Site Inventory for Sustainable Landscaping

A Fall Course at the Landscape Institute of the Arnold Arboretum

The Landscape Institute is a conduit for research and innovation to reach design students and practitioners, a role advanced by instructors like Martin Michener.

Teaching Site Inventory for Sustainable Landscaping, Marty uses a form of “site forensics” to instruct students on investigating initial conditions to make the most of landscape design projects. The class incorporates lectures and field work to introduce students to skills needed to identify and inventory existing plants, examine their abundance and growth, and evaluate existing hydrological conditions, soil composition, and surficial geology. The course also explores modern digital resources applicable to landscaping, plant identification, controlling weeds, and invasive species.

Marty’s dissatisfaction with available teaching tools for identifying plants inspired him to construct his own resource on the topic. Botany Everywhere: Woods, Fields, Home and Garden Plants of Northeastern USA, a digital e-book, features over 5,600 plant images; external links to additional botanical, management, and toxicity information; and even recipes. The book covers common native and garden plants, as well as herbs, spices, and the small herbaceous volunteers we commonly call “weeds.” In addition to teaching and developing Botany Everywhere, he has authored The Wetland Site Index Method and Enjoy Birds software. These resources illustrate Marty’s natural curiosity and technological expertise, and reflect his dual concerns for teaching sound field technique while connecting students with the environment, the horticultural community, and the larger world.

Site Inventory for Sustainable Landscaping with Marty Michener will be offered in the 2008 fall semester at the Landscape Institute, 30 Chauncey Street, Cambridge. Visit www.landscape.arboretum.harvard.edu for more information.
I was recently watching the team from Geothermal Services Inc. dig wells for our new research laboratory. Modern well digging is more akin to giant dentistry: grinding a six-inch drill head down through rock to a depth of five hundred feet or so. We are drilling eighty-eight of these wells, not for water but for the earth’s warmth in the winter and coolness in the summer. Once these wells are all piped together, they will act like a massive buried radiator taking the place of furnaces and air conditioners.

This issue of *Silva* carries a short essay written by our director of capital projects, Cynthia Jensen, describing all of the practices we are employing to construct a facility that is kinder to the environment and unusually energy efficient in the long run. Geothermal heating and cooling is likely the largest expression of our effort to promote greater sustainability.

The largest, that is, except for the laboratory itself and the program of research it will support. We know that we face a major environmental challenge from the growing concentration of greenhouse gases in the atmosphere. Two centuries of fossil fuel consumption have released a lot of carbon dioxide into the air from its former home in the earth—a home created over millions of years by the life and death of trees growing in prehistoric forests.

As we look to future solutions to this challenge of global warming, it is exceedingly likely that trees will also be a critical part of any long-term strategy for sustainable living on our planet. Yet we will need to understand the biology of trees far more deeply than we presently do. Therefore the Arboretum’s greatest contribution to sustainability for the future, I am sure, will grow out of this commitment to basic research and our expanding knowledge of forests and trees around the world.

—Robert E. Cook, Director of the Arnold Arboretum
THE WEEDS AND THE WILDERNESS

An Interview with Les Mehrhoff on the Spontaneous Flora of the Arnold Arboretum

Jon Hetman, Development Manager

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during the institution’s first half century, director Charles Sprague Sargent and his staff gradually transformed a widely spontaneous assortment of native and naturalized woody and herbaceous plants into the nation’s first public arboretum. As the Arboretum became an increasingly managed and cultivated landscape, areas dominated by spontaneous vegetation—naturally-occurring herbaceous and woody plants—began to decline. Recognizing this shift, Ernest J. Palmer, hired in 1921 to assist in administering the collections of the herbarium, began creating a survey of spontaneous flora at the Arboretum through personal observations and specimen collections. His six-year study inventoried almost 800 kinds of “volunteer” plants growing on the grounds, culminating in his publication of *The Spontaneous Flora of the Arnold Arboretum* in the *Journal of the Arnold Arboretum* (Vol. 11, 1930).

More than 75 years later, Palmer’s important and pioneering study is being revisited at the Arboretum by Dr. Leslie Mehrhoff. Les is the director of the Invasive Plant Atlas of New England (IPANE), a multi-faceted project designed to gather and disseminate comprehensive and up-to-date information on the region’s invasive plants. His research of Palmer’s lists and herbarium specimens, compared with his own collections and observations on the grounds, will increase our understanding of how spontaneous plants behave in a botanical landscape, and how their populations have changed over time.

**Q.** Your studies of the distribution and ecology of invasive plants comprise a significant contribution to the conservation of native biodiversity. How did you first become interested in invasive species, and what led you to establish IPANE?

**A.** Years ago, when I worked on the Connecticut Geological & Natural History Survey’s Natural Diversity Database, I became interested in non-native plants that appeared to be out-competing rare and imperiled species. We weren’t calling them “invasive species” then, but the Federated Garden Clubs of Connecticut included my list in their conservation book for flower shows. Later, while working as the curator of The George Safford Torrey Herbarium at the University of Connecticut, I started using herbarium records to map the spread of invasive plants. As I became more aware of the magnitude of the problem it became obvious that we needed more eyes looking for these invaders, and an atlas seemed necessary. IPANE grew out of this and my belief that science needs to be made available to the public, who can play a role in gathering creditable distribution data.

**Q.** What inspired your interest in studying plants at the Arboretum and particularly in updating Ernest Palmer’s work?

**A.** In the late 90s, I was working to gather information for what later became known as the Massachusetts Invasive Plant Advisory Group (MIPAG). One of the sources of information that I used was Palmer’s *Spontaneous Flora of the Arnold Arboretum* and its supplements. At one point, I visited the Arboretum with Peter Del Tredici, who was also on MIPAG, to see *Lonicera xylosteum*, one of the shrubby honeysuckles under consideration. In addition to examining the actual plants that Alfred Rehder had accessioned, Peter and I saw plants that were not included in Palmer’s lists. I thought it would be a great idea, and a lot of fun, to revisit Palmer’s work.
Q. Palmer’s list is organized by plant family, and includes very general indications of the observed locations for specific taxa. Are you interested at all in analyzing the locations of the plants you observe, particularly in relation to where Palmer may have observed the same plants almost 80 years ago?

A. Oh yes. Part of the fascination for me—aside from the field work and the fact that I love the idea of reconsidering something as historically significant as Palmer’s Spontaneous Flora—is that I get to see what has moved, what has stayed in the same place, what is newly arrived, and what has dropped out. Then the fun speculation as to why comes into play. It will be interesting to try to correlate these arrivals and losses to a particular species’ ecology or to specific habitats. From all this we might be able to draw some inferences to help in managing biodiversity both here at the Arboretum and elsewhere.

Q. From a botanical standpoint, are there specific plants on Palmer’s list that you’d hoped to find still growing here today? Are there notable plants he recorded that are now exceedingly rare or have disappeared entirely?

A. Finding any of the six orchids that Palmer noted would be neat. Orchids don’t seem to be doing well in many areas, so finding one is really a treat. The purple fringed orchid (Habenaria psychodes) that Palmer says was rare when he recorded it would probably be the most exciting find. I was surprised last year when I saw the Helleborine orchid (Epipactis helleborine), which is a non-native species that is new to the Arboretum. I am trying to be objective, so it’s too early in my study to tell whether things have truly declined or been lost—maybe I just haven’t botanized the right places yet. Still, I would be surprised if some things have not disappeared. “Blinked out” is the euphemistic term for this, but in my experience with native plants, these things rarely blink back on.

Q. How can the Arboretum and others in the botanical community apply the findings of your study to better understand the changing composition and ecology of New England landscapes?

A. There are many ways that studies such as this can be useful in understanding landscape changes. To a floristic botanist, studies of this nature show the dynamics of gains and losses in a local flora. Palmer’s Spontaneous Flora gives us a baseline from which to work. At the outset, we would expect there to be new species that Palmer did not find. Most of these will be non-native species, but this does not mean that all should be considered invasive. That non-native species arrive and become established is a landscape fact of life, if you will, and not inherently bad. There will also be species, again both native and non-native, that have not stood the competitive tests of time. To an ecologist looking at landscape changes, this study will show that certain species are very effective in invading and dominating existing habitats, becoming disruptive to natural plant communities. This kind of research at a place like the Arnold Arboretum can give early indications about species we need to watch or habitats that may be particularly at risk of invasion. We are establishing a new baseline for future studies of this nature.

Q. In considering the vast task of documenting invasive plants throughout New England, what priorities and questions will guide your continuing work?

A. The most important link between my work with IPANE and my study of the Arboretum’s spontaneous flora is that it helps focus my attention on species that might be below our radar. In terms of the work itself, this kind of study reminds me of the importance that herbarium specimens play as a permanent record, and helps me understand some of the nuances of plant ecology. But there is a bigger issue at play that, to me at any rate, is even more important. Many times people stop to talk with me when I am pressing specimens, wanting to know about what I am doing and why. This gives me a chance to describe my work, and when I mention “invasive species” they nod knowingly and offer their own stories about some particularly troublesome weed. A few years ago you wouldn’t encounter people as knowledgeable about biological invasions, and this shows me that the educational effort is working. That’s exciting, and some of their stories are really interesting and useful. I guess the bottom line is that ultimately it is all about protecting our natural heritage.

Take a class with Les Mehrhoff this fall and learn more about invasive plants.

Invasive Plant Ecology SAT, SEP 20; SEE PAGE 12
Routes of Invasion WED, NOV 12; SEE PAGE 15
GREEN BEYOND OUR TREES
Green Design and the Weld Hill Research and Administration Building
Cynthia Jensen, Director of Capital Projects

The Arboretum has always been "green," but with the construction of the Weld Hill Research and Administration Building we will have our first green building. Because research labs require sophisticated ventilation systems, and greenhouses need cooling to avoid becoming solar ovens, our proposed building could easily become an "energy hog" without assertive strategies for energy efficiency. Fortunately, the Weld Hill property provides plenty of space to construct a geothermal heat exchange system, which will use the relative stability of underground temperatures to assist in heating and cooling the building.

Our geothermal heat exchange is a "closed-loop" system, never before used at Harvard, and rarely used in urban, site-constrained locations. It will be comprised of 88 holes in the ground, 500 feet deep and six inches in diameter, spaced 30 feet apart. A U-shaped, plastic, two-inch diameter tube is inserted into the hole, grouted in place, and then connected horizontally with the U-tubes in the other holes. Water is circulated up and down through these tubes and then moves to the building's mechanical room. There the water passes through heat exchange pumps, where it interfaces with the water circulating in the building's heating and cooling system. The pumps transfer the heat between the water coming from the piping in the earth and the water circulating in the building. The relatively constant temperature of the water coming from the underground piping can be used to cool warmer water—or warm cooler water—depending on what is needed. Additional steps to improve energy efficiency include power-saving lights, the use of many windows and skylights to leverage natural lighting, and room occupancy sensors that will automatically extinguish lights in unoccupied spaces.

Another important priority for sustainability is water management, both outside and inside the building. Outside, a landscape of native trees and shrubs will reduce the need for irrigation beyond what is necessary for its initial establishment. Rainwater falling on the building will be directed to an underground retention system below the parking lot, where it will be retained until it can be slowly released into the ground. This system will be complemented by a pervious asphalt driveway and parking lot that will allow rainwater to percolate through the paved areas and infiltrate the ground. Both of these features will reduce the overland run-off of storm water into Bussey Brook, located below the site. Within the building we will install low-flow faucets and shower heads, dual-flush toilets, and waterless urinals.

Although the building will not directly use fossil fuels for energy, some building occupants will certainly use them commuting to work. To help reduce fuel consumption for transportation, we will continue to take advantage of University-sponsored programs that encourage the use of MBTA buses, subway, and commuter rail, all of which are available near the Arboretum. Premium parking spots will be reserved for employees who carpool, and ample bicycle parking and locker room facilities will be available for those who bike to work.
AUTUMN GRACES AT THE ARNOLD ARBORETUM
Dissecting the Phenomenon of Fall Color

Michael Dosmann, Curator of Living Collections

As summer shifts into autumn, the leaves of many of the woody plants at the Arboretum and across the temperate world take on extraordinary color displays. Ever wonder why this is so? Although scientists may still quibble over what advantages favored the evolution of changing foliage color, the mechanisms involved are relatively well understood. It all boils down to the interplay of three main factors: the initial environmental cue of lengthening nights, the presence of multiple pigments in the leaves, and the weather. The mosaic of fall colors we observe is actually the expression and/or development of four categories of pigments prior to leaves falling off the tree.

You may have learned that chlorophyll is the pigment responsible for making leaves green. More importantly, it enables the leaves to harness the sun’s energy to change carbon dioxide into nourishing carbohydrates through photosynthesis. During the growing season, new molecules of chlorophyll are synthesized to replenish those that have degraded, keeping leaves green throughout the summer. However, as autumn approaches and nights grow longer, the plant’s production of new chlorophyll begins to decline.

In addition to chlorophyll, there are also the yellow pigments carotene, xanthophyl, and other carotenoids in the leaves that are imperceptible due to the initial dominance of green pigment. It is only when chlorophyll production stops that these stable yellow pigments are unmasked. Look for striking examples of yellow fall foliage in the Arboretum’s collection of *Phellodendron amurense* (cork tree) along Meadow Road and *Betula* species (birch) at the foot of Bussey Hill.

Anthocyanin is the contributing pigment for various shades of pink, red, and purple, and is most prevalent in leaves exposed to direct and high-levels of sunlight. Thus in many trees, the leaves on the outside are a bright red while those growing in the interior or in the shade are more orange or even yellow. Look for evidence of anthocyanin in *Acer rubrum* (red maple) and *A. saccharum* (sugar maple) in the maple collection between Meadow Road and Willow Path, and *Nyssa sylvatica* (black gum) and *Sassafras albidum* on Bussey Hill Road near the lilacs.

Tannins, which you may be familiar with for the dry and tart qualities they impart to red wine and tea, are another group of compounds that influence autumn leaf coloration. Leaves with high tannin content develop golden to brown colors, as in species of *Fagus* (beech) and *Quercus* (oak) growing along Valley Road.

The interplay of several, or all, of these pigments results in the great diversity of leaf color throughout our deciduous flora. For example, combinations of carotenoids (yellow) and anthocyanin (red) produce various shades of orange; the more anthocyanin (or the fewer carotenoids), the deeper the red or purple becomes. And leaves with an abundance of chlorophyll late into the season may not develop much fall color at all.

As with many aspects of plant growth, much depends on the weather. Warm, clear, sunny days allow plants to

continued
Do aquatic bacteria contribute to global warming? Peter Pollard, a microbial ecologist at the Australian Rivers Institute of Griffith University, is investigating this question in a collaborative project with the Arboretum’s Center for Tropical Forest Science (CTFS) and the Harvard Forest. Recipient of a prestigious Queensland-Smithsonian fellowship, Peter hopes to determine whether the respiration of aquatic bacteria serves as a major pathway for the return of carbon to the atmosphere as the greenhouse gas carbon dioxide, a well-documented contributor to climate change.

From 2000 to 2001, Peter worked to quantify the movement of carbon through microbes in the Bremer River in subtropical Queensland, Australia, to determine the amount of dissolved organic carbon (DOC) the organisms consume and the amount of carbon dioxide they produce during respiration. As expected, he found the river contained huge populations of bacteria and viruses. He was surprised, however, to discover that the DOC concentration and bacterial numbers in the river remained relatively constant even though the bacteria were consuming DOC at exceptionally high rates and replicating rapidly.

These observations suggest that a steady supply of DOC is stimulating continual bacterial reproduction, while viral infection keeps their numbers constant. Such bacterial-viral cycling effectively turns over the steady supply of DOC in the river, returning it to the atmosphere as carbon dioxide. But where does the initial DOC in this process come from? Peter thinks it is leached from nearby plants and trees, and by replicating his experiments in Panama and Massachusetts, he hopes to prove that the source of DOC in other freshwater bodies is real and significant in relation to forest dynamics and global carbon budgets.

Ultimately, Peter wants to quantify the terrestrial carbon passed through all aquatic ecosystems of the planet, a research endeavor that complements the HSBC Climate Partnership studies underway at CTFS and the Smithsonian Tropical Research Institute. Peter will present his findings at the Harvard University Herbaria Seminar Series this fall.
GETTING TO KNOW YOU
Study Explores Visitor Experience at the Arboretum

Julie Warsowe, Manager of Visitor Education

The Arnold Arboretum strives to make meaningful connections with the visiting public, and achieving this goal starts with a better understanding of you, our visitors. Why do you come to the Arboretum? What patterns characterize your visitation? What do you want to do, see, and feel while you are here? Instead of assuming we understand you, your needs, and your interests, the Visitor Education team launched a formal visitor study to gather reliable data to guide our efforts.

With the expertise of audience research firm People, Places, and Design Research, we developed a survey of 12 multi-part questions, administered by a group of specially trained staff and volunteers. We needed to reach a statistically significant cross section of visitors, and since the Arboretum is open daily from dawn to dusk, we conducted interviews seven days a week between 7:00am and 7:00pm. From May through early November, we interviewed nearly 900 visitors. We were pleasantly surprised by a cooperation rate approaching 80%—quite respectable for a voluntary survey in an outdoor public setting that included bikers and joggers. We believe that the sample we gathered is reasonably representative of the Arboretum’s overall audience.

What did we learn? Nearly all our visitors have been here before, and many visit frequently (61% had visited at least a dozen times in the past year; 45% had visited 50 or more times). Reasons for visiting include specific activities (taking a walk, walking a dog, jogging, and cycling) and broader motivations (casual experiences in nature, exercising in a pleasant and safe place, and learning about plants). We learned that visitors are wholeheartedly enthusiastic about their overall experience and the care of the grounds in proportions our consultants found impressive and unusual among museums and parks.

One of the most significant findings is the satisfaction that many visitors express regarding existing information and interpretive experiences about plants and the landscape. This is a challenge to an institution dedicated to disseminating knowledge and fostering understanding of the Earth’s botanical diversity, and indicative of the need to be realistic about the range of audience interests and expectations. Now that we know you better, we can design engaging educational programs that better target those of you who are interested in more information and, at the same time, perhaps entice those who have not expressed an educational interest.

The Arboretum will soon complete an Interpretive Master Plan, a systematic guide to developing interpretation and informal education in the landscape over the next five years. The plan relies heavily on the findings of the visitor study to develop themes, activities, and information that will be relevant and meaningful to you and accord with your needs, interests, and motivations. It explores improvements, such as permanent and temporary signage, a renovated Visitor Center exhibit, updated paper maps and self-guided tour brochures, family-friendly landscape explorations, and newer technologies such as podcasts and cell phone tours. Future phases of the plan will investigate improving outreach efforts to better connect with new and underserved audiences.

Improved signage, including detailed maps and destination markers, were installed in the landscape this year as part of the Arboretum’s Interpretive Master Plan.

Julie Warsowe, Manager of Visitor Education

Stephen Hill

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CURATOR'S CHOICE
Noteworthy Plants in the 2008 Members' Fall Plant Sale

Jon Hetman, Development Manager

Since its debut in 1980, the Arboretum’s Fall Plant Sale has been one of the most anticipated days on our members’ calendars. While initially conceived as a distribution for sharing excess plant material from our greenhouse and nurseries, the plant sale has evolved to highlight notable and hard-to-find plant species and introduce new cultivars to our plant-savvy constituents. We asked Arboretum curator Michael Dosmann to select his top picks from this year’s catalog to help members evaluate the trees, shrubs, and vines on offer in our 28th annual sale on Sunday, September 21 at the Dana Greenhouse. See page 41 for details.

Prunus depressa 'Gus Mehlquist'

*Prunus depressa* 'Gus Mehlquist' is a native sand cherry cultivar with interesting landscape possibilities as a woody, deciduous groundcover. This selection was found along the banks of the Connecticut River by Arboretum research taxonomist David Boufford and Rob Nicholson, then of the Arnold Arboretum and currently at the Smith College Botanic Garden. The plant roots well and is a rapid spreader, growing three feet per year once established. It is entirely prostrate, forming a dense mat that stands six to twelve inches above the ground. Flowers are small with five white petals, followed by blue-black fruits in September. It has dark green foliage through the growing season, and lovely crimson fall color. Hardy to Zone 4, it performs well in normal garden conditions, and displays bolder fall foliage when planted in full sun. The Arboretum’s accession is beautiful and thriving behind the Dana Greenhouse.

Sciadopitys verticillata

The Japanese umbrella pine, *Sciadopitys verticillata*, is among the most ancient of extant conifers, with a prehistoric range extending across Eurasia and North America. Today, it is the only surviving member of its genus with a native range limited to southern Japan, where its spicy-scented, water-resistant wood is highly valued. Its scientific and common names refer to its evergreen leaves, which are glossy, flattened, and arranged in terminal whorls like the spokes of an umbrella. While it is slow growing, *Sciadopitys* is long lived and may attain a mature height of 25 to 40 feet with a conical, broadly pyramidal, or spire-like habit. It bears both male and female flowers in spring, which are followed by thick-scaled cones. A fine example may be viewed on the left front lawn of the Hunnewell Building.

Styrax japonicus ‘Carillon’

The Japanese snowbell is handsome and graceful in the landscape, with several seasons of interest for the home gardener. The cultivar ‘Carillon’, developed by Brookside Gardens in Wheaton, Maryland, is a small selection growing eight to twelve feet in height over a 10-year period with a refined, weeping habit. Its simple, alternate leaves are typical of the species, appearing on the upper part of the branches and colored a dark, lustrous green in summer and yellow to red in the fall. The placement of the leaves allow full appreciation of its profusion of attractive, pendulous flowers, which bloom in May to June. They are white with yellow stamens, bell-shaped, modestly fragrant, and borne in clusters of three to six per inflorescence. Flowers change to grayish-brown drupes that persist into late autumn. Mature branches fissure to reveal orange inner bark, adding landscape appeal in winter. A lovely 25-year-old specimen grows on the Leventritt Garden Path, near the Dana Greenhouse gate.
Adult education at the Arnold Arboretum is a community resource for the study of horticulture, botany, and garden arts.
### Horticulture

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### Symposia

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Focused Studies

Adult education at the Arnold Arboretum is centered on our collections of temperate woody plants. For students seeking to structure their studies, we offer a sequence of core classes in plant identification, horticultural methods, and propagation. We recommend that all students complete an introductory botany class as a preliminary step. Please note that not all classes are offered every semester, or even every year, and that others may be added as we develop new ones.

Temperate Woody Plant Identification

The ability to identify a wide variety of hardy woody plants is essential for understanding the floral and horticultural environment of New England. The classes below provide a foundation for this skill.

- **BOT 104** Winter Tree Observations
- **BOT 172** Introduction to Winter Tree Identification
- **BOT 252** Sampling the Conifers—Juniperus
- **BOT 293** Invasive Plant Ecology
- **BOT 310** Framework Trees of New England
- **HOR 103** Identifying the 25 Most Common Trees in Boston
- **HOR 125** Vines for the Garden
- **HOR 209** Trees and Shrubs for Fall and Winter Interest

Horticultural Methods for Woody Plants

Proper care of woody plants is important to their overall health. These classes teach techniques and procedures for woody plant care.

- **HOR 100** Steps to a Better Garden
- **HOR 110** Fundamentals of Gardening
- **HOR 191** Landscape Maintenance: An Organic Approach
- **HOR 195** Planting and Transplanting: Demonstrated Techniques for Trees and Shrubs
- **HOR 225** Plant Selection in the Nursery
- **HOR 138** Ericaceous Plants for the Home Garden
- **HOR 152** Species Rose Care and Culture
- **HOR 301** Pruning Basics for Woody Ornamentals
- **HOR 314** Pruning in Winter
- **HOR 328** Woody Plant Health Care: Identifying Insect Pests, Plant Diseases, and Stresses
- **HOR 335** Fall Planting and Winter Care of Trees and Shrubs
- **HOR 359** Assessing Tree Health and Structure
- **HOR 407** Lilac Intensive with Jack Alexander

Woody Plant Propagation

The elements of propagation—from taking cuttings and germinating seeds to hardening off, potting, and planting out—are covered in the classes listed below.

- **HOR 303** Propagation 1: Hardwood Cuttings and Seeds (Fall)
- **HOR 305** Propagation 2: Grafting of Ornamental Trees (Winter)
- **HOR 307** Propagation 3: Softwood Cuttings (Summer)
- **HOR 317** Success with Propagation: Growing On (Spring)
- **HOR 320** Advanced Propagation: Choice and Challenging Plants (Summer)
- **HOR 316** Budding Workshop (Summer)
- **HOR 336** Growing Plants from Seeds (Spring)
September

On the Wing: Migratory Butterflies

Kim Smith, Author, Illustrator, Designer, Photographer
1 Session
Sat Sep 13 11:00am–1:00pm [HB]
Rain Date: Saturday, September 20
Not all butterflies are migratory, but those that are begin their journey to warmer climes in late summer and early fall. Join butterfly garden designer Kim Smith on this walk in search of species commonly seen in New England. Sightings of migratory butterflies may include the Monarch, Red Admiral, Question Mark, Comma, and Pearly Crescentspot. Participants will also look for butterflies such as sulphurs, swallowtails, gossamer wings, fritillaries, and ladies that remain in the area through the winter. Kim will explain typical migration patterns and over-wintering habits. She will also offer suggestions for providing food and safe harbor in your own garden for species on the wing in September.
Fee $20 member, $25 nonmember

Taking Stock of the 2008 Growing Season

Julie Coop, Manager of Plant Health, Arnold Arboretum
1 Session
Tue Sep 16 10:30am–noon [HB]
How did our plants grow in 2008? Take a walk to discover the effects of pests, diseases, soil conditions, and the weather on our plants this past growing season, and find out how Arboretum staff tackled these challenges. Learn some of the green solutions that help our plants cope with environmental stresses.
Free, but advance registration is requested

Steps to a Better Garden

Peter Medaglia, Owner, Gold Medal Gardens
4 Sessions
Thu Sep 18, 25, Oct 2, 9 6:30pm–8:30pm [HB]
Everyone wants a more beautiful garden, but many have no idea how to achieve this, short of hiring a professional. However, a better understanding or review of some basic gardening concepts and techniques can lead to improvements. As well, fall is a great time to reflect on the soon-to-end growing season.
Peter will present the fundamentals of organic gardening in simple terms. He will discuss problems commonly encountered in new or existing gardens and make suggestions for maintenance that, if performed now, will lead to a phenomenal garden come spring. This is not a class about lawn care or vegetable gardening, but a class on landscaping that might just turn your neighbors “green with envy.” Participants are encouraged to take stock of this year’s gardening experience before the first meeting.
Fee $40 member, $48 nonmember

Invasive Plant Ecology

Leslie Mehrhoff, Director, Invasive Plant Atlas of New England
1 Session
Sat Sep 20 9:30am–12:30pm [HB]
Invasive plants spread into all sorts of places, using various strategies to out-compete native vegetation. Leslie Mehrhoff, director of the Invasive Plant Atlas of New England at the University of Connecticut, will report on the evolving status of invasive plants in New England and elaborate on how different species come to dominate and suppress native plant communities. He will speak about the ecology of habitats before and after invasive plants arrive. Following his talk with a walk through the Arnold Arboretum, Les will explain how highly competitive dispersal mechanisms, germination rates, leaf retention capabilities, and other characteristics allow these plants to insert themselves into habitats and quickly gain the upper hand.
Fee $40 member, $48 nonmember

Why Does an Arboretum Need a Curator?

Michael Dosmann, Curator of the Living Collections, Arnold Arboretum
1 Session
Sat Sep 20 1:00pm [HB]
Question: How are maples like Impressionist paintings? Answer: They both need a curator to keep them straight! At the Arboretum, the curator plays a valuable role in identifying all of the plants in the collection, but also in deciding what new trees, shrubs, and vines to acquire, and where to install them in the landscape.
Tag along with Michael on this walk as he immerses you in some of the activities of his job. You’ll learn a bit about plant identification, documentation, collection planning, and some great tree stories. Free, but advance registration is requested

**Introduction to Botany**  
**BOT 100**

**K. N. Gandhi, Botanist, Harvard University Herbaria**

8 Sessions  
Tue Sep 23, 30, Oct 7, 14, 21, 28, Nov 4, 18 6:30–8:30pm [HUH]

“Dr. Gandhi’s enthusiasm and sense of wonder at the amazing things that can be found in nature make the concepts of botany come alive for us.” —Jane Mead, Botany Student, Fall 2006

Learn botany from dedicated instructor and plant nomenclature specialist Kanchi Gandhi. Among the topics to be explored: plant cells and tissues, anatomy and morphology, reproduction, nutrition, growth and development, plant diversity, evolution, classification, and nomenclature. This course, offering both lecture and laboratory activities, introduces botany to new students or serves as a refresher course. Required text: *Botany for Gardeners* by Brian Capon. Contact the Arboretum’s bookstore (617.384.5209) for availability.

Fee $180 member, $215 nonmember  
Credit MCLP: 1ceu; MCA: 1ceu  
Offered in collaboration with the New England Wild Flower Society

**Propagating Trees and Shrubs from Cuttings and Seeds**  
**HOR 303**

**Jack Alexander, Plant Propagator, Arnold Arboretum**

2 Sessions  
Sat Sep 27 and Oct 18 9:00am–4:00pm [DG]

Need to nurture? Then join longtime Arboretum propagator Jack Alexander to learn basic information and techniques for propagating most woody plants. Session One includes a lecture and workshop on seed propagation and construction of a propagation case.

Session Two will be a lecture and workshop on hardwood cuttings. You will leave class with numerous cuttings and seeds to care for. Bring a lunch and beverage. If you own hand pruners, bring them to the second class. A sharp knife and an apron may also be helpful. You will be collecting propagules from the Arboretum grounds on both afternoons regardless of weather, so dress accordingly and wear comfortable shoes.

Fee $180 member, $215 nonmember  
Credit MCLP: 1ceu

Offered in collaboration with the New England Wild Flower Society

**October**

**The American Chestnut: A Relic’s Resurrection**  
**BOT 325**

**Rufin Van Bossuyt, The American Chestnut Foundation**

1 Session  
Sat Oct 4 1:00–2:30pm [HB]

Retired forester Rufin Van Bossuyt will begin this lecture with a history of the chestnut blight and how it spread, beginning with the first North American outbreak in 1904. He’ll chronicle attempts by government agencies to stop the blight and cross-breeding efforts early in the 20th century. Rufin will then speak about current breeding techniques that attempt to bring Chinese chestnut blight resistance to the American tree. After twenty-five years of breeding, The American Chestnut Foundation is just beginning to test its first blight-resistant chestnuts. The lecture refers to the recently published *Mighty Giants: An American Chestnut Anthology* which covers all aspect of chestnut culture in America before and after the blight. This book gives the reader...
classes

a true appreciation for the cultural and ecological loss of this once great forest tree. Copies will be available for purchase at the lecture.

Free, but advance registration is requested

Offered in collaboration with the New England Wild Flower Society

Fall Planting and Winter Care of Trees and Shrubs

HOR 335

Jen Kettell, Horticultural Technologist, Arnold Arboretum

1 Session

Sat Oct 4 10:00am–noon [DG]

Early fall is the preferred time to plant many trees and shrubs. Learn from an International Society of Arboriculture-certified arborist how to proceed with fall planting, which trees and shrubs to plant at this time of year, and what you can do to help your woody plants survive the winter. Jen will discuss planting techniques, proper watering schedules, and winter protection for your plants.

Fee $25 member, $30 nonmember

Offered in collaboration with the New England Wild Flower Society

Framework Trees of New England

BOT 310

Karen Sebastian

6 Sessions

Tue Oct 7, 14, 21, 28 7:00–9:00pm and
Sat Oct 18 Noon–4:00pm;
Sat Oct 25 9:00am–1:00pm [NEWFS]

Trees are the dominant plant type of New England, with forests covering much of the land area. This survey course will address identification and natural history of individual species as well as forest ecology. Since understanding today’s forests requires familiarity with their history, you will review the changing landscape from the Ice Age through European settlement. You will learn to identify native New England trees and their habitats; recognize different aged stands including pioneer, second growth, and other growth; and become familiar with the forest communities of the northeastern temperate region, considering the natural and human disturbances that produce the different forest associations. You will visit a variety of forest types during the two Saturday field trips.

Fee $204 member, $240 nonmember

Offered in collaboration with the New England Wild Flower Society

Photography for Garden Designers

ART 172

Erik Gehring, Freelance Photographer, Writer, and Radio and Video Producer

3 Sessions

Tue Oct 14, 21, 28 2:00–5:00pm [HB]

For garden designers who must be able to communicate their work visually, this course will be tailored to improving their photographic skills, portfolios, and websites. Erik will discuss basic photographic technique, showing how to move beyond the camera’s presets. He’ll cover composition, color, and light so that students can tell a better story through their images and he’ll demonstrate essential Photoshop® techniques, including the proper sizing of images for effective display on the web and elsewhere. This is a very “participatory” class—there will be field work in the Arboretum and homework assignments to practice what is learned.

Fee $90 member, $110 nonmember

Credit MCLP: 1ceu

Nature in the City: Exploring the Arboretum’s Urban Wilds

WAL 277

Richard Schulhof, Deputy Director, Arnold Arboretum

1 Session

Sat Oct 18 1:00–2:30pm [HB]

Take a vigorous hike exploring the varied topography and land-use history of natural areas at the Arnold Arboretum. Learn some of the current and future management challenges and approaches for these wild pockets.

Free, but advance registration is requested

November


HOR 533

Peter Del Tredici, Senior Research Scientist, Arnold Arboretum and Lecturer in Landscape Architecture, Harvard University Graduate School of Design

1 Session

Thu Nov 6 6:30–8:30pm [HB]

In this slide lecture, Peter Del Tredici will explore the nature of the modern urban/suburban environment and the ways it is changing in response to population pressures and economic expansion. Peter will show how the spread of invasive species across the landscape is a symptom of on-going, large-scale environmental degradation rather than its cause. He will also attempt to define an approach to the problem that focuses more on ways of rebuilding ecological functionality rather than on restoring past ecosystems that no longer exist.

Fee $20 members, $25 nonmembers
Sampling the Conifers: *Juniperus*  
**BOT 252**  
*Dennis Collins, Horticultural Curator, Mount Auburn Cemetery*  
1 Session  
Sat Nov 8 2:00–4:30pm [Bussey Street Gate]

Junipers can be found worldwide in some of the harshest ecological habitats. With more than 50 species, the genus *Juniperus* is one of the few truly successful conifers and shows great adaptability and diversity. Horticulturally, it is equally impressive, with hundreds of cultivars produced for landscape use. Many are suited for our north temperate New England climate. They offer a range of different forms:

![Juniperus](image)

some species cling to the ground while others form round globes or grow upright into pyramidal trees. In this class, which takes place in the Arboretum's world-class conifer collection, you can learn the characteristics of junipers and what traits you might want to consider when choosing a juniper for your landscape. Size and shape at maturity, features too often overlooked by landscapers and home gardeners, are well illustrated by the Arboretum's juniper collection.

Fee $30 member, $35 nonmember  
Offered in collaboration with the New England Wild Flower Society

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Routes of Invasion: Tracing the Travels of Some of New England’s Most Troublesome Plants  
**BOT 349**  
*Leslie Mehrhoff, Director, Invasive Plants Atlas of New England*  
1 Session  
Wed Nov 12 6:30–8:30pm [HB]

By looking at herbarium specimens and locations of plant populations, Leslie Mehrhoff has been able to narrow down and in some cases definitively determine the first instance or entry point of an exotic plant's introduction to North America. For some he has discovered the routes these plants first traveled, by what means of transport, with whom they traveled and with whom they were first shared. Part historian and sleuth, this invasive plant expert with tell some of the stories he has pieced together from historical documentation as well as what plant invasion means in a global economy.

Fee $20 member, $25 nonmember  
Offered in collaboration with the New England Wild Flower Society

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New Lows in the Garden  
**HOR 131**  
*Jen Kettell, Horticultural Technologist, Arnold Arboretum*  
1 Session  
Thu Nov 13 6:30–8:30pm [HB]

Low-growing and ground-covering woody plants can add texture, unity, and dimension to even the smallest of gardens. In fact, these can be the perfect solution for the city gardener--small, low-maintenance plants that help to shade out weeds while adding interest. They can be used in many ways; for example, to accentuate pathways or control erosion, as dwarf hedging, as a surround for spring bulbs, and even to distract from the “bare ankles” of taller shrubs. Horticulturist Jen Kettell will show some of her favorites appropriate for a variety of site conditions and design uses.

Fee $20 member, $25 nonmember

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Trees and Shrubs for Fall and Winter Interest  
**HOR 209**  
*Nancy Rose, Editor, Arnoldia, Arnold Arboretum*  
1 Session  
Sat Nov 15 10:30am–12:30pm [HB]

A former extension horticulturist in Minnesota and now editor of *Arnoldia* for the Arnold Arboretum, Nancy Rose is accustomed to gardening in colder zones and thus has a keen eye for plants that will keep her interest through the dark and snowy months. Persistent fruit, showy bark, and architectural branching patterns are some of the characteristics she looks for when selecting plants for a northern garden or landscape. Join Nancy for a lecture and walk in the Arboretum to see some of her top choices for winter interest.

Fee $20 member, $25 nonmember

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Botany is Exciting  
**BOT 103**  
*Carol Govan, Naturalist and Artist*  
1 Session  
Sat Nov 15 9:30am–2:30pm [WCBG]

With her infectious enthusiasm for anything botanical, Carol will introduce the non-scientist to the wonders of botany. Using basic terminology, direct observations, and sketching, participants will explore plant form, structure, and function. Class activities will take place in the Wellesley College greenhouses and the campus landscape, depending on inclination and weather.
At some point, almost every gardener wants more—more space for plants, more kinds of plants, more time to work in the garden, and a longer season to enjoy it. This symposium, for both the professional and amateur gardener, will explore innovative ways to temporally and spatially stretch a garden’s capacity. You can create a spectacular landscape that lasts well beyond our region’s May-to-October leafy season, and your garden spaces can break the confines of conventional planting styles. Using examples from both small and large gardens, our speakers will focus on the best plants for multi-season interest, techniques for “fall-scaping” and “winter-scaping,” creative strategies to “borrow” and make better use of space, and how to improve transitions between garden areas.

Virginia Small: Design Strategies from Great Gardens

Discover ways to create and extend your garden’s impact by making it welcoming, more unified, and personally expressive. Join garden expert Virginia Small to learn how to make the most of a site, to extend views, and to rely on dramatic focal points and plantings as meaningful structural elements, as well as to make graceful transitions. To illustrate these strategies, Virginia will present vivid images from exceptional landscapes that range from formal to naturalistic, including some that reach beyond the confines of traditional garden spaces.

Virginia Small is a garden consultant and an award-winning garden writer and editor who enjoys making design topics accessible for gardeners. Formerly senior editor at Fine Gardening Magazine, her work has been published widely, including in Horticulture, Garden Design, and American Gardener. Virginia’s new book, Great Gardens of the Berkshires, published by Down East Books, will be available at the symposium.

John Greenlee: Ornamental Grasses and Sedges in Seasonal Design

Grasses and sedges are basic building blocks for creating meadows and natural lawns. With their tremendous versatility and desirability, they are also great additions to almost any kind of garden in sun or shade. One of the exciting new directions in horticulture and design encompasses greater interest in, and more innovative use of, grasses and their relatives. “Graminoid” expert John Greenlee will look at the art and science of choosing grasses and sedges to fill multiple niches in your home garden and designed landscapes. Learn how to take advantage of bold textures and gradations of color to make them stand out in the landscape in all seasons. Many of the plants that will be shown are either new to the nursery trade or just now becoming available to Northeastern gardeners.

A specialist in growing ornamental grasses and grass-like plants, John Greenlee is founder of Greenlee Nursery, the west coast’s oldest and largest specialty and ornamental grass nursery. He is also president of John Greenlee Associates, a design firm in Chino, CA. John is author of The Encyclopedia of Ornamental Grasses, and the soon to be published Meadows by Design. He has hosted HGTV’s Way to Grow and PBS’s The New Garden. A noted lecturer across North America, John advocates for ecologically sound lawns, native grasses, and meadow restoration. He travels nationally and internationally in search of new and exciting plant varieties.
Stephanie Cohen: Fallscaping—Extending Your Garden Season

Autumn, the oft-neglected shoulder of the gardening season, has its own special beauty, with dazzling foliage, multi-hued fruits, and celestial seed heads. Why not activate your imagination to further enhance the autumn season and provide your garden with true three-season appeal? Join Stephanie Cohen to learn about new possibilities for the fall, a season that appears to be getting longer in our changing climate. Stephanie’s lecture will include practical techniques for autumn gardening, a virtual shopping list of late-blooming perennials and showy woody plants, and inspiring plans for visually impressive, fall-friendly garden spaces.

Stephanie Cohen is a nationally recognized horticulturist and an award-winning garden communicator. Her witty and frank approach to plants has both delighted and enlightened audiences across the country. A member of the Temple University faculty and former director of Temple’s Landscape Arboretum, she specializes in herbaceous perennials. Stephanie Cohen’s recent books—Fallscaping: Extending your Garden Season into Autumn and The Perennial Gardener’s Design Primer—will be available at the symposium.

Nancy Rose: Great Trees and Shrubs for the ‘Other’ Six Months

The leafless season can drag on for nearly half the year in New England. Fortunately, there are plenty of great trees and shrubs that provide landscape interest even without their leaves. Author and horticulturist Nancy Rose will highlight plants whose showy bark, striking architecture, and colorful, persistent fruit are sure to enliven your garden throughout the winter.

Nancy Rose is a horticulturist who knows something about winter, having spent the past seventeen of them in Minnesota where she worked in extension horticulture and woody plant research. This year she moved to (relatively) balmy Boston where she is now editor of Arnoldia at the Arnold Arboretum. Nancy is also a garden writer, photographer, and co-author of Growing Shrubs and Small Trees in Cold Climates.
classes

Twelve Months at the Arnold Arboretum: Conversation with the Artist

Kate Cardamone, Artist and Horticulturist
1 Session
Wed Nov 19 6:30–7:30pm [HB]

The Arboretum has color and seasonal interest every month of the year, thanks in part to plant explorers and the exchange of plants from Europe, Asia, and North America. Take a journey through the seasons from both a painter’s and a horticulturist’s perspective via this talk by Kate Cardamone. Kate will showcase some of the flowering trees and shrubs that she loves most, for the art they inspire and their horticultural significance. Her exhibition of oil paintings will be on display this fall in the Hunnewell Building Lecture Hall. See page 34 for art show information.

Fee $50 member, $65 nonmember
Offered in collaboration with the New England Wild Flower Society and Wellesley College Friends of Horticulture

Understanding Botanical and Horticultural Names

Judith Sumner, Botanist and Author of The Natural History of Medicinal Plants
1 Session
Sun Nov 16 1:00–4:00pm [NEWFS]

During this workshop on plant nomenclature, participants will have the opportunity to sort out the confusion associated with plant names. You will discuss common names, binomial scientific names, and the history of nomenclature since Linnaeus. The current rules of nomenclature will be reviewed, and you’ll see why and how plant names sometimes change. You will then look at a variety of plant names and try to deduce whether they give clues to the plant’s characteristics. Attention will also be given to the names of species and hybrids in cultivation and the meaning of cultivar names.

Fee $40 member, $48 nonmember
Offered in collaboration with the New England Wild Flower Society and Wellesley College Friends of Horticulture

Fluid Imagination: Water in the Garden

Warren Leach, Horticulturist and Landscape Designer
1 Session
Tue Nov 18 1:00–4:00pm [HB]

Water features seem to be the hot topic in gardening these days, and Warren Leach is in deep. He has designed and installed numerous features and selected the accompanying plants in private suburban gardens as well as in commercial, often-times harsh, sites. In all cases he carefully considers the dynamics of flowing and falling water, its aural and visual effect, and the garden atmosphere desired by his clients. He’ll inspire you with images of his own designs and of gardens he has visited, with the goal of encouraging you to think more imaginatively when incorporating water. Warren will also provide practical installation techniques and tips for your next project.

Fee $40 members, $48 nonmembers
Offered in collaboration with the New England Wild Flower Society and Wellesley College Friends of Horticulture

Green Roofs and Plant Materials: An Advanced Introduction

Edmund Snodgrass, Nurseryman and Owner, Emory Knoll Farms Inc.
1 Session
Fri Dec 5 9:30am–noon [LI]

Sustainability is the buzz word these days, but what does it mean in terms of green roofs, especially in the Northeast? In this class for design students and practitioners, Ed Snodgrass will attempt to detail and explain green roof fundamentals. A farmer-turned-nurseryman, Ed owns Emory Knoll Farms in Street, Maryland where he and his wife grow the plants used in many of Boston’s and the nation’s green roof installations. As he approaches a site, his goals are to solve storm-water issues, reduce heat-island effect, and deliver cost-effective, resource-saving solutions. In this class Ed will address the evolution and implications of LEED’s requirements and present a realistic view of what is feasible for green roof technology in New England. Ed will help designers determine what it is they need to know, and where to learn what they don’t know, and he’ll emphasize the importance of their presence on a green roof team as the voice for horticulture.

Fee $40
Offered in collaboration with the Landscape Institute
December

Introduction to Winter Tree Identification  
Kyle Stephens, Arborist, Arnold Arboretum  
1 Session  
Sat Dec 6 9:30am–2:30pm [HB]

This class will provide an overview of the information necessary to identify deciduous trees during their dormant season. Looking at specific character combinations, participants will learn to determine the genus and species of several types of trees in the Boston area. The group will begin indoors with a discussion of basic classification techniques and then go outside to the Arboretum grounds to explore maples, oaks, lindens, buckeys, hickories, hornbeams, and more. Dress warmly for spending the day outdoors. Bring your lunch. A hand lens may be helpful, but is not necessary. This class is recommended for beginner-to-intermediate tree observers. Limited to 14 participants. Fee $50 member, $60 nonmember

January

Introduction to Residential Garden Design  
David McCoy, Principal, Geographia Landscape Design  
6 Sessions  
Mon Jan 12, 26, Feb 2, 9, 23, Mar 2 6:30–8:30pm [HB]

Landscape design starts with an idea and a site. How do you work from these to a fully realized garden? In this class, participants will explore the basics of good design through lectures and individual projects. Fundamentals of design—the creation of space in the garden and the experience of moving through it—will be covered. In the students’ individual projects, special emphasis will be placed on identifying the unique qualities of their sites and using those features as the basis for design. Students should come to class with a project in mind, whether it’s a specific area or an entire property. This is a basic course for beginners.

Fee $120 member, $144 nonmember

Aunt Rhodie’s Relatives: Ericaceous Plants for the Home Garden  
Jen Kettell, Horticultural Technologist, Arnold Arboretum  
1 Session  
Tue Jan 13 6:30–8:30pm [HB]

Rhododendrons and azaleas seem to get all the attention, but there are many other plants in the Ericaceae that merit consideration for your landscape. In fact, the acidic soils of New England are naturally suited to plants in the heath family. In this class, horticulturist Jen Kettell will introduce some of these including heath, heather, leucothoe, and mountain laurel. Some are delicate and difficult to grow, yet most are tough survivors. Jen will discuss soil preferences and the care of ericaceous plants in general. She will not, however, cover in depth the ever-expanding list of rhododendron and azalea varieties available on the market today.

Fee $20 member, $25 nonmember

Maintaining a Green Roof: Best Practices  
Edmund Snodgrass, Nurseryman and Owner, Emory Knoll Farms Inc.  
1 Session  
Fri Dec 5 1:00–4:00pm [LI]

As an increasing number of Metro-Boston’s roofs become green, there will be a growing need for knowledgeable individuals to care for them. In this class Ed Snodgrass will get into the nitty-gritty details of maintaining plants in these harsh, unforgiving environments. He will cover issues such as life expectancy of plants and budgeting guidelines for replacements, nutrient rates and kinds, winged invaders and common weeds, plant survival through New England’s freezes and thaws, timing and methods of maintenance, best practices, and managing client expectations.

Fee $40

Offered in collaboration with the Landscape Institute
insatiable desire to replicate the scene, a feeling sometimes referred to as “garden lust.” For an individual yearning to change yard into garden, identifying just what evokes such strong emotion can be elusive. In this brief foray into garden design, you will dissect garden images so that you begin to understand the pieces that contribute to the whole. Christie will then define some basic design vocabulary and techniques to help you compose your own dream garden image.

In the second class, Geovani will join Christie to show the garden construction process, using examples from several projects they have worked on together. In identifying your hopes and visualizing the process and sequence of work, you’ll be able to nudge your winter dreams toward garden realization.

Bring a collection of garden images that appeal to you to the first class.

Fee $45 member, $55 nonmember
Offered in collaboration with the New England Wild Flower Society

The Carpenter Poets: Reflections on Wood and Trees

The Carpenter Poets of Jamaica Plain
1 Session
Tue Jan 20 6:30–8:30pm [HB]
The Carpenter Poets of Jamaica Plain meet regularly to share original poems with themes based on their trade. For this evening, we’ve invited the poets to read their poems about the lumber they work with and the trees from which it comes. Trees like the American chestnut, long gone from our landscapes, reveal their durability when chestnut planks are exposed during a home renovation. A carpenter selects boards at the lumber yard—feeling the grain, eyeing each plank for its quality—making a visceral and utilitarian judgment. Carpentry, requiring both physical and mental acuity, attracts creative people. Enjoy an evening of creative verse from those who have dared to put their thoughts on paper.

Free, but advance registration is requested

Grafting Techniques for Ornamental Trees

Jack Alexander, Plant Propagator, Arnold Arboretum
1 Session
Sat Jan 31 9:00am–4:00pm [DG]
Grafting is the technique of joining parts of plants in such a manner that they unite and continue their growth as one plant. It is sometimes the most practical propagation method for the hobbyist since it does not require special conditions or equipment. This workshop will teach methods of grafting and offer practice in making graft unions from actual plant material. You will graft both deciduous and evergreen trees and shrubs. The plants may include two- or five-needled pines and crabapples. (Simple aftercare will be required until planting out in late spring.) If you own pruning shears or a grafting knife, please bring them to class.

Fee $90 member, $110 nonmember
Credit MCLP: 1ceu

Winter Tree Observations: Deciduous Trees

Carol Govan, Artist and Naturalist
1 Session
Sat Feb 7 10:00am–2:30pm [WCBG]
Winter is a great time to identify trees based on their overall structure and twig and bud characteristics. Close observation can also reveal clues to the adaptive strategies of various tree species. You will begin indoors at the Botanic Garden’s Visitor Center, discovering family and genus similarities and examining indicators of the growth cycles of deciduous trees. After lunch Carol will lead you through the Wellesley College Botanic Gardens to identify trees, observing both large- and small-scale details. Bring a lunch and hand lens and dress for cold weather. Participants may also wish to register for BOT104B below which focuses on evergreens.

Fee $50 member, $65 nonmember per session
Credit MCLP: 1CEU; MCA: .5ceu
Offered in collaboration with Wellesley College Friends of Horticulture
Winter Horticultural Lecture Series
Offered in collaboration with the New England Wild Flower Society and Wellesley College Friends of Horticulture

The Authentic Garden: Cultivating a Sense of Place
Claire Sawyers, Director, Scott Arboretum of Swarthmore College
Thu Jan 29 7:00–8:30pm [MBCC]
What would an “authentic” American garden look like? How would we garden if we weren’t still borrowing from European or Eastern traditions? These are questions horticulturist Claire Sawyers addresses in her book, The Authentic Garden. In this lecture Claire will outline the five principles she believes can lead Americans to create gardens grounded in the history and landscape of their place, gardens that connect to and fit within our lives.
Fee $20 member, $25 nonmember

Great New Annuals and Perennials to Feed Your Plant Habit
Allan Armitage, Author and Professor of Horticulture, University of Georgia
Thu March 5 7:00–8:30pm [MBCC]
New horticultural varieties are the lifeblood of a healthy industry and are requisite to maintain interest by gardeners. The popularity of annuals, and the sustained interest in perennials has been nothing short of spectacular. And the grassroots movement in native plants has been followed with research and breeding dollars that are allowing natives to become widely available to American gardeners. Although he has been evaluating new plants around the country and working with breeders for over two decades, Allan Armitage has often noted that “just because it is new does not mean it is better.” Join this renowned plantsman as he shares his thoughts on his favorite plants, along with some humorous stories and more than a few opinions.
Fee $20 member, $25 nonmember

Local Genus—Genius Loci: Using Native Plants to Emphasize Garden Context
Claire Sawyers, Director, Scott Arboretum of Swarthmore College
Fri Jan 30 9:30am–12:30pm [HB]
Native plants can contribute significantly to the spirit of a garden, but just including them isn’t enough. For best results, Claire Sawyers urges gardeners to approach a site with no pre-conceived notions: to observe first to determine the genius loci—or the spirit of the space—before sketching a plan or lifting a spade. Tuning in to the genius loci requires an understanding of the site’s existing and historical conditions, its context within the larger community, and what the site conjures up for you personally. In this workshop, Claire will address her philosophy on native plants and tell how to plant them in “believable” combinations as a way to capture a sense of place. She will showcase some of her favorites for East Coast gardens and suggest ways of using them in concert with other indigenous materials to accentuate the garden as place, making it feel “authentic” and connected to the broader landscape.
Fee $40 member, $48 nonmember
Pruning in Winter

Jen Kettell, Horticultural Technologist, Arnold Arboretum

1 Session
Sat Feb 21  9:00am–noon [HB]

With no leaves on the branches to obscure your view, this is the best time of year to study a tree’s structure and shape it for improved air circulation, silhouette, and strength. Jen Kettell, an International Society of Arboriculture-certified arborist and accredited Organic Land Care professional, will explain the reasons for pruning and what to consider when pruning dormant trees, shrubs, and vines. She will demonstrate techniques, give guidelines for determining which plants benefit from winter pruning, and explain how plants heal from pruning wounds, even when dormant. Bring your questions to this classroom discussion and demonstration.

Fee $30 member, $35 nonmember

Lighting the Garden

Dan McAllister, Owner, Nite Image

4 Sessions
Tue Feb 24, Mar 3, 10, 17
1:00–3:00pm [HB]

Outdoor lighting provides security, safety, and usability, but can also add subtle or dramatic beauty to the landscape. In this workshop with lighting specialist Dan McAllister, you will discover multiple uses for and types of outdoor illumination and begin to understand the components of a well-designed lighting plan. You will learn to consider lighting cohesion, depth, focal points, quality and direction, perspective, balance, and symmetry in examples of public and private outdoor spaces. Dan will also discuss lighting techniques, planning, installation, and documentation of a design, and demonstrate voltage adjustment and amperage reading. You will leave class with a better understanding of outdoor lighting and how best to incorporate it into your next landscape project.

Fee $90 members, $105 nonmembers

Credit APLD: 8 ceu

Planting Design in Multiple Dimensions

Warren Leach, Horticulturist and Landscape Designer

1 Session
Sat Feb 28  9:30am–3:00pm [HB]

Explore the tao of planting design—the expression of form, texture, color, and line—that reveals the beauty of trees, shrubs, and herbaceous perennials in a cohesive garden or landscape. Each of these expressions can be experienced through touch, vision, or movement. However, in the design process they are often considered at the intellectual level only as abstractions. Landscape designer and horticulturist Warren Leach will help participants to blend the ideals of design with the realities of horticulture as he teaches his view of planting design. Whether planning a mixed border, contemplative garden space, or entry garden where plants counterbalance architectural forms, Warren’s approach emphasizes the inherent beauty of leaves, twigs, and flowers in stunning combinations in which plants become the predominant architecture of the garden.

Fee $65 member, $78 nonmember

March

Landscape Maintenance: An Organic Approach

James J. Agabedis, Jr., Minuteman Landscaping, Inc.

1 Session (select one)
Session A: Wed Mar 4  9:00am–3:30pm [HB]
Session B: Tue Mar 24  9:00am–3:30pm [HB]

Improve your understanding of horticulture and enhance your landscape skills. This all-day class will introduce the basics of horticultural landscape maintenance. The owner of an all-organic land care company, Jim is a pro at communicating with customers and employees and brings a solid understanding of current landscape practices to the classroom. He is a Northeast Organic Farming Association-certified Organic Land Care Professional and emphasizes organic techniques in this class. Jim will present the following topics:

- Landscape maintenance practices
- Soil fertility
- Plant growth and health
- Planting and pruning techniques
- Plant evaluation
- Equipment safety
- Turf care

The class will take place indoors and on the grounds of the Arnold Arboretum. Certificates of attendance will be given to attendees. Bring a lunch and beverage. Register early as this class fills quickly.

Fee $90

Arnold Arboretum
Pruning in Winter  
**HOR 314B**

*Kyle Stephens, Arborist, Arnold Arboretum  
1 Session  
Sat Mar 7 9:00am–noon [HB]*

With no leaves on the branches to obscure your view, this is the best time of year to study a tree’s structure and shape it for improved air circulation, silhouette, and strength. Kyle Stephens, an International Society of Arboriculture-certified arborist, will explain the reasons for pruning and what to consider when pruning dormant trees, shrubs, and vines. He will demonstrate techniques, give guidelines for determining which plants benefit from winter pruning, and explain how plants heal from pruning wounds, even when dormant.

Fee $30 member, $35 nonmember

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Growing Plants from Seeds  
**HOR 336**

*Jack Alexander, Plant Propagator, Arnold Arboretum  
1 Session  
Sat Mar 21 9:00am–1:00pm [DG]*

There’s nothing more satisfying to a gardener than growing plants from seeds. From annuals and perennials to trees and shrubs, success can be achieved if you understand what triggers germination. Expert propagator Jack Alexander will share techniques and tips for starting various types of plants from seeds. This workshop is for beginners and those who have been frustrated in past attempts to transform seed to seedling. Students will leave class with a selection of seeds raring to grow. Aftercare will be necessary.

Fee $45 member, $55 nonmember

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April

Planting and Transplanting: Demonstrated Techniques for Trees and Shrubs  
**HOR 195**

*John DelRosso, Head Arborist, Arnold Arboretum  
1 Session  
Sat Apr 4 9:00am–1:00pm [DG]*

Setting out young trees and shrubs is a major spring gardening task. Learn planting and transplanting techniques that will give a new tree or shrub the best chance of survival. John DelRosso will cover planting-hole preparation, settling the plant in, finishing touches, and maintenance. After the lecture, he will demonstrate these techniques in the Arboretum’s nursery. Dress for the outdoors.

Fee $40 member, $48 nonmember  
Credit APLD: 1.5ceu; MCLP: 1ceu; MCA: .5ceu

Introduction to Botanical Drawing and Painting: Woody Plants  
**ART 110**

*Ruth Ann Wetherby-Frattasio, Botanical Artist and Art Instructor  
4 Sessions  
Mon Apr 6, 13, 20, 27 1:00–4:00pm [HB]*

Artist Ruth Ann Wetherby-Frattasio will teach techniques for depicting the finer details of woody plants.
details of trees and shrubs—budding
boughs, newly unfurled leaves, and blos-
soming twigs. Participants will learn to see
like an artist and will practice drawing in an
encouraging atmosphere. A simple drawing
method will be demonstrated followed by
instruction in painting techniques, includ-
ing the color mixing necessary for achieving
the neutrals of bark, the mossy greens of
leaves, the whites of emerging buds, and
the delicate pinks, violets, reds, and yellows
of flowers. Beginners will start with a tech-
nique for placing an image on paper. Con-
tinuing students will develop their skills
further. During this class, botanical works
by artist Esther Heins will be on display in
the lecture hall, providing inspiration.

Email adulted@arnarb.harvard.edu to
request a list of supplies you will need for
this class.

Fee $130 member, $155 nonmember

Offered in collaboration with Wellesley
College Friends of Horticulture

Do Manutenção de
Jardins em Português
(Landscape Maintenance
in Portuguese)

HOR 127

Luiz Ibanhez, Supervisor de Manutenção,
NatureWorks Landscape Services, Inc.

1 Sessão
Terça-feira, 7 abril, 9:00h da manhã às 3:00h
da tarde [HB]

Melhore sua compreensão de horticultura
e aumente suas habilidades de trabalho.
Esta aula de um dia introduzirá os fun-
damentos da manutenção de jardinagem.
Luiz Ibanhez, orador em Português nativo
que trabalha na área há 8 anos, discutirá o
seguinte:

• Prática de Manutenção
• Fertilidade do Solo
• Crescimento e Saúde das Plantas
• Técnicas de Poda e Plantio
• Avaliação de Planta
• Equipamento de Segurança

A aula será dada em Português e acon-
tecerá em lugar fechado e aberto, ambos
nas dependências do Arnold Arboretum.
Serão dados Certificados de Participação
aos participantes presentes. A taxa inclui
café da manhã e materiais do programa.
Os estudantes deverão trazer almoço.

Pegue a Linha Laranja para Forest
Hills siga as placas para o Arboretum.
Taxa $60
Growing Vegetables in the City

HOR 173
Abby Hird, Putnam Fellow, Arnold Arboretum
3 Sessions
Tue Apr 7, 14, 28 6:30–8:30pm [HB]

Learn the where, what, and why of urban vegetable gardening with horticulturist Abby Hird. Raised on a Nebraska farm, educated in horticulture, and now living here in Boston, Abby Hird will talk about her gardening adaptations in the city environment. She will guide you through site evaluation, plant selection, and common problems and possible solutions in raising home-grown food. She’ll also talk about community resources for gardening, ideas for maximizing yield from a small plot, as well as ways to grow food more sustainably. This class is for nascent gardeners and those who have been frustrated by previous run-ins with vegetables.

Fee $60 member, $72 nonmember

Greening with Native Trees and Shrubs

HOR 121
Nancy Rose, Editor, Arnoldia, Arnold Arboretum
1 Session
Thu Apr 16 6:30–8:30pm [HB]

Native vs. non-native is a hot topic in horticultural circles. There are plenty of good reasons to choose native plants: they’re essential to the lifecycle of native birds, insects, and other animals; they’re adapted to the regional climate; and many are highly ornamental as well. But the issue isn’t really as simple as that. For starters, how do we even define “native”? And are native plants really the best choice in landscapes that have been so completely human-altered that there’s nothing “native” about them? Though horticulturist Nancy Rose can’t resolve all the questions, she will identify some of the arguments and reasons for “going native” and then suggest appropriate trees and shrubs. She will speak about plant characteristics, cultural requirements, and site conditions that should be considered in the selection – including examples of situations where a native plant isn’t necessarily the best choice.

Fee $20 member, $25 nonmember

Gardens and Spirituality

HOR 481

Julie Moir Messervy
1 Session
Sat Apr 18 2:00–3:30pm [TC]

Julie Moir Messervy’s vision for composing gardens of beauty and meaning is changing the way people think about and experience their outdoor surroundings. With thirty years of experience, four books and numerous high-profile lectures, Julie has emerged as a leader of a movement in which landscape design is as much about a personal journey as it is about leaving an imprint upon the earth. She has inspired a new generation of landscape designers, homeowners, and others to create gardens that reflect an inward vision deeply rooted in outdoor archetypes, childhood imagination, and aesthetic impulses. In this lecture at Boston’s Trinity Church, Julie will show gardens that engender spirituality and reveal how spirituality can inform garden design. Her forthcoming book, Home Outside: Creating the Landscapes You Love, will be available for purchase and signing.

Fee $20 member, $25 nonmember

Co-sponsored by the Arnold Arboretum of Harvard University and Trinity Church in the City of Boston

Plant Re-exploration

WAL 200
Abby Hird, Putnam Fellow, Arnold Arboretum
1 Session
Wed Apr 22 10:30 am–noon [HB]

The Arboretum grows nearly 3,500 plants collected from wild places world-wide. Today, many plants in once wild places are extinct, endangered, or severely threatened by habitat change, human impact, and overharvesting. The wild-origin plants at the Arboretum, some collected on plant explorations, are now extremely important for conservation and restoration efforts. Take a walk to re-explore threatened plants inside our garden walls, and find out how these plants got to the Arboretum and how they are being used to further conservation efforts now.

Free, but advance registration is requested
Instructors

James J. Agbedis, Jr. is the founder and president of Minuteman Landscaping, Inc., an organic lawn care company serving clients in the metro Boston area. Jim is a Massachusetts Certified Horticulturist with a Bachelor of Science degree in finance from Babson College. He is an accredited organic land care professional and a Massachusetts certified landscape professional.

Geovani Aguilar was born in El Salvador and came to the U.S. in 1994, unable to speak any English. Starting off as a laborer, he worked his way up the ladder from first line supervisor to foreman, and is now operations manager at A Yard & A Half Landscaping in Watertown, Massachusetts. He regularly attends training seminars in pond building, tree climbing, rock wall building, and other landscaping subjects.

Jack Alexander is the plant propagator of the Arnold Arboretum, a position he has held since 1976. He is a graduate of the Harvard University Extension School and a third-generation nurseryman. Jack is an active member of the International Lilac Society. In 1995 he was named a Fellow of the Eastern Region of the International Plant Propagators’ Society and in 2004 he was awarded their Award of Merit.

Allan Armitage is a professor of horticulture at the University of Georgia. He is the author of eleven books on garden topics, including Herbaceous Garden Perennials, a Treatise of Identification, Culture and Garden Attributes now in its third edition, Armitage’s Native Plants for North American Gardens, Armitage’s Manual of Annuals, Biennials and Half Hardy Perennials, and the Photographic Encyclopedia of Herbaceous Plants. His research focus is on new crops for the garden, greenhouse, and field.

Kate Cardamone has been exploring the Arnold Arboretum for three decades. Her relationship to the Arboretum began as a visitor, then as a volunteer and employee, culminating in two decades of teaching field studies through the Landscape Institute. Kate is a lifelong artist.

Dennis Collins is curator of plant collections at Mount Auburn Cemetery in Cambridge. He has taught conifer classes at the Arnold Arboretum since 1997. He has a masters degree in botany from the University of Edinburgh and the Royal Botanic Garden, Edinburgh, Scotland.

Julie Coop began her career at the Arnold Arboretum in 1988 as a grounds crew member at the Case Estates in Weston. She has worked as assistant superintendent and then superintendent of grounds and is currently the Arboretum’s manager of plant health.

John DelRosso has an associate’s degree in forestry from Essex Agricultural and Technical Institute and is a graduate of the Consulting Academy of the American Society of Consulting Arborists. A certified arborist with the International Society of Arboriculture and the Massachusetts Arborists Association, John is the head arborist at the Arnold Arboretum.

Peter Del Tredici is senior research scientist at the Arnold Arboretum and lectures in the department of landscape architecture at Harvard’s Graduate School of Design. While he does research in various areas of the plant sciences, his primary goal has always been to bridge the gap between botany and horticulture.

Michael Dosmann is the curator of living collections at the Arnold Arboretum. He holds a doctorate from Cornell University as well a BS and MS from Purdue and Iowa State Universities, respectively. His interests include the eco-physiology and taxonomy of woody plants as well as their use as ornamentals.

Christie Dustman, principal of Christie Dustman & Company Inc., is a certified landscape designer and has been designing in the Boston area for 11 years. Working closely with A Yard & A Half, a landscape construction company, she offers a design-build approach to landscape solutions. Examples of her work can be viewed at www.christiedustman.com.

Kanchi Gandhi earned his doctorate from Texas A&M University. He is the editor of the International Plant Name Index for the Harvard University Herbaria; nomenclature editor of the Flora of North America; associate editor of Rhodora, the journal of the New England Botanical Club; and associate nomenclature editor of Taxon, International Journal of Plant Taxonomy, Phytology and Evolution.

Erik Gehring is a professional photographer and frequent visitor to the Arnold Arboretum. He has shown his work extensively throughout eastern Massachusetts and New Hampshire. Examples of his work can be found on his website at www.erikgehring.com.

Carol Govan helps others to explore the connection between art and science and to learn the observational skills needed for both. She is a professional artist and teacher whose insight has engaged scores of students at museums and gardens in Massachusetts.

Abby Hird is the 2008 Putnam Fellow at the Arnold Arboretum where she is heading up initiatives in plant conservation and sustainable work practices. Abby coordinated a graduate student community garden while completing the Longwood Graduate Program in Public Horticulture at the University of Delaware.

Luiz Ibanhez is supervisor of maintenance with NatureWorks Landscape Services, Inc. in Walpole, MA where he is responsible for the horticultural training of employees. A native speaker of Portuguese, he has worked in the green industry for more than eight years.

Peter Jeswald has a degree in residential design from the University of Massachusetts and more than 30 years experience in the construction industry, designing buildings and landscapes for residential and commercial customers. He is the author of several books, including The Patio Ideas Book; How to Build Paths, Steps, and Footbridges; The Basement Ideas That Work Book; and Homework: Ten Steps to Foolproof Planning before Building.

Jen Kettell, horticultural technologist at the Arnold Arboretum, oversees The Levitt Garden of Shrubs and Vines. She is a certified arborist and an accredited organic land care professional. She began work at the Arboretum as an intern in 2003.

Tim Korytoski is co-owner of North Country Landscapes. Previously Tim worked as a construction supervisor for high-end landscape projects in the greater Springfield area. He has a degree from the University of Massachusetts in landscape construction.
Dan McCallister has worked in the green industry for more than ten years, first with water system hydraulics and irrigation. For the last six years he has worked on the design, installation, and service of outdoor low-voltage lighting. He is a principal of Nite Image, his full service outdoor landscape lighting company, with clients in New York, Rhode Island, and Massachusetts.

David McCoy is the principal of Geographia Landscape Design, providing residential design and build services for more than 10 years. David has a graduate certificate in landscape design from the Landscape Institute, a bachelor of fine arts degree from the joint Tufts University/School of the Museum of Fine Arts program, and a diploma in sculpture from the School of the Museum of Fine Arts. Geographia’s web site is www.geographialandscape.com.

Peter Medaglia traded a career in marketing for a pair of garden clogs and a lifetime of dirty fingernails. Gold Medal Gardens, his award-winning landscape design and construction company, specializes in client-driven, site-specific solutions for personal landscapes.

Leslie Mehrhoff is director of the Invasive Plant Atlas of New England, a USDA-funded project designed to provide comprehensive and up-to-date information about invasive plants in New England.

Julie Moir Messervy has inspired a new generation of landscape designers and homeowners to create gardens and parks as soul-nurturing places. Her first book, Contemplative Gardens, was named “one of the ten best garden books of the year” by The New York Times. Her second book, The Inward Garden, won the Garden Writers Association of America Gold Medal in 1996. In 1999, Messervy completed the award-winning Toronto Music Garden, a collaboration with cellist Yo-Yo Ma and the City of Toronto.

Nancy Rose, a horticulturist, recently moved to Boston to become editor of Arnoldia at the Arnold Arboretum. For the previous seventeen years, she worked in extension horticulture and woody plant research in Minnesota. Nancy is also a garden writer, photographer, and co-author of Growing Shrubs and Small Trees in Cold Climates.

Richard Schulhof is deputy director at the Arnold Arboretum, where he works with programs in horticulture, education, and long-range planning. A graduate of the University of Delaware’s program in botanic garden administration and museum studies, Schulhof served for six years as executive director of Descanso Gardens near Pasadena, California. His current work includes research regarding management response to hemlock woolly adelgid and associated forest disturbance.

Claire Sawyers has been director of the Scott Arboretum of Swarthmore College since 1990. She spent six years of her youth in Japan, and returned there to work with landscapers while pursuing her undergradu- ate degree in ornamental horticulture at Purdue University. After graduation she worked for Kalmthout Arboretum in Belgium and private gardens in Britain and Normandy before returning to Purdue to earn a master’s degree in horticulture. She also studied public horticulture administration in the Longwood Graduate Program at the University of Delaware and Longwood Gardens.

Karen Sebastian is a registered Landscape Architect in Massachusetts and is principal of the firm Karen Sebastian, LLC, Landscape Architecture, which specializes in residential design. As an adjunct professor she has taught planting design studios at the University of Massachusetts, Amherst, and she teaches regularly for the New England Wild Flower Society.

Kim Smith draws on over twenty years’ experience as an interior and garden designer. She uses her collaborative skills to create highly individualized, livable spaces. Kim’s love of textiles drew her to interior design, and passion for flowers to garden design. Her book, Oh Garden of Fresh Possibilities!, will be available this fall.

Edmund C. Snodgrass started the first green roof nursery in the United States and has collaborated on green roof research with colleges and universities. He is owner and president of Emory Knoll Farms Inc. and Green Roof Plants in Street, Maryland, specializing in plants and horticultural consulting for green roofs. They supply plants for over one million square feet of green roofs in 20 states as well as internationally.

Kyle Stephens, a certified arborist, has worked as an arborist for the Arnold Arboretum since 2005. Prior to this he worked at Brooklyn Botanic Garden.

Judith Sumner is a botanist with interests in flowering plant systematics, morphology, anatomy, and medicinal plants. She is the author of American Household Botany and The Natural History of Medicinal Plants and numerous scientific publications. She is currently writing a college botany textbook on the symbiotic interrelationships between plants and other organisms. She is on the faculty of the Massachusetts Academy of Math & Science at Worcester Polytechnic Institute.

Judith B. Tankard is a garden historian and the author of numerous articles and six books, including biographies of Ellen Shipman and a forthcoming volume on Beatrice Farrand. Her previous books include The Gardens of the Arts and Crafts Movement, Gertrude Jekyll at Munstead Wood, and A Place of Beauty: The Artists and Gardens of the Cornish Art Colony. An instructor at the Landscape Institute since 1987, she serves on the board of the Beatrice Farrand Society.

Kathy Tracey and her husband Chris run Avant Gardens, where they propagate what they sell. They grow choice plants that are often difficult to propagate and not commonly found in mass-market garden centers. Container plantings and display gardens around the 18th-century farmhouse where they live and work showcase their horticultural and design talents.

Rufin Van Bossuyt, a retired system forester, has been a member of the American Chestnut Foundation since 1991, and was a founding member of the Massachusetts Chapter of the American Chestnut Foundation. He has also been a national board member of the American Chestnut Foundation for the last 5 years. He has lectured on the American chestnut both in Massachusetts and nationally at conferences for professional arborists and foresters.

Ruth Ann Wetherby-Frattasio, an award-winning botanical artist and instructor with a degree from the Massachusetts College of Art, has taught art for 35 years. She exhibits nationally in juried botanical shows. She is a member of the American Society of Botanical Artists and the American Orchid Society.
Registration Information

The Arnold Arboretum’s adult education program offers many types of classes for adult learners. These are listed chronologically with dates and times noted with each class description. Letters in brackets designate meeting places. See the key to meeting places on page 11. See page 10 for an overview of classes by topic. If you have questions, contact Pamela Thompson, manager of adult education, at 617.384.5277.

Registration by Mail or Telephone

To register by mail for adult education classes, please complete the form on page 29 and 30. An additional registration form is provided on page 31 and 32 for your convenience. You may telephone your registration to the registrar at 617.384.5251.

Registrations are processed upon receipt and confirmed in writing. You may pay by cash, check, or credit card (Visa, MasterCard, or American Express). If you are registering for more than one person, please attach a separate sheet with names, addresses, and telephone numbers. Note that all registrations, including those made by telephone using a credit card, will be confirmed in writing. Consider your registration to be complete when you have received written confirmation.

Mail registration form to:
Adult Education Department
Arnold Arboretum
125 Arborway
Boston MA 02130

Fees and Membership

Fees for classes are listed with each class description. Members receive a discount of up to twenty percent for most classes. If you are a current member, or if you are enclosing a new or renewed membership with this registration, you are entitled to pay the member rate. If our records do not indicate that your membership is current, we must charge for classes at the nonmember rate. Please write separate checks for membership and class registration. For more information, call 617.384.5766 or visit our website at arboretum.harvard.edu.

Harvard University’s Tuition Assistance Plan (TAP) for faculty and staff may be applied only toward classes with class numbers preceded by “BOT,” “EDU,” “HOR.”

Children at Classes

We regret that it is not possible to include babies or children in classes designed for adults.

Parking for Classes at the Arboretum

Hunnewell Building [HB]
Monday through Friday, for daytime and evening classes, students may drive through the main gates and park in front of the Hunnewell Building if space is available. Otherwise parking is along the Arborway. For all weekend classes and events, the main gates remain closed and parking is along the Arborway.

Dana Greenhouse [DG]
For weekday, evening, and weekend classes, students may park in designated spaces and along the greenhouse drive in front of the Bonsai House unless otherwise directed. Do not block any entrances to the shrub and vine garden or access drives surrounding the greenhouse facility. Please do not park on the grass.

Note: At both locations be aware of Arboretum visitors (especially children), employees, and Arboretum equipment and vehicles when parking at and leaving our facilities.

Cancellations and Refunds

You may cancel a class registration and receive a partial refund by calling the adult education department five business days prior to the first class. With such cancellations, a $5.00 per class cancellation fee will be deducted. We regret that no refunds or credits can be given for withdrawals from classes in progress or for classes you have not attended.

If registration numbers are insufficient, we reserve the right to cancel a class. In this case, a full refund will be issued.

Weather Cancellations

Class cancellations due to inclement weather are announced by recorded message at 617.384.5277. If you think that your class may have been canceled, please call the adult education department at this number.

Confirmation of Attendance

The adult education department does not maintain attendance records and cannot confirm your attendance at past class meetings. If you need proof of attendance at classes, you are responsible for obtaining your instructor’s signature at each class meeting. To request a list of all the Arboretum classes for which you have registered, please contact Pamela Thompson, manager of adult education, at 617.384.5277.

Professional Credits

Certified members of the Association of Professional Landscape Designers (APLD), Massachusetts Certified Arborists (MCA), and Massachusetts Certified Landscape Professionals (MCLP) may earn continuing education units for attending selected Arnold Arboretum classes. These classes and the number of credits offered are indicated by the following: (APLD: #ceu) (MCA: #ceu) (MCLP: #ceu). Other classes may also be accepted for accreditation. Contact the accrediting organization for approval.

Tax Deductions

Income tax deductions may be allowed for education expenses undertaken to maintain and improve professional skills. Please consult your tax advisor.

Help us serve you!
Please register at least one week in advance, and write separate checks for classes and membership. Thank you.
Registration
Classes fill quickly. Please register early (please print).

NAME

STREET

CITY

STATE

ZIP

HOME PHONE

BUSINESS PHONE

EMAIL

Method of Payment
☐ Check or money order payable to the Arnold Arboretum
☐ VISA  ☐ MasterCard  ☐ American Express

AMOUNT (total from other side)

CREDIT CARD #  EXP. DATE

CARDHOLDER NAME

SIGNATURE

Are you a current member of the Arnold Arboretum?
☐ Yes  ☐ No  If yes, under what name is your membership listed?

Please suggest new course ideas or make comments below.

Registration by Mail or Telephone
To register for Arnold Arboretum classes, please complete this form. If you are registering for more than one person, please attach a separate sheet with names, addresses, and telephone numbers. Credit card registration may be made by telephone 617.384.5277.

Registrations are processed upon receipt. You may pay by cash, check, or credit card (MasterCard, VISA, or American Express). All registrations will be confirmed in writing. Your registration is complete after you have received written confirmation.

Mail registration form to
Adult Education Department
Arnold Arboretum
125 Arborway
Boston MA 02130

If you are a current member, or if you are enclosing a new or renewed membership with this registration, you are entitled to pay the member’s discounted rate. If our records do not indicate that your membership is current, we must charge for classes at the nonmember rate.

Please write separate checks for membership and class registration.

Join the Friends of the Arnold Arboretum
☐ Yes! I wish to join the Friends of the Arnold Arboretum at the indicated level of membership.
☐ Student/Teacher $20
☐ Individual $35
☐ Household $50
☐ Sustaining $100
☐ Organization $150
☐ Sponsor $200
☐ Patron $500
☐ Benefactor $1000

My Name and Address (please print)

MR., MS., MRS.

STREET

CITY

STATE

ZIP

Payment can be made with a check, money order, or credit card (Visa, MasterCard, American Express only). Please make checks payable to the Arnold Arboretum and send a separate check for payment of classes. Students and teachers, please send a copy of your I.D. with this form.

☐ My check is enclosed  ☐ Please charge my credit card: ☐ Visa ☐ MasterCard ☐ American Express

CREDIT CARD #  EXP. DATE

CARDHOLDER NAME

PHONE

SIGNATURE
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**MEMBER CARD**

2nd MEMBER CARD

(household level and above only)

I would like to receive information about news/events via email.

**EMAIL ADDRESS(ES)**

---

Help Us Make New Friends! Do you know someone who would like information on our classes, free tours, and member benefits? Please provide their names and addresses and we will put them on our mailing list.

MR., MS., MRS.

**STREET**

**CITY** **STATE** **ZIP**

---

If you are already a member, thank you!
Please give this membership application to a friend.
Additional Registration

Classes fill quickly. Please register early (please print).

NAME
STREET
CITY STATE ZIP
HOME PHONE BUSINESS PHONE
EMAIL

Method of Payment

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☐ VISA ☐ MasterCard ☐ American Express

AMOUNT (total from other side)

CREDIT CARD # EXP. DATE
CARDHOLDER NAME
SIGNATURE

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☐ My check is enclosed ☐ Please charge my credit card: ☐ Visa ☐ MasterCard ☐ American Express

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### September

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<tr>
<th>START COURSE #</th>
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<tbody>
<tr>
<td>13 WAL 297</td>
<td>On the Wing: Migratory Butterflies</td>
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<tr>
<td>16 WAL 105</td>
<td>Taking Stock of the 2008 Growing Season</td>
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<tr>
<td>18 HOR 100</td>
<td>Steps to a Better Garden</td>
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<tr>
<td>20 BOT 293</td>
<td>Invasive Plant Ecology</td>
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<tr>
<td>20 WAL 148</td>
<td>Why Does an Arboretum Need a Curator?</td>
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<tr>
<td>23 BOT 100</td>
<td>Introduction to Botany</td>
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<tr>
<td>23 HOR 143</td>
<td>Wintering-over Tender Plants</td>
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<tr>
<td>27 HOR 303</td>
<td>Propagating Trees and Shrubs from Cuttings and Seeds</td>
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### October

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<th>START COURSE #</th>
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<tr>
<td>4 BOT 325</td>
<td>The American Chestnut: A Relic's Resurrection</td>
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<td>4 HOR 335</td>
<td>Fall Planting and Winter Care of Trees and Shrubs</td>
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<tr>
<td>7 BOT 310</td>
<td>Framework Trees of New England</td>
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<tr>
<td>14 ART 172</td>
<td>Photography for Garden Designers</td>
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<tr>
<td>18 WAL 277</td>
<td>Nature in the City: Exploring the Arboretum's Urban Wilds</td>
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### November

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<tr>
<td>1 SYM 111</td>
<td>Extending the Garden in Time and Space</td>
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<tr>
<td>8 BOT 252</td>
<td>Sampling the Conifers: Jeperus</td>
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<tr>
<td>12 BOT 349</td>
<td>Routes of Invasion: Tracing the Travels of Some of New England's Most Troublesome Plants</td>
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<tr>
<td>13 HOR 131</td>
<td>New Lows in the Garden</td>
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<tr>
<td>15 BOT 103</td>
<td>Botany is Exciting</td>
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<tr>
<td>15 HOR 209</td>
<td>Trees and Shrubs for Fall and Winter Interest</td>
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<tr>
<td>16 BOT 209</td>
<td>Understanding Botanical and Horticultural Names</td>
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<tr>
<td>18 HOR 399</td>
<td>Fluid Imagination: Water in the Garden</td>
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<tr>
<td>19 ART 180</td>
<td>Twelve Months at the Arnold Arboretum:</td>
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<td>Conversation with the Artist</td>
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### December

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<th>START COURSE #</th>
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<tbody>
<tr>
<td>5 HOR 517</td>
<td>Green Roofs and Plant Materials: An Advanced Introduction</td>
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<td>5 HOR 524</td>
<td>Maintaining a Green Roof: Best Practices</td>
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<tr>
<td>6 BOT 172</td>
<td>Introduction to Winter Tree Identification</td>
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<tr>
<td>12 HOR 190</td>
<td>Introduction to Residential Garden Design</td>
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<td>13 HOR 138</td>
<td>Aunt Rhodie's Relatives: Ericaceous Plants for the Home Garden</td>
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### January

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<tbody>
<tr>
<td>15 HOR 117</td>
<td>Visualizing Your Garden Oasis: From Dream to Realization</td>
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<tr>
<td>20 ART 309</td>
<td>The Carpenter Poets: Reflections on Wood and Trees</td>
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<td>29 WAL 100</td>
<td>The Authentic Garden: Cultivating a Sense of Place</td>
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<td>30 HOR 351</td>
<td>Local Genus—Genus Lect</td>
<td>Using Native Plants to Emphasize Garden Context</td>
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<tr>
<td>31 BOT 104A</td>
<td>Winter Tree Observations: Evergreens</td>
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<td>31 HOR 305</td>
<td>Grafting Techniques for Ornamental Trees</td>
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### February

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<tr>
<td>7 BOT 104B</td>
<td>Winter Tree Observations: Deciduous Trees</td>
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<tr>
<td>21 HOR 314A</td>
<td>Pruning in Winter</td>
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<td>24 HOR 439</td>
<td>Lighting the Garden</td>
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<td>28 HOR 331</td>
<td>Planting Design in Multiple Dimensions</td>
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### March

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<th>START COURSE #</th>
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<tr>
<td>4 HOR 191A</td>
<td>Landscape Maintenance: An Organic Approach</td>
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<tr>
<td>5 WAL 101</td>
<td>Great New Annuals and Perennials to Feed Your Plant Habits</td>
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<tr>
<td>7 HOR 314B</td>
<td>Pruning in Winter</td>
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<tr>
<td>12 HOR 111</td>
<td>Mantenimiento del Cesped y Paisaj</td>
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<td>21 HOR 336</td>
<td>Growing Plants from Seeds</td>
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<td>23 WAL 165</td>
<td>Designing Women: Beatrix Farrand and Ellen Shipman</td>
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<tr>
<td>24 HOR 191B</td>
<td>Landscape Maintenance: An Organic Approach</td>
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<tr>
<td>28 HOR 270</td>
<td>Planning Your Patio or Walkway: Creating Outdoor Living Spaces</td>
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<tr>
<td>28 HOR 229</td>
<td>Construction Details for Patios and Walkways</td>
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### April

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<tr>
<td>4 HOR 195</td>
<td>Planting and Transplanting: Demonstrated Techniques for Trees and Shrubs</td>
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<tr>
<td>6 ART 110</td>
<td>Introduction to Botanical Drawing and Painting:</td>
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<td>Woody Plants</td>
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<tr>
<td>7 HOR 127</td>
<td>Do Manutenção de Jardins em Português</td>
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<td>7 HOR 173</td>
<td>Growing Vegetables in the City</td>
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<td>16 HOR 121</td>
<td>Greening with Native Trees and Shrubs</td>
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<tr>
<td>18 HOR 481</td>
<td>Gardens and Spirituality</td>
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<tr>
<td>22 WAL 200</td>
<td>Plant Re-exploration</td>
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I would like to receive information about news/events via email.

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**Help Us Make New Friends!** Do you know someone who would like information on our classes, free tours, and member benefits? Please provide their names and addresses and we will put them on our mailing list.

**MR., MS., MRS.**

**STREET**

**CITY** *STATE* **ZIP**

---

If you are already a member, thank you!

Please give this membership application to a friend.
A bold rush of color stirs the senses this fall at the Arboretum. Then winter arrives with quiet, elemental beauty. Enjoy New England's seasonal splendor in the heart of Boston.
Events and Exhibitions

Fall Foliage Festival
A Tree-mendous Celebration
at the Arnold Arboretum

Sunday, October 26: 12:00-4:00pm
Hunnewell Building Lawn

Why leave the city to go leaf-peeping when you can come to the Arnold Arboretum for a celebration of spectacular fall foliage! Learn about the best trees and shrubs for fall color, check out the big trucks and specialized equipment used to care for our trees, and take a guided tour of our landscape, ablaze with color. Enjoy apples, cider, and other autumn treats, plus music, leaf crafts, storytelling, and more. Free. Use of public transportation strongly encouraged. Rain or shine.

Jamaica Plain Open Studios:
Artists in the Arboretum

Hunnewell Building Lecture Hall
September 17–October 10, 2008

Opening Night: Wed, September 17, 6:00–8:00pm
Open Studios: September 27-28, 11:30am–6:00pm

Local artists will exhibit Arboretum-inspired work this fall. The juried exhibiton is organized in conjunction with Jamaica Plain Open Studios.

Twelve Months:
Painting Through the Seasons
Paintings by Kate Cardamone

October 18–December 14, 2008
Hunnewell Building Lecture Hall

Reception with the artist
Saturday, October 18, 1:00–3:00pm
followed by a landscape walk with the artist

Conversation with the artist
Wednesday, November 19, 6:30pm–7:30pm
See page 18 for details.

Take an artistic journey through the calendar of the Arnold Arboretum landscape. Kate Cardamone’s paintings portray each month of the year—depicting a moment in a plant’s life cycle, reflecting seasonal changes in the light and sky, and evoking recollections of feelings and smells. Each month brings inspiration: damp snow clinging to horizontal branches in December, early sun flickering on twigs and swollen buds in March, and apple blossoms set against May’s cobalt sky.

Kate has been exploring the Arnold Arboretum for three decades. She began as a visitor, then as a volunteer and employee, including two decades of teaching field studies through the Landscape Institute. At the same time, Kate is a lifelong artist, and in this exhibition her two passions come together.

Note: The lecture hall is often used for meetings and classes. Please call 617.384.5209 for exhibition availability. See page 37 for Visitor Center hours.
Interpreting an Urban Wild
Illustrations by Anne Parker Schmalz

January 17–March 22, 2009
Hunnewell Building Lecture Hall

Reception with the artist
Saturday, January 17, 2009, 1:00–3:00pm

Artist Anne Schmalz creates illustrated interpretive signs that encourage travelers in the Bussey Brook Meadow to look closely at this unique urban wild within the Arboretum landscape. The seasonally rotated signs along the Blackwell Footpath invite visitors to notice wildflowers, seed pods, animal tracks, and signs of ecological change in a reclaimed urban landscape. The signs are sponsored by the Arboretum Park Conservancy, the advocacy group that initiated the footpath’s construction. Anne’s precise illustrations, rendered in ink and delicate watercolor-pencil, frame interpretive content in an almost poetic manner. Brought indoors for this exhibition, these signs serve equally well as works of art and educational tools.

Anne retired to Boston with her husband in 2001. They enjoy the many parklands and trails that bring Bostonians closer to nature. She has cultivated her drawing skills with classes at the Arboretum, Wellesley College, and the South Shore Art Center. She also exhibits along the Neponset Greenway in Dorchester.

Where Art and Science Meet
A Celebration of the Life and Art of Esther Heins

April 4–May 31, 2009
Hunnewell Building Lecture Hall

In large format botanical illustrations, many from the living collections of the Arboretum, Esther Heins combined her talent for drawing with a passion for flowers. She possessed an extraordinary ability to create works of both meticulous accuracy and great artistic beauty. According to Arboretum Director Emeritus Peter Ashton, “Through the eyes of Esther Heins, the intrinsic beauty of all plants becomes apparent.”

One of the great women botanical artists, Esther Heins lived in the Boston area almost all of her 99 years. This special retrospective celebrates her life and offers a rare opportunity to appreciate the subtle power of her original works of art.
Guided Walking Tours

Experience the Arboretum in a new way—take a guided tour and gain a richer understanding of this special place. Trained docents point out seasonal highlights and tell you stories the plants would tell—if they could talk! Every tour is different; you’ll hear about the science of trees, Arboretum history, future Arboretum plans, and seasonal highlights.

Tours begin in front of the Hunnewell Building unless otherwise noted, last around 90 minutes, and are geared toward adults. There is no need to register.

Private group tours, either on foot or by bus, are also available. For more information on private tours or for cancellation information due to inclement weather, call 617.384.5209.

Free Tour Schedule

Saturdays at 10:30am
September 13, 20, 27
October 4, 11, 18, 25
November 1, 15

Sundays at 1:00pm
September 7, 14, 21, 28
October 5, 12, 19, 26
November 9, 23

Wednesdays at 12:15pm
Select Wednesdays
September 10, 24
October 8, 22
November 5, 19

Fridays at 6:00pm
Last Friday tour of the season!
September 5

Scheduled Group Tours

Adult groups interested in scheduling a guided tour should contact the Visitor Center at least three weeks in advance of their visit. Group tours are 90 minutes long and cost $125 for a maximum of 20 people for a walking tour or 35 people for a bus tour. (Groups must supply their own bus.) For tour reservation information, please call 617.384.5209 or email arbweb@arnarb.harvard.edu.

Special Theme Tours

Free. Advance registration is requested. See page 24 for registration information.

Taking Stock of the 2008 Growing Season
Julie Coop, Manager of Plant Health
Tue, Sep 16, 10:30am–noon [HB]
See page 12 for details.

Why Does an Arboretum Need a Curator?
Michael Dosmann, Curator of the Living Collections
Sat, Sep 20, 1–2:30pm [HB]
See page 12 for details.

Nature in the City: Exploring the Arboretum’s Urban Wilds
Richard Schulhof, Deputy Director
Sat, Oct 18, 1–2:30pm [HB]
See page 14 for details.

Plant Re-exploration
Abby Hird, Putnam Fellow
Wed, Apr 22, 10:30am–noon [HB]
See page 25 for details.
Family Fun

Explore the Arboretum and foster a sense of wonder about nature in your child. Look for drop-in family workshops in the Visitor Center. Check our website for details: www.arboretum.harvard.edu/programs/family_activities.html. Or stretch your legs on a guided nature hike.

Take A Hike!
Nancy Sableski, School Programs Manager
Sunday, October 19, 1:30pm–3:30pm [HB]

Fall is the perfect season for a hike in the woods, so take your children on a trek through the Arboretum and explore the changes that cooler weather brings. We’ll look at falling leaves, seed pods, and signs that animals are preparing for winter. Bring water and a snack (and binoculars, if you have them), and wear sneakers or hiking boots. These hikes are appropriate for children from age 6 to 12 with an accompanying adult. Free. No registration necessary.

Getting Here

Visitor Parking & Driving Permits
Visitor parking is available around the Arboretum’s perimeter. No parking is allowed inside the Arboretum gates. Individuals with special needs may request a driving permit at the Hunnewell Visitor Center, weekdays only, from 10:00am to 2:30pm, first come, first served. For more information please call 617.384-5209. For parking for classes, see page 28.

Visitor Services
The Visitor Center, located in the Hunnewell Building, is open at the following times:

- Monday to Friday 9:00am to 4:00pm
- Saturday 10:00am to 4:00pm
- Sunday Noon to 4:00pm
- Holidays Closed

See website for holiday closings.
Telephone: 617.384.5209

Services available in the Visitor Center include:
- Staff assistance to enrich your visit
- Maps and self-guided tour brochures
- Special exhibitions, including “Science in the Pleasure Ground” and seasonal art shows
- Bookshop, featuring a large selection of books and educational items for children and adults
- Restroom facilities
- Horticultural library, open Monday through Saturday 10:00am to 4:00pm. For more information, call 617.522.1086 or email hortlib@arnarb.harvard.edu.

Enter the 2009 Lilac Sunday T-shirt Design Competition

Calling all artists! Submit your t-shirt designs for Lilac Sunday 2009. Lilac-themed t-shirts have become a tradition as beloved as Lilac Sunday itself. Submissions will be evaluated based on how well they reflect the spirit, history, and beauty of Lilac Sunday, a century-old Boston tradition. Visit www.arboretum.harvard.edu/tshirt for full details. Deadline for submissions is January 1, 2009.

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An Arboretum activity for kids of all ages

FUN WITH FALL LEAVES
Collect and press fallen leaves this autumn for fun crafts all year!

Pick up fresh fallen leaves in lots of colors and shapes. See if you can identify them before you press them.

Remember, you can’t pick plants at the Arboretum, but you can collect leaves that have fallen to the ground.

Spend the fall making a plant press and collecting and drying leaves. Then over the winter, take the leaves out of your plant press and glue them onto paper to make collages (rubber cement or craft glue work well). Cover your creations with clear contact paper so they will last a long time. For collage ideas, there is a great book in the Hunnewell Visitor Center bookshop: Look What I Did with a Leaf! by Morteza Sohi.

Can you find these leaves in the Arboretum?

- sugar maple
- striped-bark maple
- red oak
- ginkgo
- river birch
- tulip tree

You can make:

- Placemats
- Ornaments
- Cards
- Bookmarks

For more leafy celebrations, don’t miss the Fall Foliage Festival at the Arnold Arboretum on October 26. See page 34 for details.
Scientists press plants in order to study them closely. A collection of dried and pressed plants is called a herbarium. A herbarium is like a library, but with pressed plants instead of books. The Harvard University Herbarium is one of the largest in the world, with over 5 million pressed plants, including about 130,000 that are stored at the Arboretum. They are better than photos because you can see more detail. When a plant is dried and pressed properly, it can last for hundreds of years!

Want to see some of the plants in the Arnold Arboretum Herbarium, like the maple pictured here? Go to http://www.arboretum.harvard.edu/plants/herbarium.html and type in the name of your favorite plant to see if we have it in our collection.
The Arnold Arboretum grows 4,500 kinds of hardy trees, shrubs, and vines. They are arranged in botanical sequence and labeled with name and country of origin. Frederick Law Olmsted designed the grounds, and the plantings were laid out by Charles Sprague Sargent. Special plant collections include the Larz Anderson Bonsai Collection, the Bradley Rosaceous Collection, and the Leventritt Shrub and Vine Garden.

The grounds are open daily without charge from sunrise to sunset. For Visitor Center hours and services see page 37.
Outstanding Plants for New England

Members' Fall Plant Sale
Sunday, September 21, 2008

For the past five years, the Arboretum has hosted its Fall Plant Sale for members of the Friends of the Arnold Arboretum at the Dana Greenhouses, where the plants on offer have been propagated, raised from cuttings and seedlings, and nurtured by living collections staff. The considerable amount of planning, care, and professional attention given to the trees, shrubs, vines, and perennials in the plant sale create added value, conveying significance as an integral part of the Arboretum's annual horticultural efforts. At the sale, the expertise of staff and the proximity of mature specimens on the grounds help members make the best choices for their own gardens and landscapes.

The Arboretum will hold its 28th Annual Fall Plant Sale on Sunday, September 21, 2008. The sale area will open at 10:00am to the general membership, though members at the Sustaining level ($100) and above may enter beginning at 9:00am. Plants on offer include noteworthy and hard-to-find woody and perennial species as well as new and interesting cultivated varieties. Before or after the sale, members may participate in guided tours of the Leventritt Garden of Shrubs and Vines, see the beloved Larz Anderson Bonsai Collection, or enjoy a self-guided tour or stroll on the grounds.

A detailed catalog of plant sale offerings and free plant vouchers will be mailed to members in August. If you are not currently a member, you may join on the day of the sale and immediately receive benefits such as early entry or additional free plants. If you have any questions or would like to join the Friends of the Arnold Arboretum prior to the sale, please contact the membership office at 617.384.5766.

Members Make a Difference

Help us grow! Join the Friends of the Arnold Arboretum and receive:

- Free or discounted admission to gardens and arboreta worldwide
- Subscription to Arnoldia, our quarterly magazine of horticulture and botany, and Silva, our semiannual newsletter, adult education catalog, and visitor guide
- Admission and free plants at our Members' Fall Plant Sale
- A 10% discount on books and gifts at the Arboretum bookstore
- Membership rate on courses and lectures
- Discount on plant purchases at participating nurseries

Please join today at one of the following membership levels to begin receiving your benefits. Additional benefits are offered at the Sustaining level and above.

- Student/Teacher . . . . $20
- Individual ........ $35
- Household .......... $50
- Sustaining .......... $100
- Organization ....... $150
- Sponsor ............ $200
- Patron ............. $500
- Benefactor .......... $1000

Your membership helps support the care of our 265-acre landscape and living collections, research programs, and public and professional education.

Please contact the membership office at 617.384.5766, or email membership@arnarb.harvard.edu for more information.
In our Collection

Autumn Leaves by Elizabeth Russell
A bibliographic mystery

For centuries the precise rendering of plants has aided the practice of their identification, and botanical illustration continues to be an important component of plant study. The Arnold Arboretum Library has a rich collection of works featuring fine examples of the art, from beautiful depictions of Japanese flora by von Siebold and Zuccarini to the precise renderings C. E. Faxon created to accompany Charles Sprague Sargent’s Silva of North America. The work of the best botanical illustrators satisfies both aesthetic values and scientific requirements. Such is the case with a curious volume in the Arboretum’s collection, Autumn Leaves by Elizabeth Russell.

Although Elizabeth’s name appears on the back cover, the volume of 10 original watercolors lacks a title page or any other bibliographic information. There is a handwritten date “December 25, 1851” inscribed on the flyleaf that appears to be in the same hand as the common and botanical names accompanying each plate. Someone, at some time, has penciled in “Amelia Russell?” above the date. The library would like to know more about the origins of this mysterious book and its talented creator and ask readers familiar either with the book or Elizabeth or Amelia Russell to email the library at hortlib@arnarb.harvard.edu.

Learn the fine art of botanical illustration at the Arboretum. See page 23.