Meristems

The Polly Hill Arboretum
West Tisbury, Massachusetts

Vol. 25, No. 2, Fall 2023

Three-flower maple (*Acer triflorum*) displays fall color west of the Dogwood Allee.

Staff Housing Completed: A Grand Accomplishment

The Arboretum and Island community celebrated in June the establishment of two new staff houses, a longtime dream and aspiration for our organization that has struggled the past several years to meet this critical housing need.

A certificate of occupancy was granted for the first house in late May, just in time for a new staff member to move in. A second house was completed in mid-September.

Project manager and carpenter Tucker Hubbell coordinated construction. He managed a busy schedule of subcontractors, all with little disruption to our summer visitors and programs.

Local Community

"It's a remarkable achievement and something to be very proud of," says Tim Boland, PHA's Executive Director. "More than 25 local companies were employed with the project, and the results are homes that almost appear as if they grew organically out of the ground."

Joining Tucker were lead carpenters Chris Hardy and Bob Murray. Tucker's daughter Kate Hubbell and her partner Dan Reiff also worked on the project. The homes were skillfully designed by Peter Rodegast, resulting in buildings that match the current Arboretum and Island vernacular.

Sustainable Project

In addition to the beautiful design aesthetic, PHA added several features to lower the environmental impact of the houses. A denitrification septic system was installed that drastically reduces the harmful effects of nitrogen in the Millbrook Watershed that flows into the Tisbury Great Pond. Solar panels on both houses provide 100% of the electrical power.

The best part of the project was the dedicated involvement of so many supporters who helped see this project through including board, staff, volunteers, and members. Every size gift helped this project get completed and enabled us to achieve the campaign goal of $700,000.

However, even though we reached our initial goal—for those who are inspired to give again or for the very first time, your gift will be put toward the care of these new homes for many years to come. To give to the fund, visit *bit.ly/DonateToStaffHousing.*

***Meristems* — A Benefit of Annual PHA Membership**

We extend this issue to everyone who has supported the Arboretum through membership or donation since 2021. Memberships can be renewed at *bit.ly/PHAMembershipRenewal,* with QR code, or by calling us at 508-693-9426. We appreciate your support!

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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.

Meristems

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Left to right: Back row: **Tim Boland, Jenna Zier, and Tucker Hubbell;** ***middle row:*** **Carol Swiech, Nancy Rogers, Abbie Lively, and Dylan Dubay;** ***front row:*** **Ian Jochems, Erin Hepfner, Brittany Clark, and Emily Ellingson.**
Not pictured: **Margo Urbany-Joyce and Lysbeth Abrams.**

PHA—Our Summer of Love

In 1998, Polly Hill's dream of an Island arboretum came true through a legacy of growing plants from seed and the generosity of admiring friends and supporters. Reflecting on a quarter century of growth, we had many celebratory moments this summer.

Nearly three hundred people, including families with children, gathered in early August for a free community event. Tours of the collections and a continuing slide show in the Far Barn delighted attendees, who learned how PHA has grown in programming, infrastructure, and impact locally and beyond our shores. Music, food trucks, and a specially brewed local pilsner from Offshore Ale were part of the beautiful summer day.

It was extraordinary to see so many Island people at the event, where many long-time volunteers and members shared their stories and the joy of watching us grow.

All Hands on Deck

We welcomed new interns and staff who arrived in May and June and adapted quickly to the busy pace of summer. They welcomed visitors, speakers and guests, worked on family programming, plant sales and grounds maintenance. They spent considerable time on the site preparation for the construction of two new staff houses north of the Visitor Center parking lot.

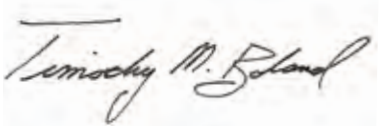
The construction reminded me of the early days of the Arboretum when we had multiple building projects and new staff joining the PHA. I want to thank old and new staff this past season for adjusting well during a period of significant change.

Seed Hunting Expeditions

In this issue, you will read about the summer's activities, including our efforts to travel to collect seeds in Alabama, Mississippi, and California. The focus of these trips was endangered trees in areas of rapid change due to forest fires or weather extremes caused by a changing climate.

Locally, experts from afar traveled to scout the Island and found a critically endangered orchid and a rare, endemic (found only on Martha's Vineyard) hawthorn tree.

We hope you take time this winter to visit our grounds and enjoy the season's beauty.



25th Anniversary Celebration a Success

Although the official anniversary is June 28, a high-season celebration took place on the beautiful Saturday afternoon of August 5, 2023.

Arboretum staff, board directors, volunteers, members, and guests enjoyed food trucks, live music, tours, and lawn games. It was a humble and very Vineyard celebration of Arboretum accomplishments and friendships. It was a time to reflect and to look forward with a positive outlook on the next twenty-five years.

People shared their sentiments:

• Three generations of our family had so much fun!!! Great music, food, dancing and of course, all in the perfect setting.

• It was a pleasure to reminisce about the grand opening of '98—and all the PHA evolution since. That, plus the cool anniversary T-shirts!

• Last night's event was a gift to the island community.

Emily Ellingson (in straw hat) led a crowd favorite, the '25 Iconic Trees' tour during the anniversary celebration.

Nearly 300 guests ate, drank and were merry in celebration of PHA's 25th anniversary.

Friends of PHA enjoyed a slideshow of images looking back on 25 years. Photo: Paulo

Smart System Improves Greenhouse Technology

Greenhouse technology was updated to a new system in June. Previously, there were several independent pieces of technology controlling heating and cooling. Now all these controls are operated through one new system from Wadsworth Control Systems called Seed V2.

The Wadsworth Seed V2 system, with accompanying Sphere software, allows the Plant Propagator to sync all the greenhouse controls to work in harmony, and easily adjust controls as the seasons change. The system uses data from indoor and outdoor sensors to automatically adjust shutters, signal the roof vent to open or close, and operate the heater to turn on at an assigned set point.

The indoor sensor continually captures greenhouse temperature, relative humidity, and soil temperature. The outdoor weather station reads outdoor temperature, relative humidity, amount of light (PAR), wind speed and direction, and precipitation.

Sphere software uses smart technology of predictive weather to ensure the roof vent is closed before rain starts and allows remote access for adjusting on-site controls.

Seed V2 and Sphere can be customized to meet the unique needs of a greenhouse and have been used in many applications, from large commercial operations to small private greenhouses. The system allows for easy expansion into multiple greenhouses as the needs of an organization grows. For now, this system is used only in one of our three greenhouses, but expansion into the remaining two greenhouses is planned. PHA is grateful for the Stanley Smith Horticultural Trust grant, which supported the technology upgrade.

The Seed system stores date inputs and outputs and uses smart technology to control the greenhouse environment. A touchscreen control box (*left*) allows for monitoring and control of the Seed system.

Housing Needed for Critical Staff Member

PHA's Visitor Experience, Membership and Outreach Coordinator is in need of year-round housing, although June–September will suffice.

Please contact Margo Urbany-Joyce at 508-693-9426 or via email at housing@pollyhillarboretum.org with any leads.

Dylan Dubay Reflects on Curatorial Internship

Q. What are a few of the most interesting things you have learned over the course of your six-month curatorial internship?

A. I've learned that plant people have a whole lot of patience. PHA's dedication to growing plants from seed was one of the things that attracted me to the internship. During my internship, I have thought a lot about the process of growing plants from seed, and how to record the story of each of those seeds.

I've been able to work closely with the seeds, plants, herbarium vouchers, and records from a few of PHA's expedition collections. That has been a great experience for me to learn about the curatorial process in botanic gardens, such as the ethical acquisition of material for collections, care of plants in our living collections, and accurate documentation of data associated with these plants.

Q. What are some of your favorite memories from your time at Polly Hill, and why were they so memorable?

A. My first week was an incredible and unique experience that coincided with the visit of botanist Ron Lance, author of HAWS: A Guide to Hawthorns of the Southeastern United States. During his visit, I was able to join him and other PHA staff on a search for the Martha's Vineyard endemic species, the cleft-leaved hawthorn (*Crataegus schizophylla*).

Along the way I got to see so many other cool plants like the globally vulnerable Nantucket serviceberry (*Amelanchier nantucketensis*), and Dukes County's sole population of purple pitcher plants (*Sarracenia purpurea*).

Intern Dylan Dubay admires the cleft-leaved hawthorn (*Crataegus schizophylla*) in full bloom.

Q. How has the curatorial internship influenced your career goals?

A. This position has continued to solidify my interest in public gardens and collections management. It has helped me to think critically about the values of public gardens, and how these values reflect in their collections. I was very inspired by PHA's mission of plant conservation, science, and education, and I hope to carry over these goals with me to any institution I work for. I look forward to continuing my professional development through a curatorial position at a public garden or arboretum.

Dylan was an intern from May to November and since leaving PHA is on the hunt for a position in curation or plant records.

Arboretum Co-hosts Easy Access Guided Walk

Volunteer docent Leah Smith talks with walk participants in Polly's Play Pen in late September as part of a guided tour of the Arboretum for all levels of mobility. Sponsored by Healthy Aging MV, Martha's Vineyard Falls Prevention Coalition and TrailsMV, the tours featured accessible conservation properties on Martha's Vineyard, and raised awareness for Falls Prevention Month in September. It was a joy to collaborate on this effort and meet many people who had not yet experienced the Arboretum.

Team Searches for Bluff Oak in the Deep South

by Emily Elllingson, Curator/Assistant Director

Emily Ellingson adds scale to a large Durand oak (*Quercus durandii*). Photo: Ron Lance

A stately bluff oak stands at the U.S. Army Corps of Engineers' Blue Bluffs Recreation Area.

Emily Ellingson, M Onion, Tom Arbour, and Ron Lance stand in front of the Alabama state champion bluff oak (*Quercus austrina*).

A typical bluff oak (*Quercus austrina*) acorn dangles from a branch.

In early October, I made the trek from the Island to Birmingham, Alabama, in search of an oak. The target species was the threatened bluff oak (*Quercus austrina*).

Polly Hill Arboretum is a Global Conservation Consortium for Oak species steward of bluff oak, due to its affinity to sandy, well-drained soils that are similar to those found on the Vineyard.

In 2022, Holden Forest & Gardens in Cleveland, Ohio, received an American Public Gardens Association-U.S. Forest Service Tree Gene Conservation Grant to collect seed and herbarium specimens from populations of bluff oak across its limited southeastern range. We were asked to be a part of the first half of the expedition, a three-day trip to Alabama and Mississippi. The trip team included Tom Arbour, curator of living collections, and M Onion, plant propagation grower, from Holden Forests & Gardens, and Ron Lance, an expert in southeastern flora with a special focus on bluff oak.

Searching Along State Line

The idea was to straddle the Mississippi and Alabama state line, weaving our way south to Mobile Bay and ending in Pensacola, Florida. Ron had mined herbarium specimens for locations. We had our eye on collecting acorns for distribution to arboreta and gardens across the eastern United States, including seed orchards for the U.S. Forest Service.

Our first three sites were along the U.S. Army Corps of Engineers' Tennessee-Tombigbee Waterway, mostly at recreation areas along bluffs above the river. We were joined by colleagues from Mississippi State University, and we learned the key diagnostic features of bluff oak. These include the length of the acorn cap and the hairiness of its leaves, which distinguish it from the oft-confused *Quercus durandii*, Durand oak.

Our first stop only had a few acorns, but it was a first sighting of many of the plant species we would come across, and we encountered a curious and extremely fast black racer snake. Moving on to another site, we found a modest acorn haul as well as our first warning from a local to watch out for timber rattlesnakes.

Acorns Collected

The second day, we arrived at the most productive site of our trip and not only collected an abundance of acorns but found ourselves in the middle of a Forest Service educational event for Alabama fifth graders.

Our collections were put on hold following a flat tire, but we persisted and made our way to another Army Corps of Engineers' trail along the Black Warrior River. This is in the Black Belt of Alabama, which is a geographical region initially named for the strip of rich, fertile soil that stretched laterally across the state. Although we didn't find any acorns, the trails we walked along were some of the most interesting, containing a confluence of plants from the north and the south, as well as a family of feral pigs.

Mature Bluff Oak Spotted

Our last day of collecting, there was barely an acorn to be found, but we confirmed the location of a large, mature bluff oak near a boat landing on a bayou near Mobile Bay. And we bore witness to the Alabama state champion bluff oak at Village Point Park Preserve in the city of Daphne.

The boardwalk down to Mobile Bay from the preserve had an extraordinary assemblage of species, such as swamp tupelo (*Nyssa biflora*), sweetbay magnolia (*Magnolia virginiana*), and climbing hydrangea (*Decumaria barbara*).

Additional searches for the bluff oak at the University of West Florida uncovered six mature trees.

Collecting acorns is always a gamble, as oak trees will have mast years where they produce many, and then years where they don't produce any. Overall, we were pleased with our haul and are looking forward to propagating these oaks and getting them in the hands of other institutions.

The Hunt for the Elusive Mountain Camellia

by Tim Boland, Executive Director

Ron Lance of South Carolina and Jack Johnston of Georgia have been long-time field guides for many of my visits to wild stewartia populations.

Mountain camellia is found in scenic mountain areas upslope of rivers, such as Dicks Creek, Chattahoochee-Oconee National Forest, Georgia.

The map illustrates the natural distribution of mountain camellia in North America. (Map courtesy Flora of North America).

In June I spent a week in Northern Georgia and parts of South Carolina with field guides Jack Johnston and Ron Lance. The goal was to see the variation in flowering of *Stewartia ovata*, commonly known as the mountain camellia. The timing was perfect. Herbarium specimens were taken, and many new sites were recorded for future seed expeditions.

A small sampling of the flowers displays color variations in the filaments on various mountain camellia trees.

Some flowers were reduced in size, yet still produced in abundance.

A triploid specimen of mountain camellia, with an additional set of chromosomes, has larger flowers and leaves.

Pollinators, including bees, beetles and flies (pictured here), visit the flowers.

Flowers typically remain open for one to two days.

This unique specimen has atypical golden filaments.

The Hunt for the Threatened California Torreya

by Ian Jochems, PHA Grounds Manager and Arborist

Left to right: **Ben Stormes, Martin Nicholson, Ian Jochems and Laura Caddy at Murphy's Creek in Plumas County, California.**

In mid-September I traveled to Shasta and Trinity counties in Northern California on a collection expedition. The four-person group included Ben Stormes and Laura Caddy, curators from the University of British Columbia Botanical Gardens, Martin Nicholson, curator at the Hoyt Arboretum, who planned most of the details, and me.

In seven days, the group drove 1,200 miles and hiked more than 40 miles in search of seed. The trip was a follow-up to a 2022 expedition in roughly the same area that PHA Curator/Assistant Director Emily Ellingson participated in.

This year, the group ventured farther south to re-collect a few species of trees that were collected in 2022 but produced non-viable seed. We managed to bring home 46 collections of 44 different taxa, of which eleven taxa were repeats from the year prior and twenty-six are new to PHA's collection.

Venerable Species

One of the highlights of the trip was spending two days scouring forests and burned areas for an old data point of *Torreya californica* or California torreya, but we were unable to find any. This species of torreya is considered vulnerable by the International Union for Conservation of Nature Red List of Threatened Species.

Miraculously, while driving 45 mph on a mountain highway at the end of the first day, Ben managed to spot a small torreya tree on the side of the road. Talk about roadside botanizing at its finest. Unfortunately, this tree had only one cone, so we left it to help continue the species regeneration in that area.

Fortunately, the next day Martin spotted another much larger tree a distance from the road. As we approached the tree, we were excited to see it loaded with ripe cones. We collected 110 cones in a matter of minutes. As we ventured further through the woods around this mother tree, we started to spot more and more of them, all at different ages. It was great to know that at least in this area, California torreya are thriving.

Team found more than 100 *Torreya californica* cones during the expedition.

Arctostaphylos

Another great collection that we are very excited about are the multiple *Arctostaphylos* or manzanita shrubs we collected. The structure and texture of the different species with their amazing blueish-grey evergreen foliage paired with a smooth sometimes flaking bronzish-red bark makes them a great garden addition. The bark is very similar to the *Stewartia monodelpha* or tall stewartia.

Ben Stormes points out the one *Torreya califonica* cone he spotted off the highway.

Martin Nicholson holds *Torreya californica* cones from the large mother tree found the second day.

Whiteleaf manzanita, (*Arctostaphylos viscida*) fruit and peeling bark.

Observing External Characteristics of Historical Trees

Article and photos by Jenna Zier, Education Coordinator

The northeastern United States contains an extensive network of vast forests, wooded suburbia, and urban street trees. The trees around us hold historical and cultural significance, with some dating back to long before colonialism and the creation of our present nation.

I have always been fascinated by historical trees and their continued resiliency in modern landscapes. So fascinated in fact, that I focused my graduate studies on creating a guide for public gardens that emphasized the importance of preserving and honoring historical trees.

Historic Characteristics

A historical tree is defined as a living tree that is more than fifty years old. One major component of my research was highlighting external characteristics of old trees at public gardens.

These external characteristics are visual cues that can help a tree convey its age before ever needing to take a single measurement or sample. There are six major external characteristics of old trees that you can keep an eye out for in your own home landscapes, in your neighborhood, parks, and public gardens.

The following six characteristics correspond with the same number photo below:

1. Smooth bark: This is more apparent on species with peeling or rough bark when young.

1. Kousa dogwood (*Cornus kousa*) with smooth bark.

2. Scarlet oak (*Quercus coccinea*) with low stem taper.

3. Swamp white oak (*Quercus bicolor*) with a snake-like trunk.

Leading Conservation Group Visits PHA

by Emily Ellingson, Curator/Assistant Director

Wesley Knapp, chief botanist at the conservation non-profit NatureServe, presented the annual David Smith Memorial Lecture the second week of August. Wes' talk, "The Race Against Plant Extinction," updated attendees on current data surrounding plant extinction, and focused on the work the botanical community, as well as *ex situ* conservation organizations like arboreta and seed banks, are doing to prevent extinction events.

NatureServe is dedicated to the documentation and analysis of biodiversity data, which aids in the management of plants, animals, insects, and more. PHA often uses NatureServe data to understand the distribution and conservation status of plants, helping in the planning of targeted acquisitions and seed collection trips.

On the Hunt for Rare Orchid

NatureServe President and CEO Sean T. O'Brien visited the Island with Wes, and the two spent a full day botanizing with a PHA crew: Director Tim Boland; PHA research associates Margaret Curtin and Gregory Palermo; Massachusetts State Botanist Robert Wernerehl and his wife Ann Ramminger and me. The main attraction was to visit an Island population of one of the rarest terrestrial orchids in North America, *Malaxis bayardii*, Bayard's adder's-mouth.

NatureServe ranks Bayard's adder's-mouth as G1, a globally critically imperiled species. It is endemic to northeastern North America, meaning that it naturally grows nowhere else in the world. It is found in disturbed meadows,

Margaret Curtin, Wes Knapp, Bob Wernerehl, and Greg Palermo walk along a fire lane in the Manuel Correllus State Forest.

Sandplain grasslands and oak-pine barrens are found on Martha's Vineyard.

2. Low stem taper: There is little to no difference in trunk diameter from the base to just beneath the crown.

3. High stem sinuosity: A wavy or snake-like appearance of the trunk.

4. Crowns comprised of few, thick, twisting limbs.

5. Low crown volume: Few limbs in the crown, not branching very widely.

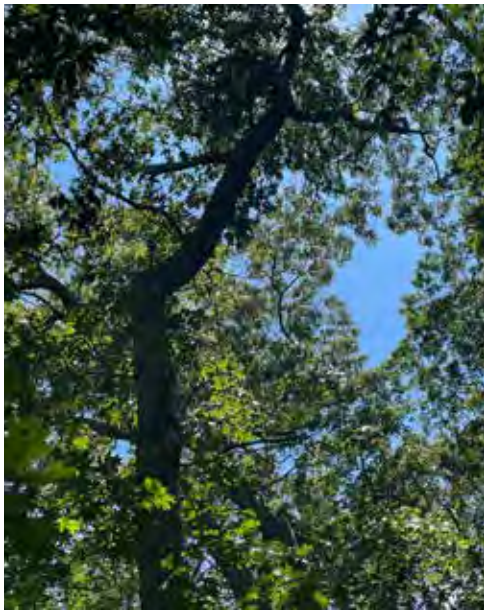
6. Low ratio of leaf area to trunk volume.

It is important to note that these characteristics are based on observations made of old trees in the eastern deciduous forest (stretching from Maine down to Florida and as far west as Texas and Minnesota). These characteristics can provide helpful hints of possible historical trees in the landscape. Every tree may not have all six characteristics; these are intended to be initial points of focus for observers.

If one of the characteristics is spotted, further assessment can be done to identify whether the tree contains any of the other five characteristics. So next time you take a stroll through the Arboretum, keep these 6 characteristics in mind and see if you can find a historical tree hiding in plain sight.

Source: *A Non-invasive Guide to Approximating the Ages of Historical Trees in the Northeastern Landscape* by Jenna Zier. Permanent Link: https://hdl.handle.net/1813/113484

4. Black oak (*Quercus velutina*) with a crown consisting of two twisting limbs.



5. White oak (*Quercus alba*) with low crown volume consisting of one thick limb.

6. Black oak (*Quercus velutina*) with few, thin branches containing leaves. More trunk area than leaf area.

open and dry woodlands, and pine barrens. In Massachusetts, this orchid is listed as both extremely rare and endangered, meaning it is in danger of extinction throughout all or a large portion of its range. Fire suppression and habitat succession—woody plants, vines, and invasive species encroaching on open woodlands—are significant threats.

Although always likely considered rare, this species now exists in only seven known populations, four of which are in Massachusetts. These orchids are inconspicuous. They are rarely taller than ten inches and have a raceme of green-yellow flowers that easily blend in with surrounding vegetation.

Bayard's adder's-mouth is likely to go unnoticed and, as referenced in Wes' talk, this may contribute to the small number of known populations. They could be as rare as we think they are, or we simply do not know where these plants exist because they are overlooked.

The crew also visited the site of another Martha's Vineyard endemic plant, the cleft-leaved hawthorn (*Crataegus schizophylla*). Hawthorns are notoriously difficult to distinguish, and Margaret and Greg continue to discover new individuals on Island, which is hopeful for their conservation.

It is a joy to learn from such enthusiastic and knowledgeable plants people and conservationists and to share information, and together work toward a common goal of conserving biodiversity for future generations.

The endemic cleft-leaved hawthorn (*Crataegus schizophylla*) has dissected leaves.

A *Malaxis bayardii* in full bloom. Photo: Margaret Curtin

***Malaxis bayardii* with developing fruit.**

Smiling at the Brier: My Defense of *Smilax*

by Dylan Dubay, Curatorial Intern

The conversation around this group of vines is a thorny subject—literally.

With the Island being a host to vines like the highly invasive, non-native Asian bittersweet (*Celastrus orbiculatus*), and the native, rash-inducing poison ivy (*Toxicodendron radicans*), it is understood why many vines get a bad rap from gardeners. Despite this, the Island's native vines play crucial roles in our ecosystems, contribute to the natural beauty of our landscapes, and deserve a bit more of our attention and respect.

Commonly Called Greenbrier

Smilax, commonly called greenbrier, is a large genus of sprawling vines with more than two hundred species worldwide. The genus is distributed mostly in the Northern Hemisphere from the temperate regions to the Subtropics and on all continents besides Antarctica.

There are three species of *Smilax* known to Martha's Vineyard: *S. rotundifolia*, *S. glauca*, and *S. herbacea*. All species share similar characteristics: They are dioecious vines with alternately arranged entire leaves, small yellow-green flowers that form in simple and compound umbels, spherical berry fruits, tendrils that are used to attach to other plants and climb, and tuberous roots which help the plants acquire water and nutrients.

Roundleaf greenbrier (*Smilax rotundifolia*) have thick, glossy, semi-deciduous leaves.

Ripe blue-black berries of the roundleaf greenbrier (*Smilax rotundifolia*) hang from a branch.

Smilax rotundifolia

The most abundant of the three is *S. rotundifolia*, often referred to round-leaf greenbrier. *S. rotundifolia* is notoriously known for being a challenge to manage in landscapes because of its climbing habit and dense thickets of prickly branches.

Despite its aggressive behavior, it is a native pioneer species that provides food and shelter for a variety of wildlife. It is found in dry to moist woodlands, sandy soils, meadows, and water edges.

Tips for ID: Bright green woody stem, grows to heights of twenty feet, glossy-green leaves, semi-deciduous in its northeast distribution, venation is parallel with three to five primary veins, flattened thorns up to one-third inch, small yellow bell-shaped flowers with curved petals, ripe fruit black-blue.

Smilax glauca

Less common than *S. rotundifolia* is *S. glauca*, or cat greenbrier. Most striking about this plant is its variegated leaves, a characteristic often appreciated and sought after by gardeners and houseplant collectors. Like *S. rotundifolia*, the prickly branches provide shelter, and its fruit is an important food source for birds and other animals.

This liana grows in a variety of environments, including dry to mesic woodlands, disturbed areas, sandy roadsides and grasslands, and can tolerate a variety of soil types. The underside of the leaves is gray-glaucous, which gives rise to the specific epithet *glauca*. *S. glauca* has short, slightly recurved thorns which are much more densely arranged along the stem than *S. rotundifolia*.

Tips for ID: Green glaucous woody stems, grows to heights of fifteen feet, leaves are narrowly cordate with parallel venation, three to five primary veins, slightly recurved small thorns, small yellow bell-shaped flowers with curved petals, ripe fruit black-blue. Semi-deciduous.

Cat greenbrier (*Smilax glauca*) grows along the forest floor.

Cat greenbrier (*Smilax glauca*) has variegation on its leaves.

Smilax herbacea

S. herbacea, known as carrion-flower, differs from the other two *Smilax* species in that it is an herbaceous annual. *Smilax* is split into two groups, *Smilax* sect. *Smilax*, which is composed of woody and prickly lianas, and *Smilax* sect. *Nemexia*, which is composed of herbaceous vines. This species belongs to the second group.

This plant grows in dry to mesic conditions, in wooded forests, meadows/grasslands, and wetland margins. Unlike many other *Smilax* species, *S. herbacea* doesn't have any thorns. It is a relatively short climbing vine, reaching heights of about 6 feet. Its leaves are similar to *S. rotundifolia*; however, they are not waxy. None of the leaves is hastate, or spear-like, but they have parallel venation with five to seven primary veins.

Tips for ID: Habit herbaceous vine, up to 6 feet, numerous tendrils from leaf axis, ovate to widely ovate leaves, small, yellow, six-petaled, unpleasant smelling flowers in ball-like umbels, ripe fruit black-blue.

The native herbaceous member of the *Smilax* genus is the carrion-flower (*Smilax herbacea*).

A carrion-flower (*Smilax herbacea*) herbarium voucher from the PHA herbarium.

THE POLLY HILL ARBORETUM

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ADMINISTRATIVE OFFICES
The Homestead
809 State Road
West Tisbury, MA 02575

VISITOR CENTER/ VISITOR ENTRANCE
795 State Road
West Tisbury, MA 02575

ACCESSIBILITY
The Visitor Center is wheelchair accessible.

VISITOR CENTER HOURS
Open 9:30 am–4 pm daily, late May through mid-October

ARBORETUM GROUNDS HOURS
Sunrise–sunset, year-round
Please note: maintenance is often performed on Wednesdays.
Check website before visiting for occasional grounds closures.

ADMISSION
$5
Free to members & children 12 and under

FREE PARKING

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

THE POLLY HILL ARBORETUM
PO Box 561
West Tisbury, MA 02575
pollyhillarboretum.org

FROM THE ARCHIVES

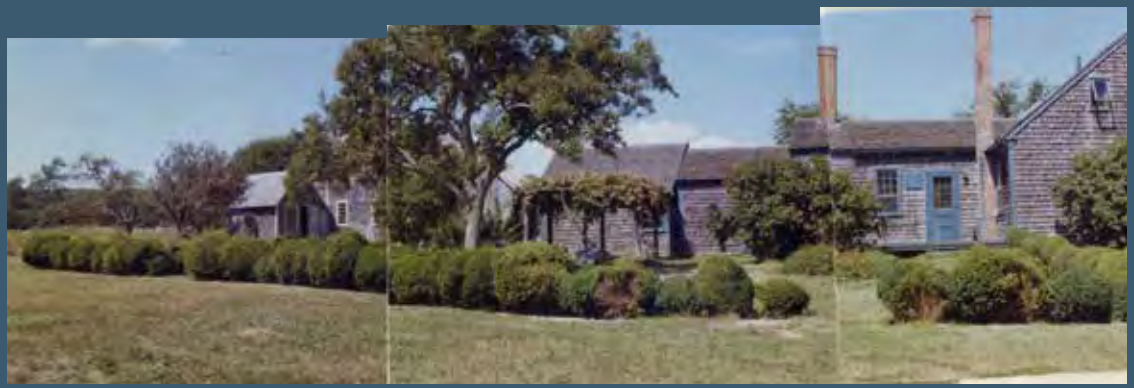
Vitis labrusca 'Concord' and Its Arbor

The grape arbor south of the Homestead has been a longstanding, albeit humble, feature of the property. Grainy images from historical Guest Books date back to the late 1930s.

The Concord grape and the arbor upon which it grows has its own modern story.

Some staff know the arbor from within the Homestead offices looking out, observing seasonal changes—the grape vine's growth, fruit and the birds that perch upon the structure. Guests walk by it with a view from afar.

The third perspective is from within, something that few experience, just as the horticulture staff did while they replaced the actual arbor. Together, they suspended the grape temporarily, replaced the rotting supports, and installed a taller, more robust arbor from black locust harvested on the grounds.



Above: **Seasonal Gardeners Abbie Lively and Lysbeth Abrams with intern Edie Banovic stand tall under the arbor, a feat only possible now due to its increased height. Not pictured from the project is Ian Jochems, PHA Grounds Manager/Arborist.**

Left: **The grape arbor below the mature pear tree in 1962, in front of the west (left) wing of the Homestead.**