Global Flora has been available for class use this year, and in the fall will be open to faculty, staff and students. It will remain closed to the public until the Science Center construction project is complete.
Wellesley College has always had greenhouses for student use.

The Durants’ conservatory was the first greenhouse used by students.

The Annex, part of a botany dept. addition onto Dower in 1907, was the first greenhouse built by the College.

A remarkable complex of 14 greenhouses built in 1922-23 was named in honor of botany professor Margaret C. Ferguson.

The Ferguson Greenhouses lost much of their historic character in a much-needed 1983 renovation.
By 2016, the greenhouse structure had deteriorated and the facility had to be shut down on windy days.

The last plants were removed in the summer of 2017, and the old greenhouses taken down in 2018.

Mary White ’79 generously and enthusiastically funded the project to re-envision and rehouse Wellesley’s permanent plant collection, and a generous gift from Nan Walsh Schow ’54 and Howard Schow provided the Camellia Pavilion.

As the goals for the plant collection had evolved over the years and it was difficult to house many large plants for the two years of demolition and rebuilding, much of the collection was given away to other institutions and individuals. The largest plants were moved to the Science Center, while the remainder went to a greenhouse at the Hunnewell Estate, where Botanic Gardens staff continued to take care of them. 20% of Global Flora’s collection is from the old greenhouses.

We are grateful to Luisa Hunnewell, Willard Hunnewell, and David Dusenbury for their hospitality and assistance.

The 150-year-old Durant Camellia was the only plant left in place. Protective structures were placed over it and a new greenhouse pavilion built around it.
Envisioning Global Flora

Planning for new greenhouses began in earnest in 2014. Boston-based Kennedy & Violich Architecture was selected to design an innovative new facility, and landscape design was provided by Andropogon Associates. KVA’s design included:

- Siting the new facility slightly south of the old greenhouses to take advantage of the slope.
- Creating a structure that is almost twice as high at its apex as the peak of the old greenhouses.
- Curving the structure to follow the east-west path of the sun.
- Building sustainable systems that meet the criteria of the Living Building Challenge, the most rigorous contemporary standard for measuring sustainable design.
Building Global Flora

Construction began in the summer of 2018 and was completed in May 2019.
After receiving our occupancy permit in mid-May, we had an intense three weeks of planting to be ready for Global Flora’s “soft opening” in June for donor Mary White ’79 and her classmates at their 40th reunion.

Botanic Gardens Director Kristina Jones and Collections Manager Rob Nicholson went on a collecting trip to Florida and came back with a truck packed full of plants.

It was “all hands on deck” as staff members and students put plants in the ground. Seniors took time out of their Senior Week festivities to help.
Collection theme: the diversity of plant form

Our collection goals focus on plant species with dramatic and unusual forms that stimulate curiosity and reward close observation. The collection includes many rare and endangered plants in order to help preserve these species. Detailed provenance records results in heightened value to researchers.

The plants are grouped in indoor landscapes in the two major areas of the conservatory: the Wet Biome and the Dry Biome. Simple flap doors separate the two areas.
A key component of Global Flora is making visible the invisible, through an environmental monitoring system. The teaching and research platform consists of:

- Sensors measuring environmental variables such as temperature and moisture in the air and soil.
- Dataloggers that accommodate a range of sensors according to research needs.
- A database containing all plant and environmental data.
- A public web portal with educational tools for visualizing and analyzing real-time and archived data.
Global Flora’s curved structure is made possible due to the lightweight pillows of ethylene tetrafluoroethylene (ETFE), a film related to Teflon™. ETFE cladding weighs just three percent of what the same area would if made of typical insulated glass. The inflated pillows provide heat retention. Unlike glass, ETFE lets in the full spectrum of sunlight.

Global Flora uses an irrigation system that captures, stores, and reuses rainwater. Solar heat is captured and slowly released by an interior wall of thermal mass on the north side.

The design won a bronze medal in the 2017 North America LaFarge Holcim Awards, which had more than 5,000 entrants. The awards recognize innovative projects and future-oriented concepts and is the most significant international competition for sustainable design.
From the entrance, you can go in either of two directions: the high road or the low road. If you go down, the sidewalk switchbacks down the slope in the Dry Biome to the planting benches on the south side and continues on into the Wet Biome, where you can look at the plantings from below.

The northern, higher sidewalk leads you alongside the planted north wall and over the bridge to the gathering space and overlook on the mezzanine.
Global Flora tour: The Link

The corridor that links the Botanic Gardens Visitor Center with the conservatory has (so far) two major installations:

On the left-hand side, the restored antique papier-mâché botanical models will be displayed. The first group, called the “Botanist's Bouquet,” has already been completed.

On the right-hand side is a mural designed and painted by Professor of Art David Teng Olsen and his students, which introduces the concept of diversity of form.
Global Flora tour: The Durant Camellia Pavilion

The Durant camellia is the only one remaining of four camellias cultivated and donated by Wellesley founders Henry and Pauline Durant in the 1870s.

It is now housed in its own space where it can have the indirect sunlight and cool winter temperatures that it prefers.
Global Flora tour: The Dry Biome

The variety of species in this biome facilitates the study of the range of plant adaptations to arid conditions. The diversity of plant form on display is remarkable.
Global Flora tour:
The Dry Biome

These lithops are camouflaged by the gravel they grow in, just as in their native habitat.

A display of rosette forms in various succulent species.
Global Flora tour: The Wet Biome

The larger of the two biomes is devoted to plants that thrive in moist subtropical environments, including substantial collections of palms, bromeliads, and jungle cacti. There are many ferns and allies, including a large tree fern, honoring the long history of cryptogamic botany at Wellesley.
Global Flora tour: The Wet Biome

A display of slipper orchids includes rare and endangered species.

A 380 million year old fossil tree stump from Gilboa, NY was given to the college by the principal researcher of the Gilboa fossils, Winifred Goldring (Wellesley College class of 1906).

This collection of ant plants allows close observation of their adaptations to live symbiotically with ants.
Global Flora tour: Aquatic Systems

The mangrove tank (left) filled with brackish water enables study of this important type of habitat, here supporting sailfin mollies that eat the algae growing on the rocks.

The freshwater paludarium or planted aquarium (right) contains fish and invertebrates as well as aquatic and emergent plants, and serves as a microcosm of pond ecosystems.
Global Flora tour: The Mezzanine

The roof of the mechanical room has become known as the mezzanine. It provides an overlook of the Wet Biome and is large enough to hold class and group meetings. It is home to an electronic piano that visitors are invited to play.
Students as staff

Students are essential members of the Botanic Gardens team and learn by doing. Horticulture assistants help with plant care and weekend watering. Aquatic systems specialists monitor water chemistry and care for the fish, and the plant health team monitors and helps manage pests and diseases through biological control. Curation assistants document the plant collections in the database and prepare labels and interpretive signage. In 2020-21, Global Flora provided part-time paid employment for 15 students.
Wanting to recognize the diversity of peoples and cultures that live alongside the diversity of Global Flora plants in their home habitats, we embarked on the Plant Names Project: labeling plants with the common names used for them in their endemic range. Students are a key part of this project.
Before COVID-19 restrictions prevented visitation, the college community used Global Flora for study, meetings with friends, and to relax and unwind. They are eager to return in the fall of 2021.

Our Greenhouse Light Show in March 2020 saw throngs of faculty, staff and students that came to admire the conservatory lit with theatrical lighting.
Recognition for Global Flora

Our new conservatory was entered into the American Architects Building of the Year competition for 2020 and won third place—an impressive finish, given that the first and second place winners are large municipal structures. The Building of the Year was determined by visitors to the American-Architects.com website during January 2021, who were asked to choose their favorite of the 42 Buildings of the Week featured in 2020. Global Flora received 14% of the votes. You can see Global Flora’s profile here.
The Margaret C. Ferguson Greenhouses for the 21st century

The entire complex of greenhouses, including Global Flora, the 1907 Annex greenhouse, and the soon to be completed Teaching and Research greenhouse, once again bears the name of Wellesley’s pre-eminent Professor of Botany.

Margaret Ferguson continues to inspire. In building Global Flora, we have followed her prescriptive: “... we shall endeavor to form a center that shall be of interest to all.”
www.wellesley.edu/wcbg

If you have any questions, feel free to contact us at wcbgfriends@wellesley.edu

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