniature conifers and a butterfly garden with food plants of local caterpillars as well as plenty of flowers for adult butterflies.

Towards their goals of strengthening connections between people and plants, and of building the WCBG community, Friends of Horticulture programs in botanical art and horticulture were offered to students as well as the public, and Friends volunteers supported events for the campus community. After the rebranding of the WCBG, the Friends of Horticulture followed suit to become the Friends of the WCBG. Gail Kahn, the Administrative Manager of the Friends of Horticulture, in 2011 took on the new larger role of Assistant Director of WCBG. In this role she continued to manage the Friends membership and public programs while also supporting the growing student programs and campus-wide events such as Orientation and Reunion.

The newly developed outdoor gardens were especially useful as the greenhouses became increasingly unsafe for people and plants. Structural engineer David Berg warned that they should be evacuated whenever winds reached 30mph, and planning for their replacement began in earnest as the first phase of the physical transformation of the Science Center.

The Margaret Ferguson Greenhouses needed to be totally reimaged, as the original footprint no longer made sense. There was a strong desire to separate a publicly accessible conservatory from spaces faculty and students used for controlled experiments. For the latter use, standard research greenhouses would be part of the new science building, replacing three “fingers” of old greenhouses connected to Sage Hall, plus the potting room in Sage. A conservatory to replace the main axis with the primary collections houses (Desert, Cool Temperate, Tropical, Warm Temperate, Hydrophyte, and the Mabel Stone Cryptogam House) would connect to the Visitor Center for public access.



Aerial view of the greenhouses prior to demolition in 2017.

The Global Flora Conservatory has its own extensive story. Years of dreaming, planning, researching and visiting innovative examples such as the Eden Project and Phipps Conservatory, and partnering with world-class Boston architects Sheila Kennedy and Frano Violich yielded a beautiful conservatory that won [architecture awards](#), including for [sustainable design](#). Amazingly diverse plants from around the world are planted in indoor ecosystems with environmental sensors providing real-time data on the conditions they're experiencing. Global Flora is a cutting-edge platform for research, teaching, and engagement with the beauty and wonders of plants year-round.

While many plants from the old greenhouses were salvaged and replanted in the new conservatory, Global Flora provided an opportunity to dramatically increase the educational value of the plant collections. WCBG had reached a point where expertise in global plant diversity was urgently needed, not only to curate the Global Flora collection but also to figure out how and where to grow each unique plant in the conservatory's indoor landscapes.

The position of Botanical Collections Manager was created, at the painful cost of the Assistant Horticulturist position. Rob Nicholson, who had built great conservatory collections at Smith College, came out of retirement to reprise this role at Wellesley. When the conservatory was just about complete in May 2019, Rob Nicholson and Kristina Jones flew to Florida, rented a box truck, and visited Miami's Fairchild Tropical Botanical Garden, Montgomery Botanical Gardens, specialty nurseries, Atlanta Botanic Garden, New York Botanical Garden, and the University of Connecticut to bring back a truck full of amazing plants, each meticulously tagged and recorded, from Rob's connections at these institutions. The next month was all hands on deck planting the conservatory in time for the June opening celebration at the 40th Reunion of primary donor Mary White '79.



KVA Architects' rendering of the Global Flora Conservatory during the design phase.



Photograph of the newly planted Global Flora Conservatory in 2019.

Global Flora dramatically increased both the amount of use and types of engagement with the greenhouses. College use increased as more faculty and staff explored Global Flora, then brought their classes and teams. Once reopened to the public, visitation quickly jumped above pre-construction levels despite much more restrictive open hours due to college use priorities.

Greenhouse use comparison before/after construction (acronyms are College departments):

metric of use (per year)	Before (2011-2012)	After (2022-23)
# different Wellesley classes using greenhouses	12: BISC (8), ARTS (3), ES/GEOS (1)	23: BISC (11), ARTS (3), ES (3), ARTH (2), ENG (1), WGST (1), WRT (1), PERA (1)
student research or other academic projects for credit	3 (BISC)	8 (BISC, CAMS, GEOS)
average # visitors per day (not including classes)	11.6 (includes tour groups)	15.2 (since opening in Nov. 2022, no tours offered yet)

Greenhouse construction followed quickly by the pandemic greatly disrupted public access and engagement with WCBG. From demolition of the old greenhouses in 2017 until Global Flora finally opened to the public in 2022, there was no public access to the greenhouses. The WCBG Visitor Center received a refresh in summer 2022 after serving as swing office space for all WCBG staff throughout the multi-year Science building construction.

With this extended disruption in public engagement came an opportunity to rethink the Friends of WCBG membership structure and programming, aiming for a more inclusive Friends community. In partnership with the Development team, WCBG moved to free membership and programs. This helpfully shifted staff time away from public program budgeting and accounting and towards more core mission work. During construction the Friends' excellent Botanical Art and Illustration program had relocated first to the College Club and then to Elm Bank, and WCBG officially transferred the program to the Massachusetts Horticultural Society in 2023.

Use of the outdoor botanic gardens increased notably since the Paulson Ecology of Place Initiative began in 2017, for students "...to engage with their natural environment and develop a sense of place on our iconic campus to enrich their academic experience, well-being, and community, and become change agents who cultivate sustainable



Paulson Initiative interns Kayli Hattley '22 and Katherine Muniz '22 in Paramecium Pond.

landscapes and communities around the globe.” Director Suzanne Langridge and her postbacs and student interns developed numerous programs in WCBG and beyond, and intentionally forged a diverse and inclusive community engaging with nature at Wellesley. Activities range from art and music in the landscape to summer research projects and biodiversity monitoring. The Paulson Initiative also brought several faculty from a variety of disciplines outside through course grants for class activities and projects in the landscape. This partnership has been further enhanced since the launch of the Frost Center for Environment in 2020, through co-sponsorship of weekly Green Gatherings, the founding of Students for Intersectional Environmental Justice (SIEJ), and numerous collaborations. These include a range of College-wide programming such as Orientation, Reunion, Family & Friends Weekend, Science Summer Research Program, and events with campus cultural organizations and affinity groups.



Composite image of WCBG students and some of their work.

WCBG’s programs and partnerships provided students a place of connection and wellness on campus even through the COVID-19 pandemic. Short-term funding enabled WCBG to try out more ambitious work-study and summer internship programs, with nearly 40 students participating each year starting in 2022. Upon WCBG Assistant Director Gail Kahn’s retirement in 2021, the need to manage the burgeoning student program and public engagement was met by combining Gail’s part-time role with the Botany Fellow role to create a full-time Associate Director. Botany Fellow Jennifer Yang ‘12 stepped up into the new role, bringing a focus on equity and inclusion. WCBG students gain deep connections and agency as they build experience, and often bring friends and family to see their work on public-facing exhibits, materials such as [interactive maps](#), events like the Greenhouse Light Show, or favorite plants in their care. Having served as a Thorndike Intern and done botanical research as a student, Jenn

had a personal understanding of how working directly with plants can transform the college experience. She worked to ensure that WCBG is student-centered, and that all Wellesley students have opportunities to engage here.

Empowering students to make important contributions to the WCBG is very helpful in pushing back against the Eurocentric botany that has historically ignored and continues to exclude so many people interested in plants. For example, labeling plants only with the Latin name (often memorializing the white man who “discovered” the species), along with an English common name, misses the richness and cultural connections of names from regions where the plant is indigenous. It is a huge project to research names and stories for over a thousand different plants from around the world, but highly suited to linguistics enthusiasts like Yuxi Xia '20 and Nafisa Rashid '23. This project is a long and worthwhile educational journey, inspiring more students and visitors to ask questions...



Plant label in Global Flora.

Faculty also are having students bring critical lenses to longstanding botanical practices. Students in Erich Matthes' Philosophy class visited Global Flora after reading about how botanic gardens tend to present plants as objects rather than subjects, and were excited to be greeted in the entry by David Teng Olsen's mural (co-created with his Digital Design class in 2019) depicting *portraits* of diverse plants. Dr. Ashanti Shih's Spring 2022 Environmental Studies course on Botany and Empire fostered exemplary engagement, with each student researching and producing a [storymap of a Global Flora plant](#) as the final project. Women's and Gender Studies (WGST) Professor Banu Subramaniam's *Naturecultures* class has continued this project and extended it to include plants in the outdoor botanic gardens.

Environmental sustainability and climate resilience also are key goals for WCBG's second century. The outdoor gardens face serious issues with water, and need substantial work to improve their climate resilience. The Silver Thread stream was shut off in August 2021 due to issues with

the campus potable water system. Lacking the ability to pump water out of the well area when heavy rains caused flooding in Fall 2021, Paramecium Pond and the Maple Swamp became one big water body (and the main path through the WCBG impassable). The area remained flooded until the following summer, when an extended drought finally dried it out. The drought also

Botany and Empire

A multimedia exhibition by the students of ES244: Botany, Ecology, and Empire (Spring 2022)



What do plants and the environmental sciences have to do with colonialism? • How have different peoples cultivated, used, and made knowledge about various flora, or the natural world more generally? • What does it mean to look at plants in "scientific" or "colonial" ways, and how did this way of knowing come into being and change the world? • How have peoples resisted colonial science, and what might it mean to "decolonize" the plant sciences or plant institutions?

Botany and Empire exhibition by ES244 class (Ashanti Shih).

dried out upland areas along the dry Silver Thread. This flood-drought pattern has happened repeatedly, and many accessioned trees and shrubs have died, along with countless herbaceous plants. WCBG is making significant strides towards better climate resilience and accessibility for these areas. The Paulson Ecology of Place Initiative led landscape planning efforts for the whole Science Hill area, including the outdoor botanic gardens: first a discovery phase with landscape architect Toby Wolf and engineer Michelle Callahan, then a comprehensive planning study by Mikyoung Kim Design (MYKD). Wetlands expert and wildlife biologist Tom Biebighauser consulted on restoring more natural hydrology at the vernal pool in the Arboretum by removing its cement liner, allowing stormwater to infiltrate and increasing plant cover. Implementation of these plans has begun in 2025.

Thanks to the College's significant reinvestments in WCBG since its millennial reset, and the enduring power of Margaret Ferguson's founding vision to "create a center of interest to all," WCBG at 100 is thriving and continuing to improve the student experience at Wellesley - from sense of belonging to myriad opportunities for original scholarship, creativity, and joy.



Young 'Survivor' Camellia outdoors near its cousin the Durant Camellia growing indoors.



WCBG summer crew of students and staff, 2022.

Over the past two years, with Wellesley approaching its 150th anniversary as a mission-driven college, we have worked to articulate WCBG's core values and develop a new mission to launch WCBG's second century:

Mission

WCBG inspires generations of changemakers to cultivate reciprocal relationships with plants and land.

Core Values

Education: We pursue our mission through thoughtful horticulture and curation of diverse plants and landscapes, providing exemplary academic resources that uphold multiple ways of knowing, and co-creating experiential learning spaces and programs with our community.

Community: We nurture connection and sense of belonging for our community, prioritizing access for all students. We recognize that each participant brings unique value, and aim to minimize barriers based on physical, sensory, cognitive, economic, social, or cultural differences.

Justice: We approach our work through a justice-oriented lens, addressing systemic issues such as racism and patriarchy through our own botanically-focused efforts and through partnerships on and beyond campus.

Ethical Practices: We engage appreciatively with plants, land and water as we work to improve the health and resilience of the ecosystems in our care. Our work supports abundance and holistic well-being, while minimizing our environmental footprint.

Land relationship and acknowledgment

As a 20+ acre campus botanic garden, we affirm [Wellesley College's land acknowledgment](#).

We invite everyone to participate in strengthening our collective understanding of this land, encompassing its history, its challenges, and the diversity of life it includes. Hands-on learning with plants and land empowers people to develop relationships of reciprocity and contribute to the care of this land, to recognize that they are part of it, and to take these lessons with them.

Acknowledgments

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Durant Camellia flower (each flower has different white figuring on a pink background).

Postscript

The Durant Camellia has witnessed the full history of botany at Wellesley to date. Brought to the College by Henry and Pauline Durant in the 1870s, this unique tree was planted in the ground in the original Margaret Ferguson Greenhouses in the 1920s. Remaining in place even through major greenhouse reconstructions, the venerable Camellia continues to thrive and bloom every winter, and is now an enduring symbol of Wellesley College.

Individuals of this species in their home habitat can live hundreds of years, so - here's to the next 100 at the Wellesley College Botanic Gardens!

Wellesley College Botanic Gardens - Outdoor Garden Map



Map Guide

- | | | |
|---|-------------------------------------|-------------------|
| 1. Visitor Center | 7. Silver Thread - Waterfall | 14. Maple Swamp |
| 2. Global Flora | 8. Edible Ecosystem Teaching Garden | 15. Green Roof |
| 3. Teaching and Research Greenhouses & Kitchen Garden | 9. Pine Knoll | Bench |
| 4. The Kettle | 10. Ancestor Oak Circle | Handicap entrance |
| 5. Ephemerol Pool | 11. Meandering Meadow | Paved trail |
| 6. Azalea Hill | 12. Wet Meadow | Mulched trail |
| | 13. Paramecium Pond | Mown trail |





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