

Meristems

The Polly Hill Arboretum
West Tisbury, Massachusetts

Vol. 20, No. 2, Fall 2018



Acer palmatum 'Dainty Dobby' is one of the many special plants in Polly's Play Pen.

PHA Joins the Center for Plant Conservation

A network of more than 40 leading botanic institutions, the Center for Plant Conservation (CPC) is an organization solely dedicated to preventing the extinction of U.S. native plants. We are proud to announce that PHA officially became a CPC member this past October.

Executive Director Tim Boland notes that this is an important accomplishment. Entry into the CPC requires a demonstrated commitment to protecting plants from extinction. Tim prepared the application and met with CPC leadership at their national meeting in Fort Worth, Texas, last spring.

CPC board member Dr. Edward Schneider visited the Arboretum in October of 2017, and after touring our collections and facilities, he encouraged Tim to apply for membership.

"It's something we have worked towards over many years," says Boland. "We have built our capacity to be involved with this critical conservation work through our living collections, our herbarium, our professional staff and volunteers, and our top-flight facilities. We are excited about our entry into the CPC. It puts us in great company with leading plant conservation organizations in the U.S. and opens up a network of new partnerships that will enable our conservation activities here on Martha's Vineyard as well as off-Island." Working with the CPC enables PHA to fulfill important aspects of our mission, including support for research, plant conservation, and horticultural experimentation.

The more we know, the better we can save plants: these words from the Center for Plant

Conservation's website succinctly state their philosophy. Founded in 1984 and located at the San Diego Zoo Global, the CPC operates the only coordinated national program of off-site conservation of rare and threatened native plants of the United States. More from their website: "The Center for Plant Conservation maintains a collection of more than 1,400 of America's most imperiled native plants through its network of world-class botanical gardens. Participating institutions safeguard endangered plant material in "ex situ" botanical collections including seed banks, nurseries, and garden displays." We invite you to visit their website (saveplants.org) and find out more about this important organization.

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The Polly Hill Arboretum

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The mission of the Polly Hill Arboretum is to perpetuate the experimental tradition in horticulture established by Polly Hill by sharing knowledge of plants and scientific procedure through educational programs, research, plant conservation, and exploration. The Arboretum seeks to preserve its meadows and woodlands, to promote an understanding of its collections, and to encourage their utilization for scholarship, observation, and the enjoyment of all.

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These seasoned volunteers, who gathered for a photo at our annual volunteer party, have been with PHA since its first year: (from left) Ann Fielder, Nancy Rogers, Nancy Weaver, Margaret Curtin, Linda Hearn, Susan Silva, Leah Smith.

Message from the Director

What a summer! This past year we celebrated our 20th year as a public garden. Fond memories combined with a feeling of accomplishment made it a memorable year for the staff, Board of Directors, and volunteers. As Executive Director, though, it's my job to look forward. In this issue of *Meristems*, I'll answer some questions about the future of PHA as we move into our third decade.

The Arboretum will always be about trees. For our 20th anniversary, we chose 20 trees for 20 years. The "20 Iconic Trees" tours provided an opportunity to share our history and the stories of our trees, both for devoted members and first-time visitors. An accompanying exhibit in the Visitor Center launched visitors out into the collections to visit such arboreal icons as the Julian Hill magnolia, dawn redwood, and beetlebung.

While celebrating our past, we are busy working to support our mission into the future. This past fall, Curator Todd Rounsaville traveled to Japan and curatorial intern Katherine Brewer and I went to Tennessee to collect tree seed for future planting. When you see a tree at PHA, it represents the

culmination of a lot of hard work—in addition to a bit of luck! The journey often includes finding seed in the wild, collecting it, treating it, sowing it, caring for young plants, and eventually planting the tree on the grounds. This year we increased our chances of success: we renovated the Littlefield Nursery to improve the growing conditions and constructed new benches inside our Quonset huts.

PHA is about growing; inherent in growth is change. You'll also read of some changes. This year we bade farewell to several staff members retiring after devoting their skills and creative energies to making PHA a vibrant community resource. The challenge of change is adaptation. It's hard to lose seasoned staff, however, new people bring new energy and ideas. We will adapt and continue to grow. Look for growth in areas that speak to our devotion to connecting plants and people! Please make plans to join us on our winter walks this upcoming season. We look forward to seeing you!

Timothy M. Boland

Talking with Executive Director Tim Boland

PHA recently celebrated its 20th year as a public garden. What are your reflections on the Arboretum's growth over the past two decades?

I often tell people that the key to the success of PHA today is our solid foundation. Not-for-profits are vulnerable to fads and/or taking on initiatives that stray from their mission. The Arboretum's original Board of Directors and Director Emeritus Stephen Spongberg honored Polly Hill's plant and landscape ethic by committing to a philosophy that I call plant-centric and people-powered. PHA appeals on multiple levels. Its serene landscape comes from a commitment to honor our agrarian past. We are also committed to the horticulture experimentation that Polly established beginning in 1958. We carry out our work with creative, talented staff and dedicated volunteers. It is this people-power that has enabled our success and that I am most proud of as we enter our 21st year.

Can an arboretum survive being wedded to its founder's vision, given that the Vineyard and the world continue to change?

Yes! Prior to working at PHA, I worked at two very different gardens that went from private to public: Chanticleer Garden in Wayne, Pennsylvania, faced this challenge, as did the Morton Arboretum in Lisle, Illinois. I have learned from and been inspired by my experiences at both places and by observing others. The secret to success is to work within the confines of your mission, but to do so in innovative and purposeful ways. In 1958, when Polly Hill first started her grand experiment, the world and its environment were in a very different state. Now, 20 percent of all plants—many of these are trees—are in some stage of vulnerability to extinction. This compels us to be active in their protection and in telling their stories because they cannot speak for themselves.

In addition to our local and global responsibilities to plant conservation, we are also very concerned about the state of the plant sciences, particularly college horticulture and botany programs. An estimated

50 percent of college programs in these two disciplines have been eliminated by U.S. colleges and universities. Given this painful reality, where will the future horticultural leaders and plant scientists come from?

They will come from public garden training programs! My career was deeply influenced by internships and mentorships I engaged in after my undergraduate training. Today, we pass on this tradition with our college and post-college internships at PHA. Polly believed in the power of observation, discovery, and sharing. As scientists and educators that is what we continue to pursue.

What significant projects and plans do you see on the horizon over the next few years?

After several years of expansive growth with the renovations of historic buildings and the building of new facilities, we are settling into the methodical growth of our programming on all levels. We are expanding our youth education programs to include a middle school curriculum, and have recently hosted high school classes in the new Education Center and Botany Lab. PHA is also involved in the creation of our Backyard Habitat project that engages Vineyard youth and families in the stewardship benefits of planting native plants to reconnect fragmented habitat.

This upcoming spring we will undertake an audience research project to help us improve the visitor experience and create an interpretive signage plan to better share our story and mission in interesting and accessible ways. This project is also intended to inform future publicity and outreach to increase visitation and community visibility.

Polly loved plants! At the heart of what we do is curating and caring for our plant collections. We have recently improved our plant records and mapping systems, and the recent nursery renovation has created better growing conditions and increased our capacity to track plants from seed to planting on our grounds. We plan to increase our plant breeding activities in a pursuit to introduce new cultivated varieties of plants. The

nursery renovation provides the template for us to take this on. Last year we initiated our new plant records database, IrisBG. This year we introduced a new labeling format with anodized aluminum replacing plastic. We expect these easier-to-read labels to last far longer than the plastic labels that would fade and eventually break from exposure to ultraviolet light.

Our science and plant conservation activities with the Flora of Dukes County continue to find both new plants and historic plants that have been rediscovered after 60 or more years. While the publication of a revised flora is in our future, a checklist of current plants will appear on our website soon. These projects are what PHA is all about: seek constant improvement, do it in the spirit of our founders, and be open to change when given the opportunity.

What are your most pressing challenges today as a public garden on Martha's Vineyard?

Support! As beloved as we are on-Island and as respected as we are by our professional peers, we do not have significant, consistent monetary support. This challenges us on a yearly basis. More recently we have been hard-pressed (as are other Island not-for-profits) to find affordable housing for our employees, who are the very lifeblood of PHA. To counter this, we have created a housing stipend fund that aids long-term employees in their housing or rental costs. Unfortunately, we realize this may only be a temporary fix. If we cannot retain talented employees, the sustainability of our people-power will become unstable. This will threaten our future progress and impact. We need our members and constituents to help us, not just with current support, but also with PHA's long-term sustainability from a generational perspective. There are a lot more trees in our future!

Many of these new developments and more are included in this newsletter. You can also send me questions at info@pollyhillarboretum.org. We welcome your suggestions, and, of course, your continued support!

Youth Education Coordinators Betsy Dripps & Jill Bouck Retire

It is with much gratitude and awe that we look back on the years Betsy Dripps and Jill Bouck have been running PHA's youth education program. Their energy, hard work, and creativity transformed our youth education program into a full-blown science program spanning kindergarten through 4th grade and serving between 700 to 800 students each year. They both retired from their position as Youth Education Coordinator this year.

Betsy joined the PHA team in 2005 after a 25-year career as a school teacher. She enjoyed working with many of the same teachers and students she had known during her years teaching in the Martha's Vineyard school system, but this time in an *outdoor* classroom. Our initial youth education program was modeled after a program at the Arnold Arboretum in Boston, and Betsy soon began working to expand and customize the programs.

In 2009, shortly after completing 18 years as chief curator at the Martha's Vineyard Museum, Jill joined PHA's volunteer grounds crew. Already a certified teacher in Massachusetts, it wasn't long before she began helping Betsy with our youth education program. It soon became clear that her skills and talents made her the perfect partner! Within a year, she and Betsy became joint program leaders. The scope of the programs continued to expand with Jill on board. Her calm demeanor balanced well with Betsy's

energetic presence, and they became favorites at the Island schools—many teachers returned with their students year after year.

In 2016, the Massachusetts Department of Education adopted a new framework of standards for science, technology, and engineering. That winter, Jill studied the new curriculum standards and worked with Betsy on a plan to adjust and expand PHA's programs to more closely align with the new science framework. Several new programs were born out of these curriculum changes, including lessons on flowering plants, biomes and ecosystems, and a program on "dinosaur plants."

All of the youth education programs at PHA allow students to become young scientists: exploring, asking questions, observing changes, drawing, discussing, and interpreting what they discover. As Jill points out, the philosophy of PHA's programs emphasizes hands-on scientific work both in the classroom and at the Arboretum. Each unit begins with a classroom lesson that prepares students for what they will be doing during their subsequent field trip(s). But it is also an opportunity to introduce kids to the history of PHA and its founder. Betsy shares, "My favorite part was telling students Polly's story and showing them this wonderful picture of Polly sitting in her golf cart with a little girl talking to her about the basket of seeds between them on the seat. I wanted to convince every student

that they are scientists just like Polly!"

Once the kids get to the Arboretum, their excitement is palpable. Many of them can't resist breaking into a run as they make their way along the paths and green spaces of the PHA campus. As Jill says, "The follow-up visit, while focused on the specific program, also allows for a good amount of fun observation of birds, insects, reptiles, small mammals, and any other natural world discovery that might present itself along the way." The outdoor educational experience is valuable for all children and is especially beneficial for kids with a more hands-on learning style, who may struggle in the structure of a classroom setting. Betsy adds, "We are getting them outside in nature and unlocking the curiosity inside their minds. We let them explore, ask questions, and share information with friends."

All this work couldn't be done by just two people, and Betsy and Jill are quick to give credit to PHA staff who have assisted them throughout the years, and especially to the volunteer school guides who make it possible. Betsy adds, "We have been extremely lucky to have wonderful volunteer school guides who lead small groups when classes come on field trips." Betsy was instrumental in recruiting a dedicated and energetic group of guides, many of whom have backgrounds in education. She had only two basic requirements: "First, they had to love working with children. Second, they had to

Visitor Center Updates

The Visitor Center welcomes PHA visitors and helps them make the most of their visit. This year Visitor Services, Volunteer & Youth Education Coordinator Kendra Buresch initiated some changes to benefit visitors of all ages. For children and families, a comfy bean bag chair is at the center of a new kids' corner that also includes picture books about nature, leaf rubbing materials, and an exhibit exploring tree growth rings. We have enjoyed watching kids and parents curl up with a book or create a nature drawing in their new space. The new children's area complements our explorer backpacks. These backpacks are free to borrow during open hours and contain fun

activities for families, including a tree identification book, a sketchbook, and binoculars.

Also new in 2018 is a set of interpretive panels containing information on topics related to current Arboretum happenings. These panels allow displays to be swapped out throughout the season. In early summer, visitors enjoyed a display on iconic trees of PHA. Kendra designed the exhibit in conjunction with our "20 Iconic Trees" tours planned in honor of PHA's 20th anniversary. In late summer, the display focused on the topic of our spring appeal: 20,000 bulbs! PHA staff and volunteers will be planting the bulbs on our grounds this fall. The

display highlighted the flowering bulbs purchased with funds raised from the spring appeal. We thank PHA caretaker Tucker Hubbell for his masterful installation of our new Visitor Center panels.

Finally, for visitors interested in discovering seasonal plants of interest, in addition to our "six-plant tour" live plant display, we added a digital slideshow curated by avid photographer and PHA volunteer Kathy Kinsman. The ever-changing photos highlight for visitors what's in bloom on the day of their visit. Be sure to stop by the Visitor Center when it re-opens in May to pick up one of our famous t-shirts and take a look at our latest improvements.



Betsy Dripps (left) and Jill Bouck

love the Polly Hill Arboretum, and love to share all that it has to offer to our youngest scientists.” And they do! Betsy and Jill have enjoyed working with PHA Visitor Services, Volunteer & Youth Education Coordinator Kendra Buresch, who joined the PHA team in April and will take over the reins to lead the youth education program this winter.

Looking back at their time as Youth Education Coordinators at PHA, both Jill and Betsy have fond memories. Jill sums it up as a “huge group effort, and so rewarding to see kids of all abilities have fun with science.” Betsy knows she will miss her coworkers, school guides, teachers, and students, but feels pride at what has been accomplished: “Polly would be so happy to know how far we have come with our youth education programs and how much of a difference we are making in student’s lives.” We wish both Betsy and Jill the best in their next chapter, and we thank them for their years of dedicated work bringing science and nature into the lives of so many young people.

Tim Boland Joins Board of International Oak Society

Executive Director Tim Boland was recently appointed to the board of directors of the International Oak Society (IOS). The IOS was founded in 1992. Its mission is to further the study, sustainable management, preservation, appreciation, and dissemination of knowledge to the public about oaks and their ecosystems. Tim plans to help recruit younger members to the IOS and looks forward to participating in their planning and development team.

Tim has brought oak experts from around the world to the Island and has taught classes on oak identification, ecology, and symbolism. His current research focuses on the preservation of oak forests and the conservation of endangered U.S. oaks. An enthusiastic oak advocate, Tim adds, “Oaks are critical biological infrastructure across the world. They support more insect, fungi, and microbial life than any other temperate tree group. They are also a foundation tree species that indicate through their persistence and existence the health of our planet, locally and globally.” Tim recently attended the 9th IOS conference in Davis, California, which focused on oak habitat and adapting to climate change. He presented a talk: “The ConServation: Conservation Mapping and its Role in Oak Conservation.” The ConServation is a cloud-based geographic information system that records the distribution of plant species on Martha’s Vineyard.

PHA’s New Administrative & Financial Officer

In September, Margo Urbany-Joyce joined PHA as our new Administrative & Financial Officer. Margo comes to us with a wealth of financial savvy: she worked in investment banking, sales, and trading in New York City for 18 years before moving to Martha’s Vineyard in 2005. Once on the Vineyard, she owned and ran a financial advisory practice for 6 years before becoming executive director at Habitat for Humanity of Martha’s Vineyard and, more recently, finance manager at Featherstone Center for the Arts, where she continues to serve on the board of directors.

Margo lives in Edgartown with her husband, Jim, and their golden retriever, Jolene. She can often be found walking Jolene on one of the Island’s many hiking trails. Margo says, “I was attracted to Polly Hill Arboretum not only for its natural beauty but also for its horticultural achievements. After working here for only a few weeks, I am taken aback by the strong sense of stewardship, the respect for history, and the reverence for those who helped PHA become what it is today.” She adds, “There is a very strong sense of place here and I feel fortunate to be part of it.” We feel fortunate that she has joined our team. Please introduce yourself to Margo on your next visit.



Barbara Conroy (right) with her daughter and grandchildren by the giant bloom of the Julian Hill magnolia

Barbara Conroy Retires

PHA Administrative & Financial Officer Barbara Conroy announced her retirement this past September after 16 years of exemplary service. Barbara and her husband, Eddie, have relocated off-Island to be closer to their children and grandchildren. “Barbara played a major role in many of our critical institutional advances,” says Executive Director Tim Boland. “The position is dynamic and demanding; she not only adapted to change, but she was a catalyst for many improvements, including initiating best management practices for

not-for-profit accounting and reporting.” Barbara also spearheaded our solar power program, which enabled PHA to be one of the few U.S. arboreta to produce over 100 percent of its electricity from solar energy.

On her last day, PHA staff and board members attended a special luncheon in her honor in the Far Barn; guests spoke admirably of her many accomplishments and dedicated work during her time at PHA. We thank Barbara for her years of service and wish her a very happy, well-deserved retirement!

Staff News

In June, Executive Director Tim Boland led a workshop at Bentley University in Waltham, Massachusetts, titled “The American Oaks: Diversity, Ecology, and Identification.” The program was sponsored by Grow Native Massachusetts, a not-for-profit organization based in Cambridge, involved in advocacy for native plant landscaping. In July, Tim gave a talk on PHA’s history and programs at the Tabernacle in Oak Bluffs for the Martha’s Vineyard Camp Meeting Association.

Also in July, Plant Propagator Bridget Reed traveled to Columbus, Ohio, to attend Cultivate ’18, a conference and trade show presented by AmericanHort. This dual-purpose event allowed her to attend talks, explore ways to improve greenhouse function, and to source materials from the trade show.

In August, Horticulturist/Arborist Ian Jochems took PHA interns Katherine Brewer, Nicki Achor, and Sam Snyder on a field trip to the Woody Plant Conference sponsored annually by the Scott Arboretum of Swarthmore College located outside Philadelphia, Pennsylvania. While in the area they visited the Morris Arboretum and Chanticleer Gardens, in addition to traveling to Wave Hill, a public garden located in the Bronx. In April, Ian took a family trip to the Netherlands. While there, he visited Hortus Botanicus, a botanical garden in the heart of Amsterdam celebrating its 380th year. He also experienced Keukenhof Garden during the tulip bloom where 7 million bulbs of over 800 varieties were in flower!

In September, Horticulturist Oliver Osness passed the required exam to receive a Massachusetts pesticide applicator license. The training covers IPM (integrated pest management) and details the least toxic methods to control plant pests and diseases. In October, he taught his first class at PHA: a workshop on mushroom cultivation that he looks forward to teaching again.

Also in October, curatorial intern Katherine Brewer attended the American Public Gardens Association’s Excellence in Plant Collections Symposium held in Vancouver, British Columbia. The program covered topics from curating for climate change to the ethics of wild collecting, and included visits to Van Dusen Gardens and the University of British Columbia Botanical Garden.

The Vineyard’s Backyard Habitat Project

Your backyard garden can play a vital role in conservation. Polly Hill Arboretum has recently launched the Backyard Habitat Project, spearheaded by Visitor Services, Volunteer & Youth Education Coordinator Kendra Buresch, in an effort to encourage gardeners and landowners to contribute to landscape connectivity by creating a planting called a habitat patch in their backyards. Each habitat patch will provide food, water, and shelter for Martha’s Vineyard wildlife. This conservation stewardship project, funded by a grant from the Nature Conservancy, is a fusion between PHA’s MV Wildtype program and the Habitat Kids youth education program.

As a part of the project, PHA will be propagating a variety of native plants from seed to create habitat kits that will be available for purchase next spring at the PHA plant sale area. Each kit will include



Second graders from the Oak Bluffs Elementary School show off their Island habitat map.

36 plugs of native plants: 8 wildflowers and 3 grasses that homeowners can use to create their own habitat patch. To make planning and planting easier, each kit will include a landscape design plan.

What would a habitat patch look like? Next spring, a demonstration habitat patch will be planted around the Arboretum’s Education Center and Botany Lab to provide an example. In addition, interpretive signage will explain to visitors the role backyard habitat patches can play in connecting fragmented Island habitat. In support of the project, PHA will host several speakers in the next year on topics related to native plants and landscaping for wildlife.

The project is a group effort. Arboretum staff, along with volunteers Margaret Curtin, Greg Palermo, and Nancy Weaver, have been collecting native plant seed from around the Island. The seed will be used to grow plugs for the kits. Propagator Bridget Reed, Greenhouse Assistant Nancy Rogers, and greenhouse volunteers Judy Bryant, Berta Geller, and Sue Silva have been cleaning and processing the seeds to ready them for the necessary stratification (cold storage) before sowing this winter. Grade-school students will be assisting as well. The grant will fund the Habitat Kids youth education program for second- and third-graders for the next two school years! Students will be involved in creating educational material for the habitat kits and will also be packaging native plant seeds for distribution in the Visitor Center next spring.

Farewell to Our 2018 Interns!



Summer interns Nicki Achor (left) and Sam Snyder (right) with curatorial intern Katherine Brewer

High School Helpers at PHA

During this past season, PHA was fortunate to have the help of many young people. As a part of Martha's Vineyard Regional High School's (MVRHS) Give Back Day, we hosted a work day for a group of high school students. Twenty-five dedicated teenagers helped to install plantings at the Visitor Center and to mulch and weed the Dogwood Allée. With their help, we were able to move 30 yards of mulch and plant over 200 plugs of wavy hairgrass (*Deschampsia flexuosa*). It was a pleasure working with such an engaging group of students. They were able to get out of the classroom, work outdoors on a volunteer service project, and learn a little about careers in public horticulture.

We also hosted two high school students to work on special projects. Esme Lee, now a senior at the Spence School in New York City, volunteered this summer on an ambitious project inspired by the Habitat Kids program. She devised an urban version of Habitat Kids that she will be rolling out this winter at an elementary school in Brooklyn. Esme's initiative and enthusiasm were evident as she designed lesson plans and activities for her nine-week after-school program.

Also this past summer, Jaiden Edelman, now a junior at MVRHS, worked as a summer intern on PHA's new Backyard Habitat Project. Through all sorts of weather, Jaiden was busy collecting softwood cuttings and seeds from native plant species around the Island as well as helping to weed several of the elementary schoolyard habitat patches. He also collected and pressed a collection of native oaks to be used by Habitat Kids' third-graders to create their own key of Martha's Vineyard oaks.



High school intern Jaiden Edelman preparing softwood cuttings for the Backyard Habitat Project

Plant Collection Trips

TENNESSEE: Wet but Wonderful!

Executive Director Tim Boland and curatorial intern Katherine Brewer traversed over 1,400 miles in Tennessee this past September in pursuit of the mountain camellia (*Stewartia ovata*) and other plant species. The trip was impacted by over 8 inches of rain that washed out mountain trails, making some impassable. However, they were able to collect their target stewartia at 7 sites; several were collected on private land with the permission of the landowners. 2017 curatorial intern Thomas Murphy, now a graduate student in botany at Austin Peay University in Clarksville, Tennessee, joined Tim and Katherine, and was integral to the successful planning and permitting of the trip.

The trio ventured to both mountainous areas and grassland glades where they discovered several target species. They made 33 collections in total. Tim comments, "Despite the rain, we were in beautiful, remote areas, and we were delighted to have the opportunity to work with Thomas again." Collecting seed is not glamorous; it is hard work. A typical day starts before 7:00 am and concludes at 11:00 pm. In between is driving, hiking, collecting, and after dinner, seed sorting, data recording, and herbarium preparation. This was Katherine's first experience collecting seed in the wild. She adds, "The trip was an important learning opportunity for me. I got to see first-hand the hard work that goes into plant collecting, and I had so much fun exploring these rural areas and learning from Tim and Thomas!"



Past curatorial intern Thomas Murphy collecting seed at Rock Island State Park in Tennessee

JAPAN: Collections from the Mountains

During the second half of September, PHA participated in a collecting expedition to central Honshu, the main island of Japan. The trip marked PHA's third expedition to Japan since 2005. Curator Todd Rounsaville was joined by Michael Dosmann and Steve Schneider from the Arnold Arboretum as well as Tony Aiello from the Morris Arboretum. A total of 58 collections were made over two weeks, including *Stewartia monadelphica* and *S. pseudocamellia*, six species of *Rhododendron*, five species of *Enkianthus*, and taxa of hydrangea, holly, maple, and beech that will be completely new to PHA's living collections. The trip's success can be largely attributed to the advance scouting done by Dr. Mineaki Aizawa, a forest ecologist at Utsunomiya University who served as a guide for the duration of collecting.

According to Dr. Aizawa, this summer had been the hottest ever recorded in Japan. Additionally, the group arrived shortly after a series of devastating typhoons that left certain roads impassable and damaged many forests where the group made collections. The use of Utsunomiya University's laboratories proved invaluable to the efficient processing of seed and herbarium vouchers. Todd found the trip a fascinating opportunity to see the sister species of genera that grow in North American forests. Comparing the evolutionary adaptations of these familiar species provides insight into their unique ecology and thus their cultural requirements in cultivation. We are excited to grow these seeds that will add so much taxonomic diversity to PHA's living collections.



PHA Curator Todd Rounsaville collecting this past September in the mountains of Honshu, Japan

A Magnolia Called Lydia

by Todd Rounsaville



These seedpods (aggregate follicles) collected from 'Lydia' in October are just starting to open.

How ironically fortuitous that in 1956, two unrelated events in Polly Hill's life would set the course for the plant collection now thriving as the Polly Hill Arboretum. First, as Polly wrote, "I had assumed the management of Barnard's Inn Farm, the family property on Martha's Vineyard." The centuries-old sheep farm that has now become her eponymous arboretum was a blank canvas in 1956, presumably an exhilarating and daunting opportunity for her as an amateur horticulturist. Second, Polly took a trip to Japan with her son Jeff. There, she was introduced to Dr. Tsuneshige Rokujo by an acquaintance of a mutual friend. Dr. Rokujo worked for a pharmaceutical company, but like Polly, was a passionate gardener. Over the next 41 years, the pair exchanged 233 letters and shared their favorite plants. Between 1957 and 1981, Dr. Rokujo mailed hundreds of seed packets to Polly, primarily Japanese species that remain a core component of the living collections to this day.

One of Polly's most enduring legacies

as a plantswoman are the North Tisbury azaleas; all of these originated as seed sent by Dr. Rokujo. Their shared interest in azaleas constituted the bulk of the intercontinental exchange, but seeds from Japanese Stewartias, maples, hollies, and pines also arrived. In January of 1968, three small seedlings Dr. Rokujo mailed from Tokyo arrived for Polly. The seedlings were *Magnolia obovata* (received with the synonymous name *M. hypoleuca*) and were among only a few magnolias ever sent to Polly by Rokujo.

As it happened, each of the bare-root seedlings (accessioned as 1968-004) survived the long journey, and before long Polly had planted them, evenly spaced, along the northern border inside her "playpen." These sister seedlings thrived within the confines of this fenced area amongst the other Rokujo-exchange plants. We know from Polly's recordkeeping that the first of the three flowered in 1978. Six years later, a second tree in the middle of the grouping flowered for the first time, and Polly noted

that the outer tepals were pink. Although a pink flush is not uncommon for the predominantly white-flowered *M. obovata*, this particular specimen also grew with an unusually upright habit. Recognizing that this tree was special, Polly bestowed this plant with the cultivar name 'Lydia', in honor of her granddaughter. Lydia is the daughter of Polly's son Jeff, who had accompanied Polly to Japan when she first met Dr. Rokujo.

When a noteworthy plant is given a cultivar name, a series of important steps are set in motion. First, the cultivar should be formally registered in order to describe why it is unique. Some genera, like *Magnolia*, have professional groups in place for this purpose. The name 'Lydia' was officially registered with the Magnolia Society International in 1986. Another caveat of cultivar creation is the implicitness that once named, a given cultivar is the only individual of its kind. To preserve and share cultivars with other gardeners, asexual propagation needs to occur. Polly mailed hardwood



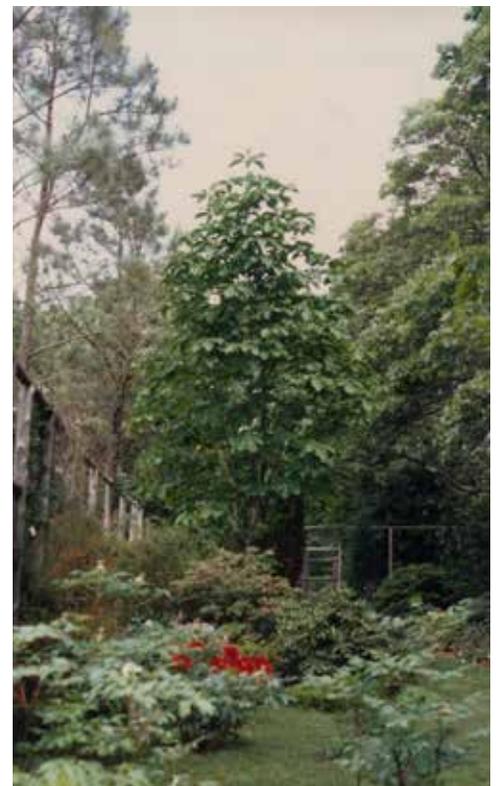
The magnificent flower of *Magnolia* 'Lydia'

cuttings to several nurseries and arboreta in order to share her special selection. One of these successful grafts returned to PHA in 1988 and was planted back into the collection as a duplicate accession.

Magnolia obovata is often called the Japanese bigleaf or Japanese whitebark magnolia. It bears a resemblance to the American umbrella magnolia (*M. tripetala*) to which it is very closely related, each having large and cuneate (wedge-shaped) leaves. In recent years, *M. tripetala* has been published as escaping cultivation, seeding into the forests of the eastern U.S., far north of its contemporary range. We have observed a similar phenomenon on Martha's Vineyard in regard to 'Lydia' and her sister seedlings. Following the collapse of the native oak trees in the natural woodlands bordering PHA's cultivated area nearly a decade ago, *M. obovata* has migrated from Polly's Play Pen and germinated in PHA's forested acres. This behavior is similar to that within its native range in Japan, where *M. obovata*

serves as a fast-growing, early-colonizing species that establishes following forest disturbances. In all likelihood, the comparatively weak-wooded magnolias will break apart in the forest over time and be replaced by native beeches and recovering oaks.

Ultimately, we decided over the summer to deaccession and remove two of the Play Pen magnolias (see "Progress in Polly's Play Pen," pp. 10–11). In addition to reducing the number of seeds dispersing into the forest, these trees had grown to be massive over their 50-year lifespan. The dense shade they cast was jeopardizing the health of Polly's North Tisbury azaleas growing beneath. Now, only 'Lydia' remains from the original seedling batch sent by Dr. Rokujo. Standing near the center of the Play Pen, and as the tallest tree within it, 'Lydia' is a sentinel for the other Play Pen inhabitants, many of which likewise originated with Rokujo. Next year we plan to propagate 'Lydia' to make this unique and historically important cultivar available to others.



'Lydia' was already a large tree when it first flowered in 1983.

Progress in Polly's Play Pen

by Katherine Brewer

I was excited when offered the chance to shape my curatorial intern project around Polly's Play Pen. The Play Pen has become my favorite spot at PHA: its high fence and far location make it feel like a secret garden. In addition, it is filled with plants such as azaleas, rhododendrons, and mountain laurels—all members of my favorite plant family: the Ericaceae.

I created an organized and ambitious plan with three phases of work: phase 1 included a full inventory of everything recorded as living in the Play Pen. I verified the location and identity of every plant. I also recorded whether the plant needed a new accession or display label and made notes on each plant's health and form. In phase 2, I determined and performed removals, transplants, and repropagations. I use the word repropagation instead of propagation because for a cultivar to retain its unique cultivar characteristic, it must be propagated asexually. Many of the North Tisbury azaleas are propagations of an original plant and we are repropagating from those propagations. In phase 3, I will select and add new plantings.



The Play Pen viewed east to west in 1974



The Play Pen in the winter of 1984. The state champion enkianthus is to the far right.



Polly's Play Pen in 1992

During the inventory, I noticed that many of the understory plants were struggling and unhealthy, apparently from the shade of the tree canopy overhead. I looked at which plants were the most overshadowed and whether any of the canopy plants could be removed. For example, Polly's magnolia selection 'Lydia' was originally planted as a seedling in the Play Pen along with two of its unnamed siblings. These three trees created a lot of shade, but because only 'Lydia' was of special importance to the collection, I slated the two other magnolias for removal. I also chose to remove a Japanese maple with a large canopy shading several North Tisbury azaleas and a scraggly holly tree, which was the same cultivar as another holly growing in the Play Pen.

Removing several larger trees opened the canopy and allowed more sun to reach the understory, but overcrowding was still a problem; specimens were being choked out or developing undesirable growth habits: more removals were needed. I identified plants that were unattractive, in poor locations, in declining health, or crushing another more important plant. Then I looked back in our records to determine which of these plants had value to PHA and should, therefore, be saved and which could be removed. A plant's value is determined using several factors, including the identity, the number of that taxon growing at PHA, whether the plant was wild collected, and whether it was named by Polly. These

important decisions are integral to the curation of a plant collection.

My decision concerning *Rhododendron* 'Niagara' illustrates the process. This plant was growing at the western end of the Play Pen hidden behind a mass of North Tisbury azaleas. It had an odd form: only one living branch growing horizontally along the ground. Removing it would allow more space for the North Tisbury azaleas. But first, some necessary research into our plant records: I looked up the accession number (1962-034*B) and found that the plant was purchased in 1957 as a rooted cutting under the name *Rhododendron* 'Niagara' and accessioned in 1962. I re-searched the name to find out if this cultivar warranted inclusion in our collection. I discovered that the cultivar 'Niagara' is not registered with the American Rhododendron Society and, therefore, not officially recognized. Since I couldn't find any other information, I couldn't verify the cultivar. In an arboretum, a plant has no value if its identity cannot be determined. I put *R.* 'Niagara' on the removals list.

Over the summer, I worked with the horticulture staff and interns on carrying out the removals and transplants, and I am happy to report that phase 2 is complete. I also worked with PHA Plant Propagator Bridget Reed on propagating many of the Polly-named cultivars where only a single plant remains. We used softwood cuttings taken in June and placed them under mist for two months. Many rooted success-

fully and are now in pots in the greenhouse.

I am currently working on phase 3: suggestions for new plantings. My plan is to recommend adding more herbaceous plants that look beautiful but can be easily removed when higher value plantings are added (e.g., larger swaths of ferns, sedges, and hardy begonias). These common plants will add a different, visually pleasing foliage texture to the Play Pen's landscape. I have also flagged several woody plants in the nursery for planting, including two unusual rhododendron species: *Rhododendron hunnewellianum* subsp. *rockii* and *Rhododendron oreodoxa* var. *fargesii*.

The Play Pen project has been a wonderful learning experience for me, and I am grateful for the chance to work with and learn from everyone on the horticulture team! I have learned a lot about the process of curating a space and the necessary decisions that must be made about removals and additions. I look forward to visiting years from now to see how Polly's Play Pen has evolved.



Katherine Brewer in the Play Pen, summer 2018



Joe Alstat

Joe Alstat

One bright fall day the grounds crew at Polly Hill Arboretum could be seen busily weeding the Homestead Border. PHA's volunteer grounds crew is our largest volunteer group, with a loyal following of individuals spanning many ages, including Joe Alstat, who at 28, is by far the youngest. Anyone watching would notice Joe's vibrant energy, and a quick conversation would reveal his enthusiasm for the plants and people of Polly Hill Arboretum.

Joe has a lifelong passion for plants and gardening. He remembers playing with Tonka trucks as a kid while his mom worked nearby in her vegetable garden. As a child in Virginia, he had a close connection to 4-H. In fact, he was originally drawn to PHA when he noticed how our youth education program embodies 4-H values through educating children about nature. Joe was introduced to the Arboretum by board member Gary Montrowl, whom he met when he first came to the Vineyard five years ago to take a job as the cheesemaker at the Grey Barn & Farm in Chilmark. Joe is now the creamery manager and cheesemaker. Prior to landing on the Island, Joe attended the New England Culinary Institute in Montpelier, Vermont. After graduating, he gravitated towards a career as an artisanal cheese maker while at Bonnieview Farm, also in Vermont.

Outside the creamery at the Grey Barn, Joe has begun a veritable mini-arboretum. He has close to 60 plants above ground in pots; many of his accessions were acquired during his four years on the volunteer grounds crew. His collection from PHA includes a few cedars, a cypress, and a cryptomeria—all volunteer plants he discovered

while weeding. He also has a collection of sundews and other carnivorous plants. Since all of his plants are in pots, he spends time watering almost every day. He says it's a great time to get some thinking done. His personal motto: "Trees and cheese!"

When asked about his favorite thing to do at PHA, Joe replied with gusto: "Cutting down trees!" Indeed, his most memorable PHA experience was the day he and the volunteer grounds crew (led by Horticulturist/Arborist Ian Jochems) took down one of the large pitch pine trees by State Road. While he likes to cut down trees, Joe also enjoys spending time among them, particularly in the 40 acres of oak woodlands at PHA that have not been cultivated.

Joe enjoys his time at the Arboretum and views his volunteerism as a great way to give back to the community. He appreciates PHA's commitment to community-based projects, such as helping out with other gardens and conservation groups. When Joe is not hanging out with trees or making cheese, you'll find him rollerblading on the streets of downtown Edgartown, or, in winter, skating across one of the coastal salt ponds. Speaking of winter, Joe would like everyone to know how fun it is to be a PHA volunteer in the winter months. "It's like being in a small class," he proclaims, "you get all the attention!"

The staff of Polly Hill Arboretum thanks Joe for all the time he devotes to the volunteer grounds crew. If you are interested in learning more about becoming a volunteer at PHA, please contact Kendra Buresch at kendra@pollyhillarboretum.org or call 508-693-9426.

THE POLLY HILL ARBORETUM

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ADMINISTRATIVE OFFICES

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VISITOR CENTER

795 State Road
West Tisbury, MA 02575

ACCESSIBILITY

The Visitor Center is wheelchair accessible.

VISITOR CENTER HOURS

Memorial Day weekend to
Columbus Day: 9:30 am-4 pm

ARBORETUM GROUNDS HOURS

Sunrise-sunset, year-round

ADMISSION

\$5
Free to members and children under 12

FREE PARKING

DRIVING DIRECTIONS

See www.pollyhillarboretum.org

mer.i.stem: *n. botany.* The growing point or area of rapidly dividing cells at the tip of a stem, root, or branch.



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THEN AND NOW



2009: A PHA gardener weeds out new rows in preparation for new tree plantings.



2018: The recently installed nursery is ready to accept trees growing in the greenhouse. Note how the Yoshino Japanese cryptomeria have grown into an effective windbreak.

The Nursery

PHA staff and volunteers have completed the renovation of the outdoor nursery! This space, located across from the Littlefield Maintenance Building, now serves as a transition area where trees and shrubs too big for the greenhouse

can be grown outside prior to being moved into the living collections. Here we'll be able to properly assess factors such as form and cold hardiness and this will allow us to select the very best individuals for planting on the Arbore-

tum grounds. Originally developed as a fenced space (for deer protection) where trees grew directly in the ground, the new nursery space includes sunken pots on drip irrigation. This growing method, known as "pot-in-pot," reduces weeding

and watering while providing insulation for plant roots over the winter, and makes transplanting large trees much easier. The renovation was carried out in fulfillment of a grant from the Stanley Smith Horticultural Trust.