

**THE NEW
RUTGERS
GARDENS**
A PRACTICAL GUIDE



RUTGERS





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RUTGERS

DIRECTOR'S STATEMENT: PLANTING THE FUTURE

Four years ago, on the fifth anniversary of my tenure as Director of Rutgers Gardens, I penned a message describing a hopeful vision that would drive the development of Rutgers Gardens over the next five years. This vision was centered on creating a welcoming front door for the Gardens in the form of a new visitor center, and it extended throughout the Gardens as an exciting series of ideas about improvements to the displays, circulation paths, and individual facilities.

Today—as marked by the completion of a Feasibility Study—this vision for a new Rutgers Gardens is ready to begin its transformation from idea to reality. Welcome to a glimpse of Rutgers Gardens tomorrow!

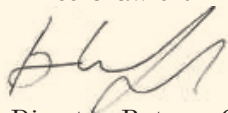
Rutgers Gardens has always evolved to meet new challenges, while staying true to its users and its principles. As outlined in the following pages, designs for a visitor center, a series of rethought gardens and structures, and a new circulation system have coalesced into an innovative development plan for the Gardens. These design proposals will allow the Gardens to better serve its network of constituents and visitors in a number of ways, providing increased organization and added amenities that will complete the experience of visiting the Gardens, whether for a brisk walk, a day trip, a monthly meeting or class session, a research visit, or a stop at the farmer's market.

These developments could not come at a more appropriate time. A number of the facilities within the Gardens are in need of repair or expansion, while other functions and uses require new, proper homes. The plant material itself has also reached a critical threshold—the majority of the plants,

installed from 1940-1960, are starting to decline with age, and the area that is currently devoted to research will soon be integrated into the Gardens proper and therefore requires replanting for a new audience. While the gardens are served by a very dedicated team of staff and volunteers, we need help.

At this milestone I am again hopeful—that the message from the Director that I will soon write on the 10th anniversary of my tenure will announce the commencement of the design process for the new Rutgers Gardens. Only with your support will we be able to make these exciting changes happen. I look forward to working together with you to make this vision a reality.

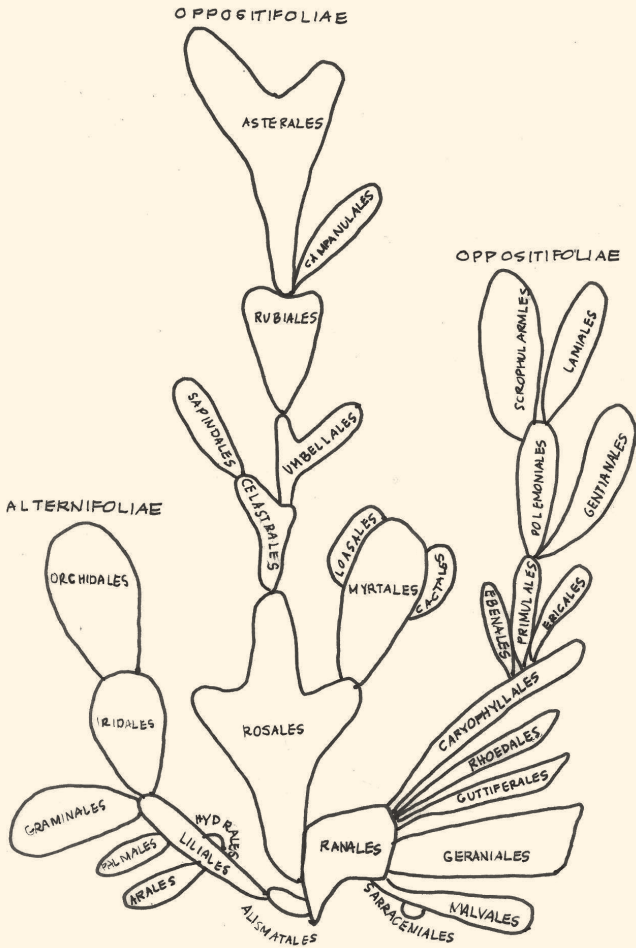
Bruce Crawford

A handwritten signature in black ink, appearing to read 'Bruce Crawford', written in a cursive style.

Director, Rutgers Gardens

June, 2014

RELATIONSHIPS of the ORDERS
(after Bessey, 1915)



EVOLUTION AND THE GARDENS

Rutgers Gardens has a rich, storied history at the forefront of innovation—as both a public display garden and as an academic research garden. With this unusual hybrid structure, the Gardens has long served the needs of a diverse array of communities: from Rutgers students and faculty to research associates, from community organizations to trade groups. Driving this proud legacy of service is a willingness on the part of the Gardens’ staff and constituency to ADAPT—allowing the guiding principles and structural features of the Gardens to EVOLVE—in order to meet the changing realities of its context.

Today Rutgers Gardens stands at a critical juncture, facing both fundamental needs and exciting opportunities. As part of the arc of constant RENEWAL, the Gardens is presented with a unique chance to again reinvent itself to better serve its loving users and caretakers, while also reaching out to new audiences. REINVENTION will require careful consideration combined with innovative design, to create a Rutgers Gardens that is at once consistent with its great history and forward looking in nature.

The notion of EVOLUTION is particularly relevant to the Gardens today. In a world experiencing the shifting dynamics of climate change, the possibility of showcasing the history of plant species development in response to climatic forces is an opportunity to create an unprecedented educational structure – a new Gardens that is both an informative experience and a stimulating journey for the senses.

BOTANICAL GARDEN COMPARABLES

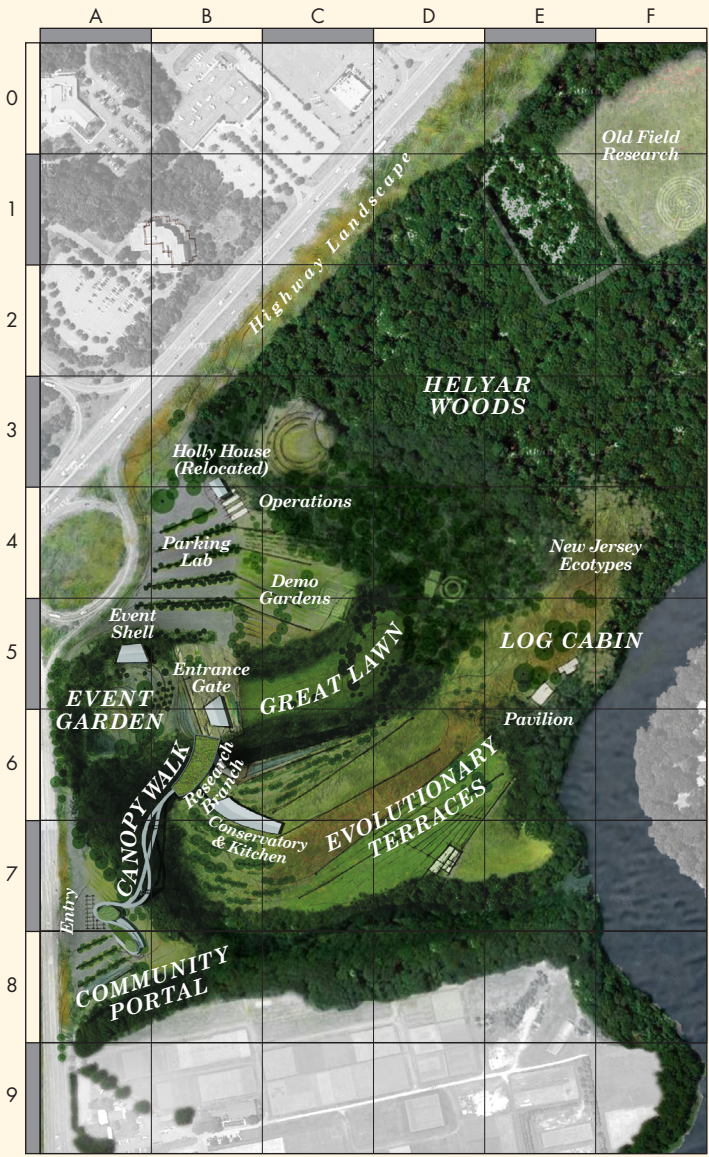
University of Wisconsin Arboretum	1,200 ac
Longwood Gardens	1,077 ac
Cornell Plantations	400 ac
Chicago Botanic Garden	385 ac
State Botanical Gardens of Georgia	313 ac
Arnold Arboretum	281 ac
Rutgers Gardens	174 ac
Morris Arboretum	92 ac
Brooklyn Botanic Garden	52 ac
Queens Botanic Garden	39 ac
Botanical Garden at Berkeley	35 ac
Atlanta Botanical Garden	30 ac
JC Raulston Arboretum	10.5 ac

THE NATURE OF BOTANIC DISPLAY

For the past 100 years, Rutgers Gardens has focused upon plant collections. The future will focus upon the story of plant development over the past 400 million years and, in a garden setting, it will show how the gradual shifting of the continental plates and changes in climate is connected with the evolution of plants.

Traditionally, botanic gardens and arboreta were built around collections of plants, typically of a particular genus, a geographical area, or a particular environment type. During the nineteenth and twentieth centuries, expeditions to new areas of the world uncovered new and exotic species which were shared with botanic gardens and displayed to the public for the first time. While the discovery of new plant species has slowed down dramatically and the scientific literacy of today's public is unprecedented, the wonder and splendor of botanic gardens is still evident by the numbers they draw through their doors.

There are a number of different paradigms for garden types, and the future Rutgers Gardens aims to synthesize the best qualities from each of these into a new, exciting model for botanic display. Rutgers Gardens has a unique history as a location where public display is combined with research that is dependent upon real-life situations. The reinvention of the Gardens offers the opportunity to combine new and educational experiences with dynamic research into important, timely areas.



A VISION FOR

The unique legacy of Rutgers Gardens is rooted in its two distinct missions: the first as a horticultural research institution, and the second as a public facility available for community use and education. The reinvention of the Gardens, with new facilities and redesigned grounds, will speak to these dual missions – creating an entirely new experience while maintaining the formative elements of the Gardens that make them so well loved.

LEARNING LANDSCAPES

The proposed “learning landscape”– with Evolutionary Terraces and new, flexible facilities for the university and the public at large – will position Rutgers Gardens as a model for innovative botanical gardens, both regionally and globally, while maintaining its powerful local roots and connections. Education and entertainment, information and visceral experience, will be combined to drive the design of the new Gardens landscape.

GREATER GATEWAYS

The new Rutgers Gardens will present a strong visual statement in order to increase recognition of the Gardens, within the university community and surroundings. Such a statement will also function as an improved gateway to the university itself, with the Gardens marking an attractive entrance to the larger Cook Campus beyond.

IMPROVED CIRCULATION AND CONNECTIONS

Improved access and connectivity for pedestrians, bicyclists, and bus riders would both increase usage of the Gardens, especially for visitors coming from the campus, and provide

a dramatically improved circulation experience within the Gardens. The new plan includes the redesign of access routes, the rethinking of pedestrian and vehicular circulation within the Gardens, as well as the consideration of how to better integrate the Gardens into the campus bus network and other local circulation systems.

ENHANCED FACILITIES FOR INCREASED USE

The Rutgers Gardens are open year-round, and are one of few gardens in the United States to not charge an entry fee. Therefore, Rutgers Gardens has a history of use by both the university community for education and relaxation and the larger New Jersey community frequenting its public ornamental display gardens. Enhanced facilities will better serve these two constituencies. They will allow for greater usage and satisfying a greater range of programming options and a providing better facilities through which to explore the Gardens.

REVENUE-GENERATING PROGRAMS AND FACILITIES

Rentals and partnerships present key revenue generation opportunities to enhance the financial sustainability of the Gardens in the future. New event spaces and the accompanying infrastructures, along with improvements to the beloved existing spaces, will offer new programming possibilities to University and community groups. Revenue generation will be also be achieved through the creation of flexible classroom and learning spaces for many university departments. Supporting Rutgers' classroom-sharing system, this vision for Rutgers Gardens will expand the campus classroom resources, while positioning the Gardens as a new typology for interdisciplinary learning amidst the natural landscape.

AN INNOVATIVE BOTANICAL GARDEN

Rutgers University has the opportunity to house the premier garden in the state, with a range of cutting-edge operational and research facilities, attractive public gardens, and flexible-use spaces for a wide range of users. Operational and administration issues will receive the support systems they need. Research opportunities will be expanded to include support for advanced sustainability initiatives, and the displays will be developed to be sophisticated, informational, and entertaining.

The Gardens is a special asset for the campus, with the potential to be easily accessible and widely-used by a variety of users. Investment in the new Rutgers Gardens is an investment in the university’s future, and an opportunity for an institutional model that integrates educational resources with financially and ecologically sustainable landscapes.



Diagram of key features of the Community portal (see following pages).



The Community Portal is the gateway into the redesigned Gardens beyond (top). The Portal will provide a welcoming entry to the Gardens, and flexible facilities for public programming (bottom).

COMMUNITY PORTAL



COMMUNITY MEMBERS AND GARDEN CLUBS

Rutgers Gardens is regularly used by community members and gardens clubs. These community groups visit the Gardens, attend flower fairs, organize farmers markets, and attend garden tours. The community portal will enhance opportunities for flexible events like these, organized and attended by local garden groups, including the New Jersey Garden Club.

The new entry gardens and Community Portal will offer an iconic gateway experience to the gardens, integrating the buildings seamlessly with the landscape through green roofs and landscape berms, while providing the appropriate space and infrastructure needed to support different events.

DESIGN FEATURES

- Visible entry point to the Gardens from the surrounding roads
- Meeting/dining space, reception/garden display, retail store, wet areas/restrooms, garden club
- Integral ramp takeoff, leading to the Canopy Walk beyond (see following pages)
- 11,000 sqft interior spaces, 8,000 sqft of finished exterior spaces
- Interior spaces that open and close to the exterior, creating a permeability between the built structures and the landscape and a pleasant experience during the seasonal warm months.
- Green roofs



The Canopy Walk passes over the streambed, offering two paths through the trees (top). Looking back towards the Canopy Walk (bottom) from the green roof of the Research Branch (see following pages).

CANOPY WALK



Visitors will view the Canopy Walk towers from the entrance to the Gardens. The entry into the Gardens will offer visitors of all ages a continually changing perspective, as the walkway varies in height as it passes through the tree tops and on to the Gardens proper beyond.

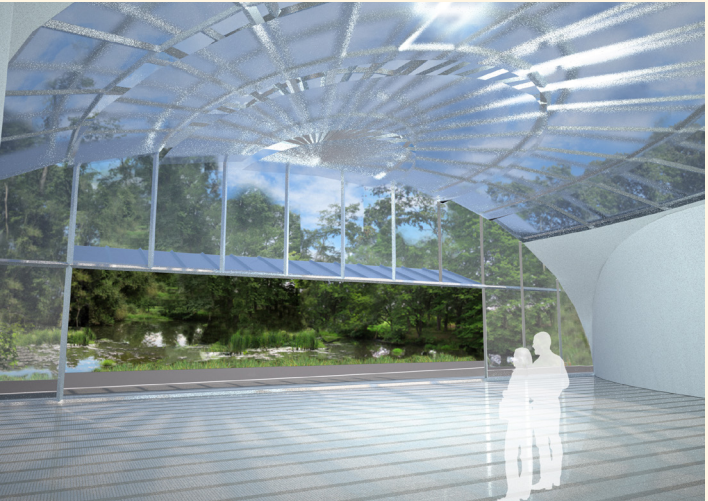
The Canopy Walk is designed with two levels to better engage the visitor and increase their appreciation of tree species and canopy habitat: one level in the upper canopy, and a second level in the lower canopy, for viewing of different microcultures. The Canopy Walk establishes a signature feature of Rutgers Gardens, while providing an iconic experience both visually from the roads leading to the Gardens and as an unforgettable entry point into exploration of the many species and landscapes within the Gardens.

DESIGN FEATURES

- Iconic towers, visible from the surrounding roads, support a dramatic pathway that serves as the main entry sequence into the Gardens proper
- Two levels of walkway offer two different experiences through the tree canopies
- Connects the Community Portal at the Gardens entrance (see previous page) with the Event Garden and Research Branch beyond (see following pages)
- Designed for pedestrians, wheelchairs, and electric mobility carts, compliant with ADA standards
- 1/4 mile walk, in each direction



The Entrance Gate (above), framing the view over the Great Lawn, will be a home for large events.



The Event Shell (above) will offer support for a number of different uses, set within the lush Event Garden.

EVENT PAVILIONS



PAVILION 1 - THE ENTRANCE GATE

At the end of the Canopy Walk, visitors will pass over a green roof to face the Entrance Gate, framing the stunning view of the Great Lawn and Evolutionary Terraces beyond. In addition to serving as a gateway into the Gardens proper, the Entrance Gate will contain the infrastructure required to act as a sort of multi-use bandshell for large-scale gatherings on the Great Lawn.

PAVILION 2 - THE EVENT SHELL

More intimate events - weddings, garden parties, plant sales - can be held within the Event Shell. Nestled with in the dense foliage, the Event Shell will afford events a close connection to the landscapes of the event garden.

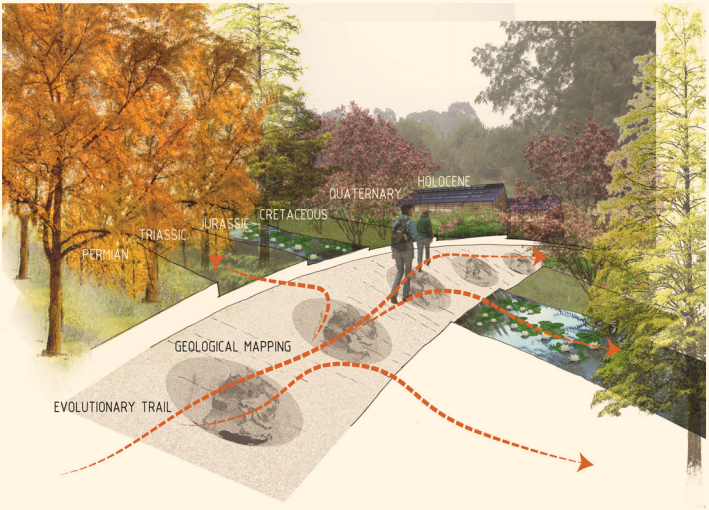
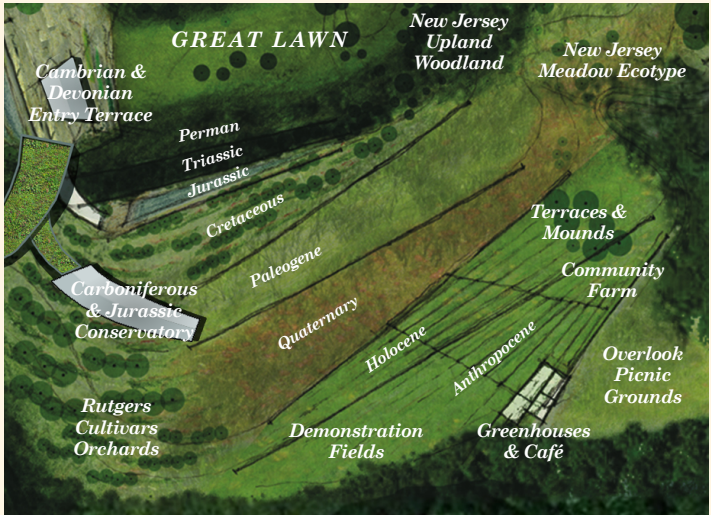
DESIGN FEATURES

- Two 6,000 sqft pavilions containing flexible event spaces
- Pavilions are designed as structures integrated into the landscape (bermed walls, green roofs, open to the air)
- Incorporated infrastructure to support multiple small and large scale programs



At the end of the Canopy Walk, visitors will pass over a green roof to face the Entrance Gate, framing the stunning view of the Great Lawn and Evolutionary Terraces beyond...





The rich, educational plan for the Evolutionary Terraces (top) will offer an exciting, informative journey along a number of paths spanning the terraces (bottom).

EVOLUTIONARY TERRACES



EXPLORATORY TOURS AND SPECIAL-FOCUS WALKS

Walking and exploring the Gardens will have a focus on botanical evolution and how it is tied in with the shifting and changing of the continents. This is a unique mission, one that will attract visitors and offer opportunities for the university community, local community, and regional visitors to learn about botanical science. The Evolutionary Terraces will offer an exploratory journey through the history of plant evolution, from the Pre-Cambrian era through to contemporary botanical developments. The Terraces will feature a winding trail along which gardens increase in variety and diversity of plant materials. A visitor will travel from a garden of mosses and ferns, typical of 350 million years ago, to a garden that surrounds these mosses and ferns with asters and bamboo, among the most modern developed plants.

The Evolutionary Terraces will demonstrate how plants have impacted human societies, while also offering interpretations of future ecological issues facing plants, like climate change. These facilities, ideal for providing guided tours of the gardens, will also engage volunteers and interns in the management of ongoing research.

DESIGN FEATURES

- Cohesive and educational theme across the Gardens, allowing visitors to learn as they enjoy the Gardens.
- Trail system following an historical narrative of plant evolution, providing a unique educational experience of the grounds.
- Key visitor attraction for the Gardens to draw from beyond the university community, enabling the Gardens to operate as an attraction as well as a public research facility.



The Research Branch (top), will have a green roof and covered porch. Connected to one arm of the Research Branch will be a Conservatory (bottom left), and adjacent will be an outdoor kitchen (bottom right, courtesy Atlanta Botanic Garden).

RESEARCH BRANCH & CONSERVATORY



ACADEMIC RESEARCH IN THE GARDENS AND LABS

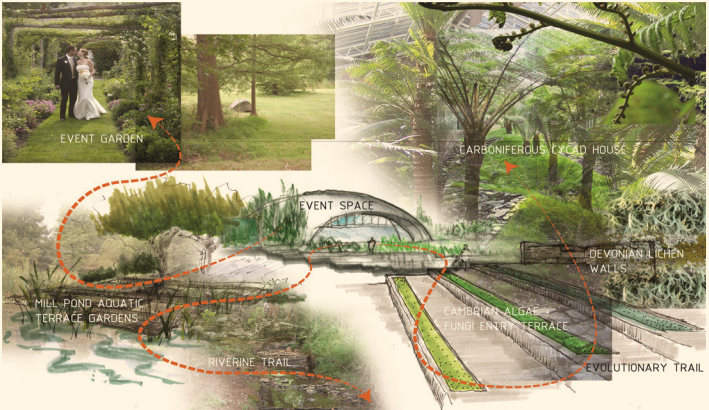
The new Research Branch will offer an enhanced opportunity for students and faculty to conduct research, within the buildings labs and classrooms, and out into the Gardens themselves. Students and professors will utilize the Research Branch for technical analysis (fabrication lab, soil testing, plant diagnostics) and flexible teaching space. Departments focused on botanical study or landscape research will have specialized need for the facilities; the spaces will also be used by other departments as flexible-use classroom space. The Research Branch will provide exciting classrooms, with retractable walls that open the interior to the surrounding landscape, and state-of-the-art building facilities.

CONSERVATORY & OUTDOOR KITCHEN

Connected to an arm of the Research Branch will be a Conservatory, housing a diverse range of plants and including a special Dining/Meeting Room for use by small functions. A covered Outdoor kitchen will be adjacent.

DESIGN FEATURES

- Auditorium, eight classrooms, reception, meeting area, multipurpose area, restrooms, exterior porch, green roof
- Reading and resource library, herbarium and archives for alumni work
- Retractable walls for openness
- Green walls/roofs and other integrated sustainable technologies
- 300'x80' Conservatory, including special Meeting/Dining Room and adjacent Outdoor Kitchen



Event Pavilions (see next page), nestled amidst the Event Garden (top and bottom). The Canopy Walk lands atop the Research Branch's Green Roof (top).

EVENT GARDEN



FACILITIES FOR EVENTS AND CELEBRATIONS

Weekend weddings, performances, and outdoor formal events can be regular occurrences at the Gardens. The Event Garden would be an iconic space for special celebrations, equipped with preparation rooms, restrooms, and a serving kitchen. The flexible pavilion structures (see following page) can be opened or closed depending on the season. After an evening event in the pavilions, guests can meander through the Event Garden, out to the Great Lawn, or across to the Evolutionary Terraces in the twilight. The Event Garden will be a landmark facility for performances, events and celebrations with alumni, academic and New Jersey communities.

DESIGN FEATURES

- Two Event Pavilions (see page 16) for hosting events of different scales
- The main transition point for entry into the Gardens proper beyond, via the Entrance Gate (see page 16)
- The landing point for the entry sequence to the Gardens as the Canopy Walk touches down here (see pages 17-18).
- The Riverine Trail, leading to the remediated Mill Pond aquatic gardens at the heart of the Event Garden



The Lacey Display Garden (top), Rhododendron Garden (middle), and Otken Garden, with its giant Adirondack chairs (bottom), along with a number of other visitor favorites, will all be refreshed and preserved.

REPOLISHED GEMS



While some of the display gardens are in need of complete reinvention, and other spaces will be made available for totally new planting displays, a number of the most beloved spaces within Rutgers Gardens will just receive a much-needed refreshment. These gems include:

THE DONALD B. LACEY DISPLAY GARDEN

This gem will move to a new location amidst the Angiosperms, and the refreshed display will focus on the development of annuals.

The following gems will not move, but will receive a repolishing:

THE SUN AND SHADE GARDEN

THE RHODODENDRON GARDEN

THE OTKEN GARDEN (& THE BIG, GREEN ADIRONDACK CHAIRS)



Holly House (top) will be relocated to a new location within the Gardens that complements its new function. The Log Cabin (above) and Pavilion will be upgraded to increase their longevity.

UPDATED CORE FACILITIES



HOLLY HOUSE

Holly House is moving! But not too far - the beloved building will be relocated a bit further north within the Gardens. The new site will provide a more scenic surrounding, and the building will be more integrated with the landscape. This will perfectly complement Holly House's new use – as a home for selected people to enjoy Residencies within the new Rutgers Gardens.

THE LOG CABIN & PAVILION

The Log Cabin and Pavilion will be upgraded so they can continue to provide loyal event service for many years to come. Bathrooms will be renovated, functional and cosmetic improvements will be made to the exteriors, and the Cabin will be made ADA compliant.



The circulation system will be redesigned to better serve visitors at a number of scales, while also increasing connections to the main campus and allowing for efficient, sustainable parking for vehicles accessing the Gardens (above).

IMPROVED AND EXPANDED CIRCULATION



WALKING

In addition to meandering through the various display gardens, visitors will be able to enjoy a number of newly refinished paths: a 1 mile loop will wind through the gardens, and the longer 2 mile Nature Loop will take visitors through the larger, magical areas of Helyar Woods and the Ecological Studies preserve.

CARS & PARKING

The new entry area, road system, and Parking Lab will allow for more efficient, considerate vehicular circulation to and from various programs within the Gardens. However, there will no longer be cars in the Gardens!

The intent is provide enough well-planned circulation such that fewer cars are encountered by visitors. And the Parking Lab —a constantly updating testing ground for the latest in sustainable technologies for the built environment, from stormwater management to EV charging stations —will ensure that the vehicular areas are maintained in the most environmentally-friendly possible manner.

BICYCLES

Coordination with the University will allow for better circulation between Cook Campus and the Gardens, allowing students and faculty to safely access the Gardens more easily.

HOW YOU CAN HELP...

MEMBER (\$100,000)

Supporting Membership	\$100,000
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PARTNER (\$100,000 – \$500,000)

Campus-Wide Composting Initiative	\$120,000
Ecological, Topological, & Utility Surveys	\$150,000
Master Planning Process	\$170,000
Route 1 / Ryders Lane Ecotype Establishment	\$230,000
Great Lawn	\$250,000
Solar Charging Station	\$270,000
Outdoor Kitchen	\$300,000

PATRON (\$500,000 – \$1,000,000)

Internship Program Establishment	\$500,000
Helyar Woods Ecotype Establishment	\$680,000
Holly House Residency Program	\$750,000
Great Lawn	\$250,000

BENEFACTOR (\$1,000,000 – \$5,000,000)

Gateway Market Plaza	\$1,200,000
Amphitheater Plaza	\$1,400,000
Entrance Gate (Event Pavilion 1)	\$2,000,000
Event Shell (Event Pavilion 2)	\$2,000,000
Relocate Holly House, M&O Facility	\$2,500,000
Parking Lab & Specimen Trees	\$2,700,000
Wetland Plantings	\$2,900,000
Event Garden	\$3,100,000

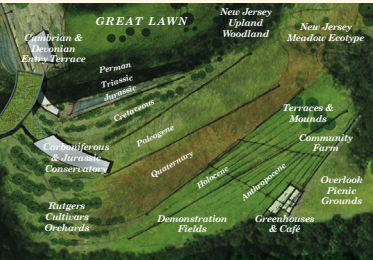
VISIONARY (\$5,000,000+)



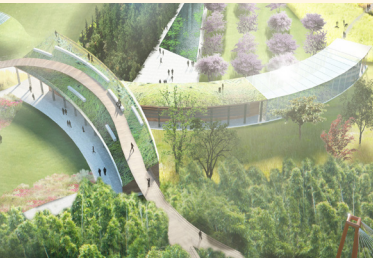
Canopy Walk
\$5,500,000



Community Portal
\$6,000,000



Evolutionary Terraces
\$6,600,000



Research Branch
\$7,200,000



a.

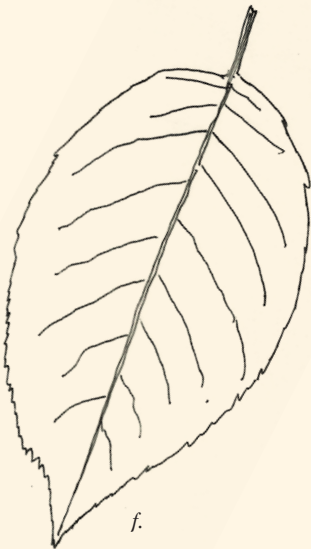
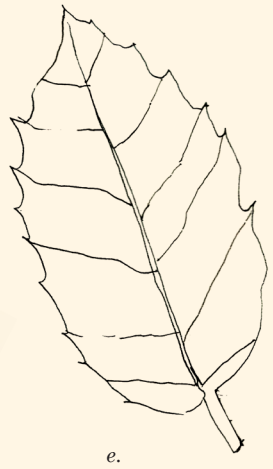
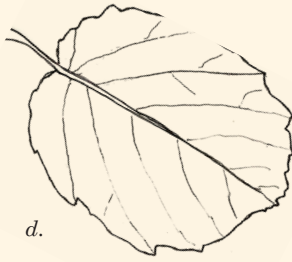


b.



c.

a. <i>Ginkgo</i>	Permian	(270 MYA)
b. <i>Magnolia</i>	Cretaceous	(110 MYA)
c. <i>Cornus</i> (Dogwood)	Cretaceous	(80 MYA)
d. <i>Corylus</i> (Hazelnut)	Cretaceous	(80–60 MYA)
e. <i>Ilex</i> (Holly)	Eocene	(50 MYA)
f. <i>Prunus</i> (Peach)	Mid-Eocene	(40–30 MYA)





W
X
Y



