

Staghorn sumac, *Rhus typhina*

Arboretum Investigates Mysterious Oak Pest

In early spring the Arboretum received numerous calls from Chappaquiddick residents reporting the puzzling deaths of large, native black oak (*Quercus velutina*) trees. A call to Mark DiBiase, master certified arborist of Bartlett Tree Experts, confirmed an island-wide outbreak of the crypt gall wasp. Mark reports the first incidence occurred in 2009 with populations and damage increasing each year. The original pattern of infestation appeared to be in coastal areas on older trees that were perhaps predisposed to the pest by salt spray damage or previous defoliation.

The Arboretum investigated further. PHA volunteer Greg Palermo and PHA Horticulturist Ian Jochems conducted an island-wide survey of oaks in an attempt to track the distribution of the pest and

the severity of the infestation. Initially we believed that the wasp infestation appeared primarily on declining trees and in coastal locations affected by salt spray. However, Greg and Ian's results revealed that the wasp has been found in every Island town and is prevalent in the interior of the Island as well. In addition the survey showed that the wasp has infested young to middle-aged trees.

The symptoms of wasp infestation are dead branches on the outer extremities of the trees and a lack of vigorous spring growth. The signs include swollen twigs with tiny pinhole perforations from where the insect has emerged. The swollen twigs are a response to the presence of the pest. This knobby, irregular growth is difficult to detect in the upper portions

of the tree, but quite noticeable upon closer inspection.

PHA continues to research and study the plants of Martha's Vineyard to protect our botanical heritage. To share more about crypt gall wasp, we hosted a lecture by Dr. Neil Hendrickson, PhD Forestry, of the Bartlett Tree research laboratories. Commercial arborists and concerned homeowners attended the event where they learned about the wasp and treatment options. At this point little is known about the insect, its life cycle, or its control. The Arboretum agreed to have an experimental systemic pesticide treatment performed by Bartlett Tree on our largest black oak. We are hopeful that with monitoring and proper cultural care our trees will continue healthy lives.

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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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The Littlefield House renovation project

Message from the Director

This fall marks the tenth anniversary of the pivotal purchase of the ten-acre Littlefield property located to the south of our original property line. An especially momentous anniversary for me and my family, it was that year (2002) that we moved to Martha's Vineyard, eventually residing at the Littlefield House, the little house just off State Road painted "Arboretum Green." In many ways it was a leap of faith to purchase the property, as it was for us to move to a small island and a fledgling public garden. Like transplanted seedlings we have grown well with the care of the wonderful Arboretum community that has been so welcoming and supportive of me, my wife, Laura Coit, and our children.

I thank Director Emeritus Stephen Spongberg and our past board members for having the foresight to acquire the property as well as for welcoming us to the Island. Since that purchase many significant events have taken place on the land. Each new development has strengthened our ability to achieve our mission. In 2007 on Polly Hill's 100th birthday, we opened the greenhouse where we have successfully grown thousands of seeds,

cuttings, and plants. In 2009 we completed the Littlefield Maintenance Building, now the hub of our gardening operations, providing offices for grounds staff and interns, safe storage for our equipment, and a gathering place for our grounds volunteers. This year we have taken on the renovation of the historic Littlefield House (1844), now the home of Curator Tom Clark and his wife, Sandy.

The Arboretum is pleased to continue a warm and friendly connection with the Littlefield family who strove to ensure their land was put into the right hands. The purchase of the property has been critical for the Arboretum in developing the infrastructure that helps us grow plants and grow as an institution. I am pleased to say we have done well. We continue to make improvements while honoring the land, the owners of the past, and the legacy of Polly Hill. We envision a bright future and we appreciate your support.

Board News

We are pleased to introduce three new members of the PHA Board of Directors: Prentice Bowsher, Sarah Griffin, and Iya Labunka.

Prentice Bowsher and his wife, Sally, of Washington, DC, are longtime seasonal residents of Edgartown. Prentice, an accomplished writer, has experience in affordable housing and grassroots leadership training. “Even so,” Prentice says, “I have had one foot in the garden most of my life.” Several years ago he enrolled in the Master Gardener program through University of Maryland Extension. At the same time, the Arboretum was organizing its volunteer grounds crew. It was a rewarding match. Prentice adds, “I’m now looking forward to contributing my volunteer energy to the PHA Board.”

Sarah Griffin has been summering on the Vineyard for over 30 years. In 2007 she and her husband, Gerard Griffin, purchased a summer home on West Chop in Vineyard Haven. With this investment Sarah feels the imperative to engage with the Island community. She plans to do everything she can to foster PHA’s research, education, and outreach programs. When not on the Vineyard, Sarah lives and works in London.

Iya Labunka is a film producer who has been a Vineyard summer resident since the early 1990s. Based in Los Angeles with her husband, Wes Craven, the couple has recently completed the construction of a home at Seven Gates Farm in Chilmark (coincidentally on land once owned by Polly and Julian Hill!). Iya has an active interest in the environment and a devotion to trees. Delighted to advocate for the Arboretum, she feels PHA is a community

resource that deserves wider support.

At the same time we bid farewell and extend thanks to two longstanding board members and two one-term members. William (Bill) Hambrecht joined the PHA board in 2009. A longtime admirer and friend of Polly Hill before we became a public institution, Bill and his wife, Sally, have a beautiful garden on Lake Tashmoo in Vineyard Haven filled with dozens of plants from the Arboretum. Bill also found time with his daughter, Amy, to volunteer on our grounds crew.

Peter Norris joined the board in 2003 and his influence made a lasting impact. Peter served as treasurer for many years and as co-chair of our 2007 capital campaign. Together with his wife, Amy Rugel, he established an endowment in support of our youth education program. A passionate plantsman with a special interest in rhododendrons and hydrangeas, Peter has shared many plants with us. His spectacular garden has been a site for Arboretum events.

Dr. Frank Rees Smith joined our board in 2006, co-chaired our 2007 capital campaign, and brought a passion for plants and an appreciation for the land that he eloquently shared as a docent tour guide. Frank worked with Tim collecting native seed and encouraged the establishment of MV Wildtype, our native plant production program. Three beach plums now prospering in the North Field were grown from seed collected by Frank.

Finally, Kimbrough Towles joined the board in 2009. A West Chop summer resident, Kimbrough served on the finance committee during a tumultuous economic time period, guiding us with facility and



Prentice Bowsher



Sarah Griffin



Iya Labunka

expertise. While we regret seeing our friends step down from active service on the PHA Board, we look forward to seeing these wonderful people at the Arboretum in the future.

Staff News

This spring Curator Tom Clark visited several public and private arboreta in Belgium preceding PHA’s Belgian garden tour where he met with curatorial and horticultural staff.

Senior Horticulturist/Arborist Steve Masterson attended the annual conference of the International Society of Arboriculture (ISA) in Portland, Oregon, in

August. Lectures, workshops, and tours provided Steve, an ISA-certified arborist, with a valuable experience.

Executive Director Tim Boland lectured on behalf of PHA both locally and nationally this season. In September he presented “The American Stewartias: Ecology, Cultivation, and Conservation” at the Clyburn Arboretum in Baltimore,

Maryland. In October he presented a program sponsored by the Chatham Conservation Commission on native pollinators in Chatham, Massachusetts. Also in October, Tim attended the triennial meeting of the International Oak Society in Bordeaux, France. The three-day meeting brought together oak experts from 18 different countries.

The Whirlwind Internship of Jaime Morin

by Tom Clark

Jaime Morin, our fourth collections management intern, left the Island shortly after Hurricane Sandy blew through. Unlike the storm's minor impact, however, Jaime's contact with the Arboretum was major. Here at PHA, Jaime will be remembered long after Sandy has been all but forgotten.

After graduating Clemson University with a degree in environmental horticulture, Jaime arrived at the Arboretum full force, ready to tackle anything. In those first chilly days of March, we were just beginning the Play Pen reconstruction project; with her ever-present smile, Jaime joined the "all hands on deck" demolition. It was there in Polly's Play Pen where she noticed a plant that triggered memories and stirred a passion. (*See page 10.*)

At PHA each collections management intern's personal interests combine with the needs of the Arboretum to yield a unique arrangement. When the intern's interests and desires mesh with the Arboretum objectives, the result is a valuable experience on both sides of the equation. In Jaime's case, this mutual arrangement was fully achieved!

A cornerstone of the collections management internship is the systematic curation of an Arboretum area. For Jaime it was the West Field. Over several months Jaime and Curator Tom Clark assessed all 461 plants in this large and diverse block to produce an accurate inventory. Together they updated notes on the condition of each plant and devised a "road map" for

the development of the West Field. This one-on-one time gave Jaime practical experience with curation—an essential part of managing a living collection. Tom says, "Jaime quickly grasped the purpose of the project. She had valuable insight and contributed greatly to a major project."

In addition to the curation of the West Field, Jaime's whirlwind of contributions was breathtaking. She created new signs for our plant sale area. She developed a watering plan for several hundred new plants scattered over 20 acres. She provided enthusiastic assistance to Youth Education Coordinator Betsy Dripps teaching Island schoolchildren. She even rediscovered a highflying passion: tree climbing. Along with Horticulturist Ian Jochems she climbed and pruned the large tulip-tree near the Cow Barn. Beyond PHA she somehow found time to volunteer at The FARM Institute, and if that's not enough excitement, she managed to slip off island returning with an engagement ring on her finger!

So what's next for this talented, energetic, and organized young woman? That question was answered well before her internship ended. In August she learned of an exciting job opportunity at the prestigious New York Botanical Garden. We were all thrilled (but not surprised!) when she was offered the job of assistant curator. We wish her well in her new life, horticultural and otherwise, in New York City.

Meet Our New Curator, Tom Clark

Former Collections & Grounds Manager Tom Clark is now Curator Tom Clark. This past summer, in consultation with the PHA Board of Directors, Tom received a well-deserved promotion. The new job title, Curator, reflects the true nature of Tom's work responsibilities. The Curator manages the care and development of our plant collections in accordance with our master plan as well as the overall maintenance of the Arboretum landscape. In addition the Curator oversees the Littlefield plant production facility—all while supervising three staff members and our student interns.

There is no one better for the position. Since his arrival in 2006, Tom has made a significant positive impact at PHA. In addition to many improvements to our landscape and plant collections, Tom has improved our plant records, leading to more abundant and accurate display labels. Recognized among his peers as an accomplished plantsman, Tom extends his professional activities well beyond PHA. He is the Northeast regional organizer for the North American Plant Collections Consortium (NAPCC). In addition, he has participated in several plant collection expeditions. We are grateful for Tom's dedication and are pleased to announce: Our new Curator is on the job!

Arboretum Wish List

Seed Cleaning Sieves \$55 each

Five stainless steel sieves of varying mesh sizes for efficient seed cleaning.

Portable Digital Microscope \$300

Powerful, compact, mobile microscope (ViTiny

Pro10 Plus) for field and classroom use to assist with plant identification.

Image Preservation \$100 per 300 slides

Funds to support digitizing Polly's historic slide collection. We have over 1,000 slides. \$100 pays for 300 slides.

If you would like to contribute to the purchase of this equipment or fund image preservation, please call Barbara or Tim at 508-693-9426. We extend our sincere thanks to those of you who have generously responded to our previous requests.

Report on Hurricane Sandy

We are thankful that PHA was only minimally impacted by the powerful storm that was Hurricane Sandy. Preparation ahead of the storm, proactive care of the living collection, and the fact that Martha's Vineyard was spared the brunt of the storm all helped to minimize damage to the Arboretum. Our sincere concern goes out to all those more seriously impacted and suffering in the aftermath of Hurricane Sandy.

Intern Experiences Exceed Expectations

This summer's interns found their PHA internship experience exceeded their expectations. Julie Jones and Keelan Weiss, our Feldman horticultural interns, appreciated the variety of work and educational opportunities. Erin McKeon, our development and marketing intern, felt her summer work in public garden outreach provided a valuable experience.

Julie, a plant sciences and landscape design student at the University of Tennessee, returned for her senior year

with an appreciation for smaller natural landscapes. She feels her experiences at PHA, and on Martha's Vineyard, created an interest in working with more intimate spaces, rather than large commercial properties.

Keelan, a graduate of SUNY Cobleskill with a degree in plant science, enjoyed working closely with the collection where she could see the results of her work. Keelan also felt working at a public garden gave her a greater sense of purpose. She



Keelan Weiss and Julie Jones, Feldman horticultural interns, with Sam Feldman, internship sponsor



Erin McKeon, development and marketing intern

is staying on the Island for the winter and watching for job opportunities in the public garden field.

A master's candidate at Cornell University in public garden leadership, Erin enjoyed assisting in the development and outreach activities at PHA. She feels her internship was very beneficial for her continuing education. She notes, "Working alongside Karin on promoting and coordinating the many educational programs and development events gave me perspective of how outreach is essential to gaining community support."

All three interns expressed how they instantly felt at home at PHA and welcomed into the "family," and what a difference that made. We echo their feelings. They all exceeded our expectations and were a wonderful addition to our team. We wish them well.

New Beginnings for Past Interns by Tom Clark

PHA's internship program is a growing, healthy, and remarkable feature of the Arboretum landscape. Keeping up with the many previous interns is an enjoyable challenge. Watching them travel down divergent paths as they pursue careers in the world of plants is inspiring, especially knowing PHA played an important part in shaping their careers. Below is an update on some of their adventures.

Cat Meholic (2009) spent last January in Brazil studying the gardens of renowned landscape designer Roberto Burle Marx, and is now back at the University of Delaware completing her landscape horticulture degree. She also works part-time at Mt. Cuba Center as their plant records assistant. On occasion Cat crosses paths with Islander Matt Lobdell (2005, 2008) who is pursuing a master's degree in plant and soil science at the University of Delaware. Aside from his studies Matt is a teaching assistant for a native woody plant class and doing curatorial work at the University's botanic garden.

This fall Paul Cady (2003, 2004) began a master's program in landscape architecture at the University of Georgia where he'll pursue his interest in historic garden preservation.

About a year ago James Gagliardi (2005) took the next step in his career when he was named the lead horticulturist for the National Museum of Natural History for Smithsonian Gardens in Washington, DC. In his new job he

manages the horticultural program for the three city blocks surrounding the museum. He enjoyed reminiscing with Sarah Dickert (2011) when she interned for the Smithsonian Gardens in 2011 following her internship at PHA. Recently joining James in the DC area is Keely McDonald (2010) who graduated from Colorado State University this May and moved to Arlington, Virginia, to work as a horticulturist for Landscape Management Group, Inc.

Kristin Shust (2009) has become a "plant cop." Last fall she took a job with Royalty Administration International. In her position as field representative, she will protect plant breeders' rights and ensure that growers are honoring plant patent laws. Alyssa Janilla (2008, 2011) has been working at the Como Park Zoo and Conservatory in St. Paul, Minnesota. She works outside in the Edible Garden as a horticulture educator. In her words, "I serve as a link between visitors, volunteers, education staff, and horticulture staff, while teaching people about plants! I love it!"

Our MV Vision Fund fellow Christine Brissette (2006) worked on collecting

seed of Island native plants in support of the MV Wildtype program while at PHA. She's now working for Watershed Consulting where she designs and implements stream restoration projects throughout Montana. She's also the manager of their native plant nursery that grows riparian trees and shrubs for restoration work.

To discover more about our internship program, watch Marnie Stanton's video, "One Seed at a Time." The link can be found at pollyhillarboretum.org/education/. During the summer of 2011 Marnie was a regular at PHA, shooting footage and interviewing interns, staff, board members, and, of course, Sam Feldman, whose family has been the PHA summer internship program's sole sponsor since its beginning in 1998.

This year's interns Jaime, Keelan, Julie, and Erin bring our intern total to 33. Like the 29 interns that came before, they struck down roots here in the nourishing environment of PHA and are now branching off. We look forward to reporting their adventures and accomplishments in the years to come.

Stay PHA Current

It's easy to keep up-to-date on PHA activities throughout the year. We send out periodic email updates in addition to this newsletter. If you are interested, join our email list from the home page on our website. You can also renew your membership online and save us postage costs. You'll find our annual "Year in Review" is available on our website. Look for it on the About Us page at www.pollyhillarboretum.org. Follow us on Facebook for photos, updates, and reminders of special events!

Arboretum Consulting Projects

One part of the mission of PHA is sharing knowledge of plants and scientific procedure. It is our goal to become a valued source for horticulture and plant science information on Martha's Vineyard through cooperation, community outreach, and expertise sharing.

Two recent projects illustrate the value of our organization as a resource for plant information and landscape development recommendations. PHA contributed to the recently adopted Developments of Regional Impact (DRI) policy on Site Design and Landscape. Executive Director Tim Boland has been consulting with the Martha's Vineyard Commission on an approved list of plants to be used with projects designated as DRI. In addition the Arboretum was asked to develop a list of approved plants for landscaping in sensitive habitat areas.

This list, based on our collections research and compiled in part by summer intern Erin McKeon, will eventually be available on-line.

PHA is also bringing its expertise to a town of West Tisbury public landscape through consulting on the design of a landscape plan for the West Tisbury Public Library expansion. The project includes an environmentally friendly parking lot. The parking lot resides within the Mill Pond and Tisbury Great Pond watershed, therefore has a significant environmental impact. The goal of the planting is to reduce petroleum hydrocarbons (gas, diesel, and motor oil) through the use of pervious pavers and rain gardens. Tim, Curator Tom Clark, and *Meristems* Editor Laura Coit will assist the project architects with the final planting design.

House Renovation Uncovers Layers of History

This fall as Tucker Hubbell and his crew began to reshingle the Littlefield House (owned by PHA since 2002 and now housing our Curator) they uncovered some unexpected layers of history—old, very old, newspapers that had been tacked on to the walls for insulation. They found illustrated journals from the Civil War years along with many papers dating to 1909. The oldest was a *Vineyard Gazette* dated 1848. Our interest roused, we decided to find out more about this historic house under our care.

According to the West Tisbury historic commission, the house dates to 1844 and was originally known as the Samuel Washington Adams house. In 1882 the house was purchased by business partners Albert Littlefield and Bartlett Smith. Between 1870 and 1888 they purchased over 450 acres in West Tisbury, including the property now owned by the Arboretum. Their first purchase included the Barnard Luce house (now called the Homestead) where they lived together until 1878 when joined by Smith's sister, Henrietta, after she and Albert were married. In 1882 after the birth of Albert and Henrietta's first child, Effie, Bartlett moved next door to the Adams house, then called the "little house" by the family.

Albert and Henrietta had two more children: Forrest and Mindwell. In 1909 upon Forrest's engagement to Marie Ames, the "little house" and 25 acres were given to Forrest. Surely it must have been Forrest, a finishing carpenter by trade, who used the

old newspapers to line the walls before reshingling. Our clue: the majority of the newspapers date to 1909, the year Forrest acquired the house.

In 1926 Forrest and his sisters sold 40 acres of land to Polly Hill's mother, Margaret Butcher. Forrest then became a handyman, caretaker, and "summer grandfather" to the Butcher grandchildren. Polly's daughter Louisa recalls, "Mr. Littlefield was a sweet, patient man. He had a swing hung from a high limb. When I visited he would push me on that swing. It went very high—an exciting event from my childhood." Forrest and Marie had one child, Albert, who was born in the house in 1911. In 1963 (Forrest died in 1959.) Marie sold the property to Albert and his wife, Peggy (Margaret Kahler).

In 1967 after 26 years off-island, Albert and Peggy returned to live in the house year-round. They planted a large garden guarded by Peggy's scarecrows named Dapper Dan and Sally. They continued to be the good neighbors Albert's parents had been to the Hill family. During their retirement Albert served on the West Tisbury finance committee and Peggy was a member of the West Tisbury conservation commission, overseeing the acquisition of 380 acres of conservation land now known as the Margaret K. Littlefield Greenlands. In 1980 they built their dream house across State Road on a parcel of the original family land. The "little house" remained in the Littlefield family until 2002 when the Arboretum acquired it along with ten acres of land.

We continue to identify the property with the Littlefield name. This honors the family as the historic owners of the land and reminds us that the Arboretum property has a long history. By keeping this history alive and building on the past, our landscape continues to capture some of the essence of the "old Vineyard." We give special thanks to Lia Kahler Littlefield for her support and for sharing her family history. Last year Lia raised over \$12,500 for the Littlefield maintenance fund through her benefit concert, "Songs for my Father."



Group tour at the garden at Hemelrijk

Garden Tours

The Arboretum's garden tours were very successful this year. Last May an arboretum-sponsored group traveled to Europe for a five-day tour of Belgian gardens including the garden at Hemelrijk (above). In July we hosted a tour of four private Island gardens and in September a group traveled to the neighboring island of Nantucket to tour the landscape. These tours are an enjoyable way to connect with our members while sharing our love of plants and horticulture. Join us! Watch for more PHA-hosted tours in the future.



Little Explorers

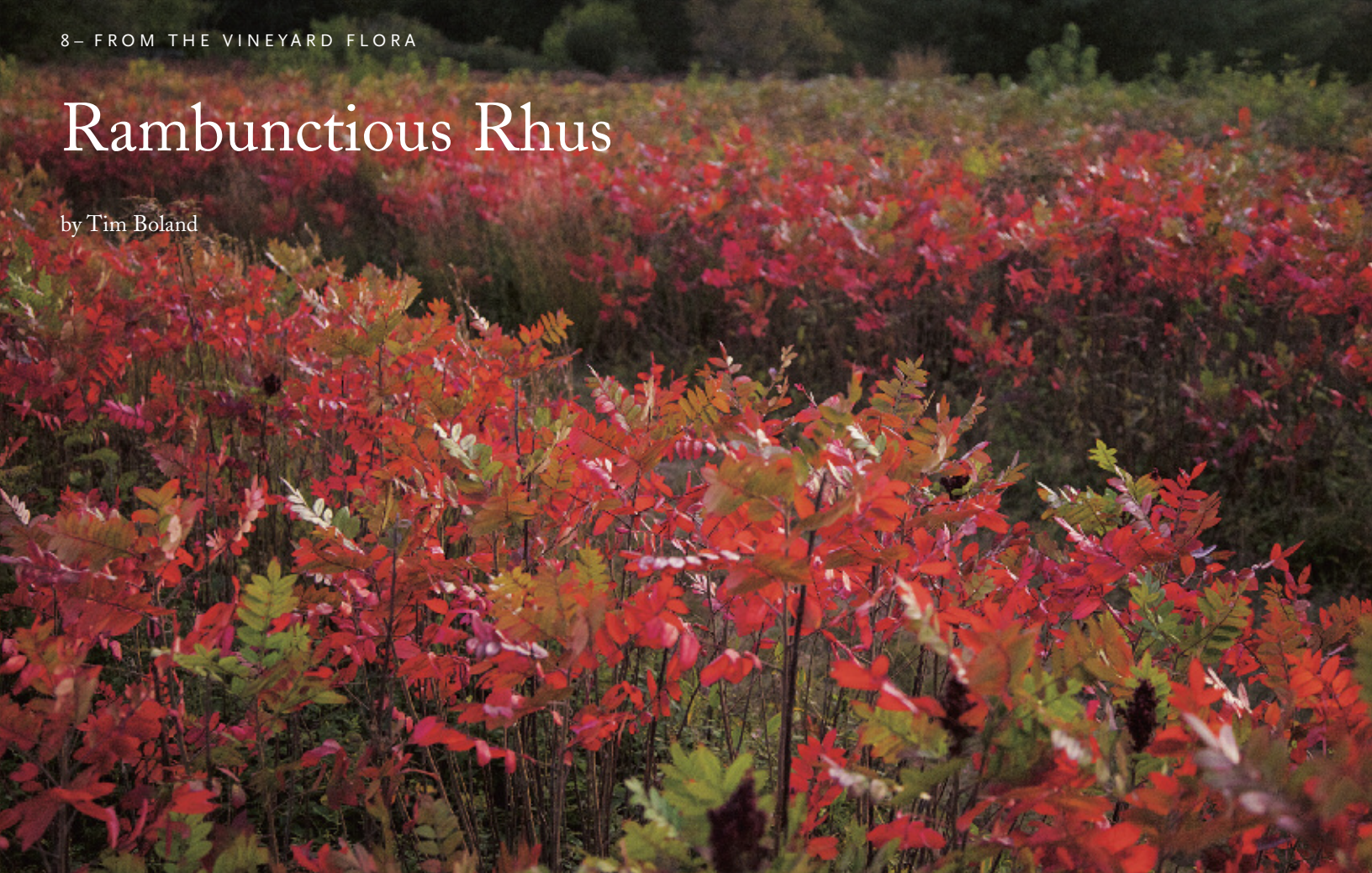
This summer we added a junior explorer pack to our popular family explorer backpacks. These portable kits contain all the tools necessary to explore the natural world on the PHA grounds. They were an immediate success with both local families and first-time visitors.



Henrietta Smith Littlefield with her children (c. 1912) at Homestead. Effie on left, Edson Forrest in back, Mindwell on right

Rambunctious Rhus

by Tim Boland



A path through shining sumac in the PHA North Field

Photo: Patrick Cullina

When you mention sumac (*Rhus* spp.) to most people you get an either/or response. They either hate it, poison sumac comes to mind, or they shrug and have little to say. Unabashed appreciation is unusual. It's not either/or for me. I actually admire members of this misunderstood and often maligned group.



Fruits of shining sumac attract wildlife.

Martha's Vineyard is home to a trio of native sumacs. My favorite is staghorn sumac (*Rhus typhina*). Found locally on sandy soils, this gawky shrub has bare, twisted lower branches topped with a flat spray of pinnately compound leaves. Supporting the foliage are stout stems covered with a velvet of dense brown hairs. The common name is a metaphor: the stems resemble the horns of a stag. In autumn the foliage creates a vibrant display of color, ranging from yellow to orange to scarlet. Two stunning cultivars—'Dissecta' and 'Laciniata'—possess lacy, fernlike foliage. Staghorn sumac grows over 15 feet tall and spreads to twice that size. It is notorious for suckering from the roots to create a large colony.

The smooth sumac (*Rhus glabra*) grows to a similar size and exhibits the same aggressive growth habit. In contrast, however, the smooth, hairless stems are covered with a light purple, waxy bloom. At a roadside meadow near my home in West Tisbury, smooth sumac engulfs a street sign each year with its rambunctious growth.

Although mowed to the ground in the fall, the plant rebounds each spring putting on 6 to 8 feet of growth by the end of the season. A hybrid between staghorn and smooth sumac named *Rhus* × *pulvinata* has been found on the Island. The defining characteristics are intermediate between the two parent species.



Stems of smooth sumac exhibit a waxy bloom.



Staghorn sumac used effectively on a steep slope.

The most common sumac on Martha's Vineyard is the winged or shining sumac (*Rhus copallinum* var. *latifolium*). The leaves of shining sumac are distinctive for their lustrous shine and for the winged structure (rachis) between the leaflets. The foliage in the summer months is attractive and its glowing crimson fall color creates a magnificent tapestry in our fields mixing with goldenrods, asters, and little bluestem.

While the portrait is stunning, there are issues. Shining sumac is a pioneer shrub beginning a chain of succession that eventually takes field to forest. At PHA we are committed to keeping our fields open; as a result controlling sumac is critical. Over the past several years the Arboretum has attempted to control the spread of this attractive yet aggressive native through mowing and prescribed burning. We are still battling.

Sumacs dazzle with fall color. However, they rarely stay put, running rampant in the cultivated garden, extending their territory by underground stems. Arboretum visitors are stunned by the autumn display, but hesitant to invite it home, for good reason! With all species of North American sumacs, the capacity to spread aggressively by underground stems stymies most attempts to control it. About the only conditions where sumacs will not thrive is in wet soils or dense shade.

With all this challenging sumac behavior, do they have a place in our gardens? Yes! With careful placement and appropriate care, you can manage sumac by cutting it back to control its spread. It's

all about siting. At woodland's edge, in an informal natural area, dry rocky site, or on an embankment or steep slope, sumac has a valuable function. In fact, it may be the perfect choice! The colonizing nature of this group also provides cover for wildlife.

All members of the genus *Rhus* are dioecious—male and female flowers appear on separate plants. The greenish yellow flowers are borne on panicles in July and August. Our recent native plant pollinator study found an abundance of local insects visit the flowers, which are followed by attractive red fruits. The fruits (a single-seeded drupe) persist over winter. Wild turkeys feed on the fruit along with numerous songbirds.

The genus *Rhus* belongs to the cashew family (Anacardiaceae). This large family is primarily tropical or subtropical in distribution with a few genera, like *Rhus*, extending into colder temperate zones. The family has several valuable economic plants including cashews, pistachios, and mangos. Some family members have resin canals that produce a noxious, irritating sap. This feature may cause severe



Poison sumac is found in Vineyard swamps.

dermatological reactions. The most notorious example is poison ivy (*Toxicodendron radicans*), followed by poison sumac (*T. vernix*), both native to the Island.

I hope that after presenting the upside of sumac, you might consider planting one in your landscape, if you have the right situation. Maligned, ignored, or admired, sumacs are just being sumacs, doing what they do best. You don't even have to meet them halfway, believe me, they will come to you!



Mid-summer flowers of shining sumac

Short Plant, Long Story

Shortia galacifolia

by Jaime E. Morin



Flowers of Oconee bells rise above the foliage on rosy-red stalks.

I adore Clemson University and the South. Most people at the Arboretum already know about my obsession. It was a long trip—over 1,000 miles and a ferry ride—from my beloved alma mater in South Carolina to the Polly Hill Arboretum on Martha's Vineyard. What a surprise when on my first day at PHA I spotted a plant that brought me back to Carolina in a heartbeat!

In Polly's Play Pen grows a colony of a sweet, little plant with beautiful white flowers and glossy leaves called Oconee bells (*Shortia galacifolia*). We learned about shortia, a southern Appalachian native, in my horticulture classes because of its significance to the county where Clemson nestles in the mountains. After my discovery at PHA, I took a keener interest in

this petite, evergreen groundcover. I'm not the first! For centuries this elusive beauty has enticed botanists, plant collectors, and propagators.

A low-growing, spreading, sub-shrubby perennial, Oconee bells naturally prefers moist stream banks and slopes in the deep shade abundant in the Carolina mountains. It has dark green, glossy, basal leaves with wavy teeth. Staying about 6 inches tall, shortia runs by stolons and can spread up to 30 feet in well-established patches. The white (occasionally pink-tinged) bell-shaped flowers are about an inch long, appearing singly on 4- to 5-inch stems.

One interesting facet of the shortia story is its history. The plant was first collected—but not identified—in 1788 by French botanist Andre Michaux in the

“high mountains of Carolina.” He added it to his herbarium collection. Over 50 years later in 1839, Harvard botanist Asa Gray noticed the pressed specimen in a cabinet of unidentified plants while studying Michaux's collection in France. He became transfixed! For decades Gray searched the Carolina mountains for the mysterious plant, to no avail. Finally in 1877 the plant was rediscovered in North Carolina by the 17-year-old son of a local herbalist. Gray and a few fellow botanists traveled to the site, found the plant, and celebrated its rediscovery.

Though shortia had been rediscovered in the wild, fellow Harvard plantsman Charles Sprague Sargent was skeptical that it was Michaux's original site. The search continued. In 1886 Sargent organized another plant hunting expedition, this time following Michaux's exact field notes. Their search led them to the headwaters of the Keowee River in South Carolina where they discovered another colony. Unfortunately, the site has since been flooded to form the Duke Power Company's Lake Jocassee destroying roughly 60 percent of the original wild habitat and population.

Another factor that makes Oconee bells unique is its rarity both in nature and in cultivation. Endemic to a small part of the southern Appalachian Mountains, it is native in only six counties across North Carolina, South Carolina, and Georgia. It is listed as endangered in both North Carolina and Georgia. Polly received the plant in the Play Pen as a gift in 1980 from a colleague in Macon County, North Carolina. Because of its rarity, shortia isn't commonly cultivated, but I think that this plucky little plant deserves renewed attention.

S. galacifolia is easily propagated by clump division, but propagators have had difficulty with seed propagation. Seed freshness is thought to be an important factor in successful germination. I experimented with seed freshly collected from the Play Pen planting. I tried three different soil media, sowing two pots of each, to see if media might be a factor in germination success. All six pots had equally successful



Shortia's charming flowers set off against evergreen foliage

Barbara Caseau

When Barbara Caseau says “teachers and scientists don’t work for the money, but for the fulfillment it brings them” she is speaking from experience. A middle and high school teacher for over 45 years, educating students in biology and environmental science is her passion. The Polly Hill Arboretum offers the perfect outlet for her interest and enthusiasm: leading field trips for school groups in our living outdoor laboratory.

After retirement, Barbara moved to the Vineyard to be closer to her family, especially the grandkids. She learned about PHA’s school programs from her daughter-in-law, an assistant at the West Tisbury School. After training with Youth Education Coordinator Betsy Dripps, she jumped right in, assisting with field trips several times a week. Betsy loves her enthusiasm noting, “Barb is a cheerful, knowledgeable, and dedicated guide who enjoys sharing her love of nature with our Island schoolchildren.”

Barbara says it is great to see children excited about the outdoors, nature, and plants; something she feels is missing in our electronically connected world. She loves being outside with the kids and claims she learns more from the students than she gives. A very active volunteer, Barb continues to take



Volunteer Barbara Caseau

on more. Beginning as a school guide in 2007, this summer she added adult tours and the Visitor Center to her Arboretum activities. She enjoys meeting visitors and helping them plan their visit.

Barbara visits the Arboretum often, not just for “official” volunteer work. She loves spending time in Polly’s Play Pen, sitting on the bench, reading, or just simply sitting. “It is a meditative place, my favorite ‘alone’ spot,” she says. When Barb is with school groups her favorite trees are the dawn redwood, the monkey puzzle tree, and the Julian Hill magnolia.

Barb says the best part of PHA is the friendly and positive people—the visitors who come into the Visitor Center, the children, the grounds volunteers, and the staff. Barbara is delighted to be involved at Polly Hill, as we are delighted to have such an active, cheerful volunteer. To learn more about becoming a PHA volunteer, contact Volunteer Coordinator Nancy Weaver at 508-693-9426.

germination! Once germinated, seedlings in one pot of the three different media were regularly fertilized with a dilute, organic liquid fertilizer; the other three pots received none. The unfertilized seedlings growing in pure milled sphagnum moss were by far the most vigorous. Regardless of the experiment’s outcome, I was pleased to produce genetically diverse plants that may someday be planted on the grounds.

There is another hidden treasure in the Play Pen, an even rarer shortia: *Shortia soldanelloides* var. *magna*. Polly received a potted plant of this Asian species in 1983 from Hal Bruce at Winterthur Gardens in Delaware. This highly variable variety can be found growing in low altitude woodlands as well as high altitude open areas throughout central and northwestern Japan. The white to light pink flowers are clustered in short racemes.

If this information has piqued your interest, you may want to chart an expedition to discover Oconee bells. Plan your own (inevitably easier!) trek to the western end of Polly’s Play Pen and find them tucked among other horticultural treasures in block 28 and 29. Our plants are particularly happy there, shaded by a large rhododendron and luxuriating in plenty of moisture from the dripline irrigation. How lucky we are to have a rich piece of botanical history right at our fingertips!

Sheets of Oconee bells carpet a South Carolina streambank.

Photo: Rick Lewandowski



THE POLLY HILL ARBORETUM

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ADMINISTRATIVE OFFICES

The Homestead
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West Tisbury, MA 02575

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

TOURS

Memorial Day weekend through
Columbus Day: 2 pm daily

ADMISSION

\$5 suggested donation
Free to members and children under 12

FREE PARKING

DRIVING DIRECTIONS

See www.pollyhillarboretum.org



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Oak Cabling



1940



2012

A massive black oak (*Quercus velutina*) towers above the picturesque lichen-clad fireplace near the Far Barn. This majestic old tree frames the vista along the main path from the Visitor

Center to the south end of the El Field. When staff discovered a serious structural defect, PHA invested in its health and structural integrity. The canopy was extensively pruned and

cabled, and the soil around the tree was improved. Having weathered everything Vineyard weather could throw at it, including recent superstorm Sandy, we expect the special attention

will ensure this native beauty continues to grow well into its second century of life.