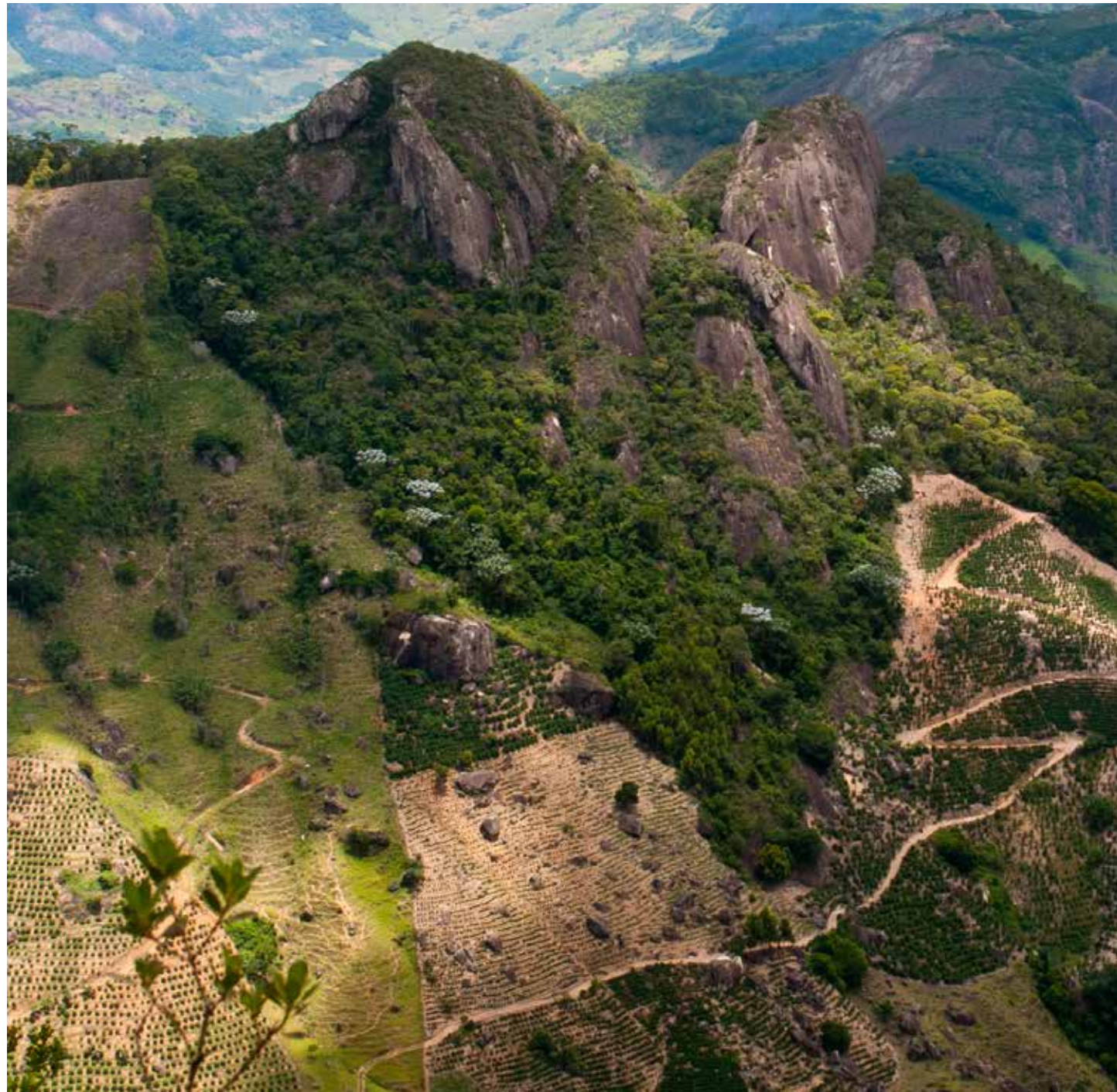


# NYBG

SAVING THE PLANTS OF THE WORLD

NEW YORK BOTANICAL GARDEN





The biodiversity crisis is growing increasingly dire as more species become threatened with extinction through habitat loss, pollution, and climate change. NYBG has a central role in saving the world's plants through research, conservation, education, and training.

—**Professor Sir Ghilleen Prance, FRS, VMH**  
*Former Director, Royal Botanic Gardens, Kew*  
*Distinguished Counsellor to the NYBG Board*

**Very few organizations that focus on plant research do as much to conserve plant life as NYBG.**

To carry out their critical work, our 200-member scientific staff call upon the Garden's unparalleled combination of resources at our 250-acre campus in the Bronx: the Herbarium, whose 7.8 million preserved specimens make it the second largest in the world; the Library, the world's largest collection of research material about plant science and horticulture; and the Plant Research Laboratory, a state-of-the-art facility for investigating plants at the molecular level.

Our field research is conducted as far away as Amazonia, Southeast Asia, the Caribbean, and the South Pacific islands, and as close as New York City. For example, in Myanmar our scientists are studying the largest remaining tract of primary forest in Southeast Asia. In Cuba we are identifying the most critically endangered species to inform conservation and sustainable development policies. And in New York City, we are documenting how immigrants from the Caribbean use traditional plant-based medicine.

NYBG is responding to the biodiversity crisis by conducting cutting-edge research on plants and their habitats and by taking institutional action to protect them, securing a healthy future for our planet and our children.

The Atlantic Coastal Forest of Brazil is one of the world's biodiversity hotspots, with diverse species that are found only in this geographic area and devastating rates of deforestation. Less than 5% of the original forest remains.

## UNDERSTANDING THE BIODIVERSITY CRISIS

Without plants, life on Earth would be impossible. Yet the plant diversity that sustains us is imperiled today as never before in human history, and efforts to save endangered plant species are woefully underfunded.



### LIFE ON EARTH WOULD BE IMPOSSIBLE WITHOUT PLANTS

#### Food

All of our food comes from plants or from animals that eat plants.

#### Medicine

One-quarter of our prescription medicines use plant ingredients or are derived from plants.

#### Shelter, Clothing, and Fuel

Trees and other plants provide raw materials for buildings, fiber for clothes, and fuel for cooking and heating.

#### Climate

By absorbing carbon dioxide, plants help to slow the warming of the planet.

#### Oxygen

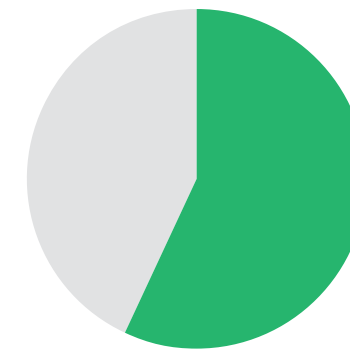
Through photosynthesis, plants produce the oxygen that all animals breathe.



### ENDANGERED PLANT SPECIES RESEARCH IS WOEFULLY UNDERFUNDED

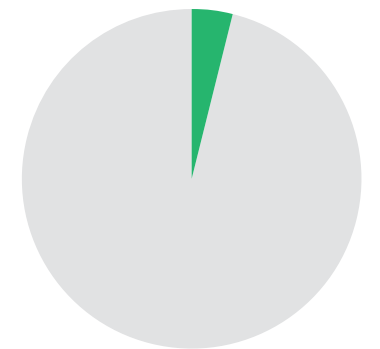
57%

of endangered species in the U.S. are plants\*



4%

of funding for endangered species goes to plants\*



\*Balding, M., and K.J.H. Williams. 2016. Plant blindness and the implications for plant conservation. *Conservation Biology* 30: 1192–1199.

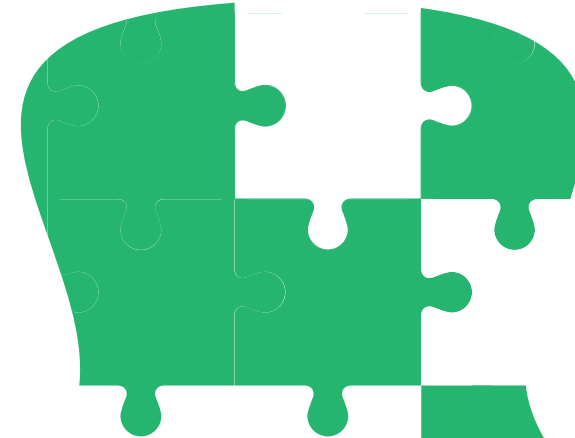
## UNDERSTANDING THE BIODIVERSITY CRISIS

NYBG's role is to solve the complex puzzle connecting plants, their ecology, their genetic diversity, and the environmental conditions that threaten them. And complicating matters, much of the natural world remains undiscovered.



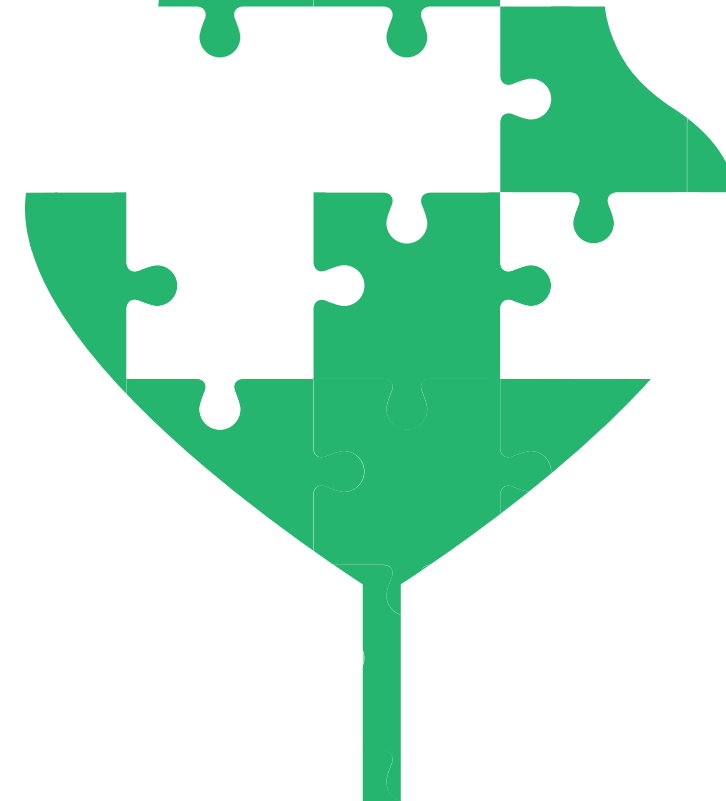
1,037

new plants and fungi discovered  
by NYBG scientists during the  
past 25 years



125,000

plant species targeted for  
conservation assessment  
in NYBG's Plants of the  
Americas project



7,800,000

plant and fungal specimens  
housed in the William and Lynda  
Steere Herbarium, the second-  
largest in the world



## NYBG DEPTH & REACH

Since 1891 NYBG scientists have undertaken field research at thousands of sites around the world. Today we work in 49 countries, with a focus on six Areas of Botanical Concern (ABCs), where we are uniquely positioned to lead biodiversity conservation efforts.



### North America

Scientists in our North America Program gather knowledge about the ecosystems, habitats, and species in our own backyard. The United States alone hosts about 22,000 species, including many that are economically important and essential for a healthy environment. Active NYBG research focuses on the northeastern U.S. and adjacent Canada, the Intermountain West, the Mid-Atlantic Coastal Plain, and New York City.



### Southeast Asia

The warm, humid tropical region of Southeast Asia includes both mainland (e.g., Thailand, Vietnam) and island (e.g., Indonesia, the Philippines) nations. Southeast Asian forests are among the least known scientifically on the planet and only a small percentage remain intact. NYBG is taking a lead in research of these unexplored ecosystems, including in Myanmar, Vietnam, Laos, and Cambodia.



### Caribbean

The Caribbean region is home to many ecosystems, including sea-grass beds, mangrove stands, coastal forests with extensive river systems, and cloud forests on high mountain peaks. The region also hosts many plant species that are endemic (found nowhere else on Earth). NYBG scientists and collaborators are working most intensively in Cuba, Jamaica, Puerto Rico, the Dominican Republic, and the Bahamas.



### Amazonia

The rain forests of the Amazon Basin are the most diverse in the world, holding 10% of the world's known species. To date 17% of this ecosystem has been lost, and even though deforestation rates have decreased, the rain forest is still shrinking. NYBG scientists and in-country collaborators, primarily in Brazil, have been working for 50 years to document, understand, conserve, and manage the incomparable plant diversity of the Amazon Basin.



### Atlantic Coastal Forest of Brazil

The Atlantic Coastal Forest of Brazil is one of the world's biodiversity hotspots, with high species diversity and endemism as well as devastating rates of deforestation. Less than 5% of the original forest remains, and NYBG scientists are working with Brazilian scientists and community members to understand and preserve this unique diversity.



### Pacific Islands

The Pacific region covers one-third of Earth's surface and is home to thousands of islands. Isolated Pacific island ecosystems are highly vulnerable to disturbances such as habitat destruction and invasive species. NYBG's research programs combine efforts to complete botanical inventories of these islands, which harbor a rich array of endemic plant species, and help local communities to identify the most important areas for conservation, for example in Micronesia and on Vanuatu.

## DISCOVERING BIODIVERSITY

Whether journeying to remote areas of Earth to identify new species, working in the lab to understand how plant life evolved, or studying how indigenous people use plants, we seek to build humankind's knowledge about plants.



### DOCUMENTING PLANT LIFE

An adequate understanding of global plant diversity is a fundamental prerequisite for the conservation and sustainable use of the species that make up all ecosystems. This understanding is generated through field exploration, collections research, inventories and floras, and the integration of this work with laboratory research that examines the biological and genetic mechanisms of plants as they relate to biodiversity and climate change.

### DECIPHERING THE TREE OF LIFE

NYBG scientists are part of a global scientific effort to assemble the evolutionary Tree of Life for all plants on Earth, past and present. At the center of this effort is the Garden's Lewis B. and Dorothy Cullman Program for Molecular Systematics, whose researchers study plant DNA to decipher the often complicated evolutionary relationships among plant species. NYBG's Plant Genomics Program focuses on exploring and understanding the genes responsible for critical evolutionary innovations—such as leaves or flowers—on the plant portion of the Tree of Life.

### UNDERSTANDING PLANT USES

NYBG's economic botany program examines the complex relationships among plants, people, and culture, with an emphasis on ethnobotany (how people of a particular group or location use plants), ecology, sustainable management, and medicinal plants. Garden scientists focus not only on useful plants that are global resources with great economic impact, but also on species used regionally by indigenous people and local communities. This understanding of plants and people at local, regional, and global levels is critical to finding solutions for conserving the plant resources on which the well-being of humankind depends.



200

scientists and staff dedicated  
to NYBG's research and  
conservation efforts

## DISCOVERING BIODIVERSITY: THREE PROFILES



**ANDREW J. HENDERSON, PH.D.**  
New Palm Species of Southeast Asia

Dr. Henderson is a leading authority on palms, and he has conducted extensive research on New and Old World Palms using morphological, statistical, geographical, herbarium, and field-oriented approaches. In recent years, he has focused his exploration on palms in Southeast Asia, including Cambodia, China, India, Laos, Myanmar, Sri Lanka, and Vietnam. In Vietnam alone, he has recently discovered more than 40 new species and one new genus of palms. He applies this research toward the conservation and sustainable management of palms, and, as a member of the IUCN Species Survival Commission's Palm Specialist Group, contributed to *Palms: Their Conservation and Sustained Utilization*.



**MICHAEL J. BALICK, PH.D.**  
Ethnobotany and Biocultural Diversity

Dr. Balick is a globally recognized leader in the science of ethnobotany, the study of how people of a particular culture use plants to meet their needs for food, clothing, building materials, fuel, art, spirituality, and medicine. He has conducted groundbreaking ethnobotanical research around the world, including in Belize, Bolivia, Brazil, Colombia, Costa Rica, Haiti, Honduras, India, Israel, Jamaica, Mexico, Micronesian Islands, Peru, Thailand, Trinidad, Vanuatu, and Venezuela, as well as in immigrant communities in New York City. Dr. Balick applies this research to help local people conserve their unique traditional knowledge and customs involving plants (biocultural conservation).

**BARBARA AMBROSE, PH.D.**  
Solving Genetic Mysteries

Dr. Ambrose is a researcher in plant genomics, the study of genes and their role in evolution, development, and biological functions of plants. By studying gene sequences, their expression patterns, and how these relate to plant development, she and her collaborators are making major discoveries in key evolutionary innovations in the development of leaves, fruits, seeds, and other reproductive structures. Dr. Ambrose is also developing several plants as "model organisms," chosen for intensive study in the world scientific community in order to advance human understanding of numerous biological and evolutionary processes.



A deep understanding of the variety of plant life is vital for human survival...work in the Lewis B. and Dorothy Cullman Laboratory keeps science at NYBG in the top tier of plant research worldwide, from understanding genomes to protecting global ecosystems.

—**Sir Peter Crane, FRS**  
President, Oak Spring Garden Foundation  
Former Director, Royal Botanic Gardens, Kew  
Distinguished Counsellor to the NYBG Board

## ENGAGING & TRAINING

By involving local communities in understanding and valuing their ecosystems, educating graduate students, and making our research widely available, NYBG leverages its expertise and advances international capacity-building efforts here and abroad.



### FOSTERING SUSTAINABLE PRACTICES

Garden scientists conserve tropical forests by working with local communities to develop management plans for using the forest sustainably. Such projects have a capacity-building component that incorporates both training and the collection of baseline data. These projects are conducted in managed forests to conserve their biodiversity, and the data collection, management planning, and monitoring activities are conducted by the local people. Areas of study include some of the largest remaining tropical forests in the world, such as Amazonia and in Myanmar.

### TRAINING THE NEXT GENERATION

Through the Commodore Matthew Perry Graduate Studies Program, NYBG trains Ph.D. and Master's students as well as advanced undergraduates in diverse academic disciplines, ranging from systematics and ethnobotany to agroforestry and genomics. Students receive their degrees through joint programs with the City University of New York, Columbia University, Cornell University, Fordham University, New York University, and Yale University. The Program prepares students to assume leadership positions at academic, research, and conservation organizations around the world.

### PROVIDING DATA FOR CONSERVATION ACTION

Since the Garden's founding, making the results of our plant research available to the scientific community and the public at large has been central to our mission. The New York Botanical Garden Press publishes books and journals to put information in the hands of those engaged in exploring, understanding, and conserving plants and fungi. An ambitious program of digitizing our Herbarium collection has already made 3 million specimens available online through the C.V. Starr Virtual Herbarium. And the Garden is one of the four lead institutions in developing the World Flora Online, which will provide free access to scientifically reliable information about an estimated 400,000 plant species by 2020.

3,000,000

specimens digitized in the C.V. Starr Virtual Herbarium—a universally accessible, fully searchable database—with 375,000 specimens added annually

303

graduate degrees conferred, including more than 200 Ph.D.s





## ENGAGING & TRAINING: THREE PROFILES



### **KATE ARMSTRONG, PH.D.**

Forestry Training and Community Engagement  
in Myanmar

Dr. Armstrong is a plant systematist whose research focuses on Southeast Asian floristics. In collaboration with national and regional institutions, she is leading NYBG's efforts to discover and document the tremendous but poorly studied botanical biodiversity in Myanmar's Northern Forest Complex. Myanmar has the most important and largest standing forest in all of Southeast Asia. She is working to strengthen the research capacity of her partners by training and mentoring colleagues from the Myanmar Forest Department as well as local botanists and university students in field research and herbarium management. By documenting Myanmar's flora, baseline botanical data will be available for informed conservation decisions.



### **BARBARA M. THIERS, PH.D.**

World Flora Online

Dr. Thiers directs NYBG's science and conservation efforts, and plays a leading role managing the World Flora Online (WFO). Through the WFO, Dr. Thiers and her team are collaborating with the world's other leading botanical gardens to engage the global plant science community in creating the first open access online resource for comprehensive data for all of Earth's 400,000 known plant species. The WFO will include the most authoritative plant species descriptions and related information, and meets the United Nations Convention on Biological Diversity's call for an "online flora of all known plants," an essential step toward conservation of Earth's plants.

Today, in the face of climate change, the Garden...brings prodigious human and physical resources to bear on humanity's vital mission of protecting and restoring forests, the "lungs" of planet Earth.

—**Thomas E. Lovejoy, Ph.D.**

University Professor, George Mason University  
Center for Biodiversity and Sustainability  
NYBG Trustee

### **DOUGLAS C. DALY, PH.D.**

Training Brazilian Woodsmen

Dr. Daly is an expert in the tropical tree systematics and the flora of Amazonia, concentrating on the Frankincense and Myrrh family, one of the most diverse and ecologically important Amazonian tree families. Over the past three decades, he has been deeply involved with forest management in the Brazilian Amazon, through collaboration with Brazilian colleagues to improve forest inventory and operations with the goal of conserving biodiversity. This effort includes training *mateiros*—woodsmen—in tree identification, promoting best practices for sustainable forestry, and guiding public policy at the national level.



## DEFENDING THE PLANET

NYBG researchers work with colleagues around the world at conservation and research institutions, other NGOs, and government agencies to identify plants and habitats most at risk, in order to implement strategies to save them.



### ASSESSING GLOBAL THREATS

The lack of a comprehensive list of the world's threatened plant species is one of the greatest impediments to strategically protecting the world's flora. The International Union for the Conservation of Nature (IUCN) has assessed the conservation status of less than 5% of the world's plant species. To address this shortfall, NYBG has developed a streamlined method to conduct plant conservation assessments using Geographic Information Systems (GIS) analysis of data derived from herbarium specimens.

### SETTING GOALS FOR CONSERVATION

Building on 125 years of research and exploration in North and South America and the Caribbean, NYBG plans to complete preliminary conservation assessments for all species of plants of the Western Hemisphere. These assessments will be used by international agencies such as the IUCN and the Convention on International Trade in Endangered Species (CITES), which prohibits the illegal trafficking of endangered species.

### ADVISING ON POLICY AND PRACTICE

In Brazil NYBG scientists are advising government forestry officials as they study how to sustainably use the resources of the vast Amazonian rain forest. In Myanmar our scientists are helping that impoverished yet rapidly developing country establish best practices for studying and conserving its pristine forests. And the Garden's newly established Center for Conservation Strategy is spearheading an effort to compile an ecological flora of New York City that will be a vital resource for conservation planning, environmental education, and research about urban ecosystems.



# 250

international NYBG collaborations  
with 168 institutions in 49 countries

## DEFENDING THE PLANET: THREE PROFILES



**BRIAN M. BOOM, PH.D.**  
Center for Conservation Strategy

Dr. Boom leads NYBG's new Center for Conservation Strategy to integrate and leverage the extensive scientific expertise and resources of the Global Plant Research and Conservation Division to maximize outcomes in protecting plant diversity worldwide. The Center not only carries out its own core conservation projects, but also coordinates and develops synergies for more than 30 affiliated projects with NYBG scientists and other organizations. These initiatives will expand the scale, collaborations, and impact of NYBG's conservation programs; prepare biodiversity leaders and build the conservation community; and catalyze wide-scale conservation actions toward local and global sustainability.

Since the beginning of civilization, people have strived to understand the diversity of living forms around them. Plants in particular, because of their vital importance and captivating beauty, are central to human life. The modern botanical garden, of which NYBG is a premier example, is the most advanced form of institution devoted to them.

—**Edward O. Wilson, Ph.D.**  
*University Research Professor Emeritus, Harvard University  
Distinguished Counsellor to the NYBG Board*

**JAMES LENDEMER, PH.D.**  
Lichen Conservation

Dr. Lendemer is an expert on lichens, intriguing forms of life that are a symbiosis of fungi with algae or cyanobacteria. His team has explored the lichens of the Mid-Atlantic Coastal Plain of the United States, and has determined that this region is a new biodiversity hotspot. Dr. Lendemer has discovered hundreds of lichen species new to science and is working to have more than 30 species included on the IUCN Red List of threatened species. His team is also spearheading efforts for the United States federal government to include fungi and lichens in conservation planning, which are currently almost completely omitted from consideration.



**CHARLES M. PETERS, PH.D.**  
Sustainable Forest Management

Dr. Peters, a forester and plant ecologist, is a leading authority on the sustainable use of tropical forests. His protocol for the sustainable management of tropical forest resources has been implemented in more than 30 conservation projects worldwide. In Vietnam he trained and worked with nature reserve staff to achieve the largest inventory ever conducted of rattan (palms used in construction), and the project received the first-ever certification for sustainable rattan management. He has extended this work into Cambodia and Laos, and is now working with local communities in northern Myanmar to help them conserve their forest resources, while providing sustainable livelihoods.



## PROVIDING SOLUTIONS FOR THE FUTURE

Unparalleled resources place NYBG at the forefront of efforts to preserve the world's botanical heritage. We are well prepared through comprehensive science and educational programs to confront the plant research and conservation challenges of the future.



### CONSERVATION

NYBG is pursuing science-based solutions for conserving and sustaining biodiversity in partnership with local people. The Center for Conservation Strategy is expanding its programming and impact to leverage NYBG's scientific resources, in partnership with collaborators and stakeholders, to achieve conservation results and conduct outreach activities that will help save the plants of the world.

### DATA SHARING

NYBG is filling the large gaps in biodiversity knowledge by making research results freely accessible online worldwide. Our scientists are sharing their cutting-edge work on such projects as the World Flora Online, Plants of the Americas, and the New York City EcoFlora with scientific colleagues, conservationists, environmental NGOs, public policymakers, government officials, and local people.

### BIOINFORMATICS

NYBG is generating, mining, and managing genetic data to understand the basis of plant diversity. In our state-of-the-art molecular research laboratory, scientists are developing innovative applications in genomics and plant molecular biology to study the evolution of plants, leading to more powerful insights into how plants respond to climate change and other environmental challenges.

### EDUCATION

NYBG is fostering a love of science in children and launching careers of tomorrow's leaders in plant research and conservation. With a wide range of hands-on education and training in the life sciences for all ages, NYBG provides a pipeline of opportunities at different levels. Pathway programs inspire more than 4,000 New York City youth annually to explore and pursue careers in science and education, while more than 300 students have graduated with Master's or Ph.D. degrees.

## HOW YOU CAN HELP

We offer many opportunities to be part of the public discourse and action to help discover and document biodiversity, engage and inspire responsible stewards, and conserve and protect Earth's natural resources.



### SCIENCE TALK BLOG

To reveal the complex and challenging nature of the groundbreaking research taking place at the Garden and around the world, NYBG has launched Science Talk, a blog dedicated to the far-reaching work of the Garden's plant scientists. From the field to the lab, NYBG researchers are dedicated and determined globe-trotters who strive to discover, understand, and preserve Earth's biodiversity.

### CONSERVATION SYMPOSIA

Each year NYBG hosts a public symposium on a timely plant, algal, or fungal conservation topic. The symposium consists of presentations by invited experts, followed by a panel discussion, and concludes with questions and answers. The events help mobilize the public around conservation priorities, and past symposia include a Native Plants Summit and an Invasive Species Summit.

### CITIZEN SCIENCE PROGRAM

Through NYBG's citizen science projects, scientifically literate volunteers have the opportunity to get directly involved in collecting and processing plant data. For those who care about plant life, it is a way to help scientists by providing them with reliable information on which they can base their research. At NYBG most of our citizen science programs relate to seasonal changes in plants, animals, and the environment.

### URBAN NATURALIST PROGRAM

NYBG is offering a new Urban Naturalist Program, which will provide an overview of the living and nonliving components that make up today's urban landscapes. Through this program, graduates will become certified to work as volunteer or entry-level researchers, making original observations and collecting the quality data scientists need to study aspects of urban biodiversity.

### SCIENCE INTERNSHIPS

NYBG places 25–30 post-graduate, undergraduate, and high school interns annually in its diverse programs in plant science and conservation. Working directly with Garden scientists and their technical teams, interns participate in cutting-edge research in systematic botany, plant DNA research, structural botany, geographic information systems, economic botany, and conservation. Internships offer a taste of the culture of plant research and allow students to explore their interests in science and conservation.

### ADULT EDUCATION

The Garden's Adult Education Program offers more than 30 courses in plant science. Courses explore aspects of plant growth and development, plant communities, plant diversity, and the role of plants in ecosystems. At the everyday level, botany can provide a gateway to herbal healing, foraging for wild edibles, cross-cultural understanding, or just a deeper appreciation of nature's seasonal beauty. In addition the Botany Certificate Program allows students to select one of three areas of concentration: Field Botany, Plant Systematics, or Ethnobotany.

### DONATE

Your gift will help NYBG expand our conservation work in high-priority areas across the globe and provide the next generation of scientists with the educational tools and resources they need to continue to conserve the planet's biodiversity. For more information, please call 718.817.8511.

To join us in our efforts and learn how you can help, please visit NYBG's Center for Conservation Strategy at [nybg.org/CCSgetinvolved](https://nybg.org/CCSgetinvolved)

## SENIOR RESEARCHERS & PRINCIPAL INVESTIGATORS

The scientific staff featured here, joined by post-doctoral researchers, graduate students, honorary curators, and global collaborators, are committed to providing holistic solutions to the biodiversity crisis.



**Lawrence M. Kelly, Ph.D.**  
Director of Graduate Studies  
Birthworts (Aristolochiaceae),  
Sweetleaves (Symplocaceae),  
Kiwis (Actinidiaceae)



**Elizabeth Kiernan**  
Laboratory Manager,  
Geographic Information  
Systems



**James Lendemer, Ph.D.**  
Curator  
Lichens, Fungi



**Damon P. Little, Ph.D.**  
Cullman Curator  
Bioinformatics, Phylogenetic  
Analysis, Conifers



**Fabián A. Michelangeli, Ph.D.**  
Curator  
Meadow Beauties  
(Melastomataceae), Ant-Plant  
Interactions, South America



**Barbara Ambrose, Ph.D.**  
Curator  
Plant Genomics, Morphology,  
and Development



**Kate Armstrong, Ph.D.**  
Myanmar Program  
Coordinator  
Southeast Asian Floristics



**Daniel Atha**  
Director of Conservation  
Outreach  
New York City EcoFlora,  
Flora of Central Park



**Michael J. Balick, Ph.D.**  
Vice President,  
Philecology Curator  
Economic Botany,  
Ethnobotany,  
Medicinal Plants



**Brian M. Boom, Ph.D.**  
Vice President,  
Bassett Maguire Curator  
Conservation Strategy,  
Science Outreach,  
NYBG Press



**John T. Mickel, Ph.D.**  
Curator Emeritus  
Ferns



**Robbin C. Moran, Ph.D.**  
Nathaniel Lord  
Britton Curator  
Ferns, Lycophytes



**Scott A. Mori, Ph.D.**  
Curator Emeritus  
Brazil Nut family  
(Lecythidaceae)



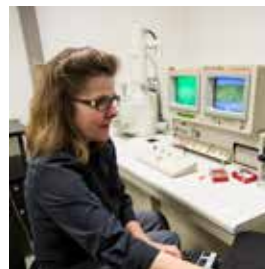
**Robert F.C. Naczi, Ph.D.**  
Arthur J. Cronquist Curator  
North American Botany,  
Sedges (Cyperaceae), Pitcher  
Plants (Sarraceniacae)



**Matthew C. Pace, Ph.D.**  
Herbarium Curator  
Collections Management,  
Orchids



**William R. Buck, Ph.D.**  
Curator Emeritus  
Mosses



**Lisa M. Campbell, Ph.D.**  
Laboratory Curator  
Monocots



**Douglas C. Daly, Ph.D.**  
B.A. Krukoff Curator  
Amazonian Botany,  
Frankincense and Myrrh  
family (Burseraceae)



**Roy E. Halling, Ph.D.**  
Mycology Curator  
Mushrooms and  
Related Fungi



**Richard Harris, Ph.D.**  
Lichen Specialist  
Lichens, Fungi



**Charles M. Peters, Ph.D.**  
Kate E. Tode Curator  
Plant Ecology,  
Community Forestry



**Gregory M. Plunkett, Ph.D.**  
Lewis B. and Dorothy  
Cullman Curator  
Molecular Systematics,  
Ginseng family (Araliaceae),  
Carrot family (Apiaceae), Bio-  
geography—Southwest Pacific



**Dennis Wm. Stevenson, Ph.D.**  
Cullman Vice President  
Laboratory Research,  
Cycads, Monocots, Genomics



**Nicole Tarnowsky**  
Assistant Director,  
William and Lynda Steere  
Herbarium



**Barbara M. Thiers, Ph.D.**  
Vice President,  
Patricia K. Holmgren Director  
of the Herbarium  
Science Administration,  
Tropical Liverworts



**Andrew J. Henderson, Ph.D.**  
Abess Curator  
Palms (Arecaceae)



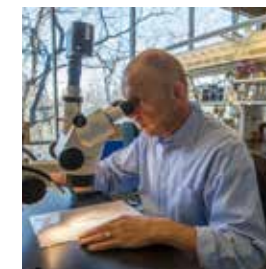
**Noel Holmgren, Ph.D.**  
Senior Curator Emeritus  
Intermountain Flora,  
Figworts (Scrophulariaceae)



**Patricia Holmgren, Ph.D.**  
Honorary Senior Curator  
Intermountain Flora



**Jacquelyn A. Kallunki, Ph.D.**  
Curator Emeritus  
Citrus family (Rutaceae)



**Kenneth G. Karol, Ph.D.**  
Cullman Curator  
Molecular Systematics,  
Green Algae



**William Wayt Thomas, Ph.D.**  
Elizabeth G. Britton Curator  
Atlantic Coastal Forest, Brazil,  
Sedges (Cyperaceae)



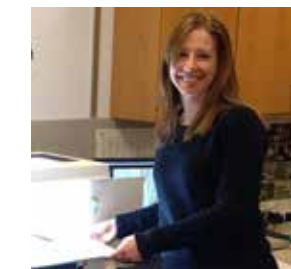
**Benjamin Torke, Ph.D.**  
Curator  
Amazonian Floristics,  
Legumes (Fabaceae)



**Melissa Tulig**  
Director of Biodiversity  
Information Management



**Ina Vandebroek, Ph.D.**  
Matthew Calbraith  
Perry Curator  
Ethnobotany, Caribbean  
Floristics, Cultural Heritage,  
Conservation



**Kimberly Watson**  
Herbarium Digital Asset  
Manager

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Learn more at [nybg.org/science](https://nybg.org/science)

