Field Botany students were excited about the next day’s lab – we were going to sample white pines (Pinus strobus) on campus to learn about their demography. It turned out that the weather was indeed extreme, but just a hair shy of “insanely extreme” so we went out anyway. For nearly two hours we all got soaked (and I mean soaked) in a cold, late October storm. Yet we managed to come back into the lab with data on how pine survival and cone production changes with tree size, how likely it is for seedlings to survive, and data from tree rings that told us how to relate the size of a tree to its age. From all of this we were able to construct a mathematical model of the white pine population behind the Science Center, allowing us to ask questions like, “what happens to the population growth of pines if more seeds are eaten?” or, “what if mortality is very high for older trees?” Not bad for two hours in the pouring rain!

This was just one of the many concepts that we explored in Field Botany (BISC / ES 217) last semester, from drawing wildflowers and ferns to designing and running greenhouse experiments on how plants interact. But just what is Field Botany? This is a central question that I kept coming back to while designing the course. (Imagine a math professor constantly wondering what calculus is!) This hopefully does not point to any profound shortcomings of my teaching ability, but rather to the complexity of the modern field of Botany.

Botany has changed dramatically in just a few decades – perhaps most poignantly here at Wellesley with the loss of an independent Botany Department and the botany major. On the surface this may seem to indicate a reduced interest in plants, but I
Notes from the Director
Spring 2010 – Hello from Wellesley!

There’s something about the approach of spring in the
greenhouses, when the sun gets a little higher in the
sky and the plants that slumbered through the shortest
days of winter put out new growth – the light filtering
through fresh young leaves is just spectacular, an
especially welcome sight when the outdoor
landscape is still mostly dormant.

Late winter has not been quiet here,
however. A short feature in The Boston
Globe brought a big spike of visitors
that continues even now. One morning
last week a microbiology class from Olin
College taught by Jean Huang ’01
sampled leaf surfaces while botanical
artists from Sarah Roche’s Techniques
class captured plants on paper from
their artist’s stools scattered around the
greenhouses, and Wellesley students
from the Environmental Horticulture
class worked on their own plant sketching
assignments, peeking at the artists’ work as
they walked by. A former science teacher
walking through the greenhouses for the first
time commented on the different ways people
were engaged with plants. And this was all before the cover
feature in the Winter issue of the WCAA Magazine
Wellesley.

Last fall we added more Wellesley students to our Botanic
Gardens team in a great new way. Our first Dorothy Thorndike
Intern, Jizhou Wang ’11, brings a lot of energy, enthusiasm,
and creative ideas to her role, and has been especially helpful in
our outreach events for students. A double major in math and
economics, Jizhou had discovered the botanic gardens on her
own, drawn in by the Robert Frost Poetry Walk and the labels
on the trees, which fed her long-standing fascination with plants.
Jizhou is planning a series of activities for students focusing on
the arrival of spring in the gardens, and BGSAC students
supplied prints of old

WCFH Memorial Gift Fund

Wellesley College students often come to the Friends of
Horticulture for financial assistance with their plant science
internships, research, and travel to present research.
We are able to help with funds from our Memorial Gift
Fund. These well used and much appreciated grants are
only possible because our friends give gifts in the memory
of some wonderful folks who found pleasure in many facets
of Wellesley College including its Greenhouses and Botanic
Gardens. If you would like to remember a special friend and
enrich the lives and learning of Wellesley College students
in their study of plant science and related topics, please
consider a donation to the WCFH Memorial Gift Fund.

Contributions may be sent to the Friends Office:
Wellesley College Friends of Horticulture
106 Central Street
Wellesley, MA 02481-8203

Please make your check payable to
“WCFH Memorial Gift Fund”
Creating an Edible Forest Garden
by Melanie Kazenel ’10

The Wellesley College Botanic Gardens is currently embarking upon a new and dynamically evolving project to create an Edible Forest Garden in the meadow below Wellesley’s Whitin Observatory. The garden will serve as a model of ecologically informed food production on campus and will function as an educational resource for the community. Students and Botanic Gardens staff will help design and build the garden, under the guidance of Dave Jacke, a sustainable landscape designer (and brother, son, and grandson of Wellesley alumnae!).

This garden’s development is still very much in its initial planning stages. To contribute to the design process, I spent the summer and fall of 2009 conducting interdisciplinary research on the observatory meadow, the site of the future garden. My goal was to characterize and document baseline conditions on the meadow in order to inform the garden’s design and development.

Characterizing the meadow ecosystem has been a dynamic, investigatory process. Beginning with basic observations of plant community composition across the meadow, my research has evolved to focus on examining soil characteristics within the patch of meadow where the garden will be constructed.

This fall, I dug two meter-deep trenches in the patch, taking samples from each of the four soil horizons I was able to distinguish. Since then, I’ve analyzed these samples to examine variation in pH, nutrient content, and mineral composition both by depth and between the two sampling sites. Certain soil characteristics – such as concentrations of nutrients like calcium, sulfur, and phosphorus – seem to be relatively consistent both with depth and between the two trenches. More notable variation, however, seems to be present with regards to other factors. For instance, in the top layer of soil, pH in the trench located at the top of the meadow’s slope was lower on average than pH in the trench toward the slope’s bottom.

In moving forward with the project, these data will be used to inform garden composition and layout. Based upon factors such as nutrient content and pH, plant species can be chosen that are most compatible with existing conditions.

The creation of an Edible Forest Garden at Wellesley promises to be an exciting opportunity to consider the complexity of ecosystem dynamics within the context of sustainable agricultural production. As the project moves forward, it will undoubtedly provide further opportunities for student and community involvement. Stay tuned!

Permaculture

Forest gardens – agricultural systems designed to mimic forest composition – are created using principles of permaculture, a method of small-scale sustainable agriculture pioneered in Australia in the 1970s. Permaculture draws upon ecological principles to create systems of food production that exist as functional ecosystems. Practitioners of permaculture aim to create agricultural systems that are low-impact and self-sustaining, thus avoiding many of the harmful environmental effects of traditional agriculture.

Permaculture is gaining popularity worldwide through a largely grassroots, actively developing movement. Practitioners in New England and beyond have formed networks to share ideas and have created education-based organizations that regularly hold permaculture workshops and trainings.

Colleges and universities are offering permaculture courses and developing demonstration gardens, and a number of consulting and design firms have emerged. With its Edible Forest Garden, the Botanic Gardens joins the experiment in a promising, developing concept.

Dave Jacke on Edible Forest Gardening

“Edible forest gardening is the art and science of putting plants together in woodlandlike patterns that forge mutually beneficial relationships, creating a garden ecosystem that is more than the sum of its parts. You can grow fruits, nuts, vegetables, herbs, mushrooms, other useful plants, and animals in a way that mimics natural ecosystems. You can create a beautiful, diverse, high-yield garden. If designed with care and deep understanding of ecosystem function, you can also design a garden that is largely self-maintaining. In many of the world’s temperate-climate regions, your garden would soon start reverting to forest if you were to stop managing it. We humans work hard to hold back succession—mowing, weeding, plowing, and spraying. If the successional process were the wind, we would be constantly motoring against it. Why not put up a sail and glide along with the land’s natural tendency to grow trees?”
Fairy Rings – Legend and Fact

by Mary D. Coyne, Ph.D. (Wellesley MA ’61) 
Professor Emerita, Department of Biological Sciences

I stopped in my tracks and gasped. The words of my Irish mother rumbled in my head and stopped my feet from moving. “Don’t ever enter a fairy ring.” And there was one in front of me. In Wellesley! In the Arboretum!

I soon realized my reaction was ridiculous and my scientific curiosity overcame my Irish roots as I bent to examine the ring more closely. Clusters of broad-capped mushrooms were laid out in an almost perfect circle. We are all familiar with finding clusters of mushrooms in wooded areas but the “fairy ring” with its circle of white mushrooms makes a dramatic statement against the ground cover of pine needles and oak leaves. It is hard to imagine that such a perfect arrangement and organization would occur naturally. Hence fairy rings have generated a number of superstitions and myths among different cultures.

Legend has it that when the original three kings of Ireland were defeated by invaders, they used their magical powers to become invisible. While the conquering humans ruled the land, the spiritual domain or “otherworld” was claimed by the original inhabitants. They descended beneath the surface to live in mounds and hills called sid and were called “the people of the hills.” This subterranean lair is thought of as an idyllic realm. The males were called Fear-sid meaning “man of the hills” and the female counterparts Ban-sid for “woman of the hills.” These words eventually evolved into “fairy” and “banshee” which are still common words in Celtic folklore.

When one couples these ancient tales with the influx of Christian ideas of heaven and hell and good and evil, it is easy to see why “fairies” who inhabit a lower world would be thought to indulge in mischievous and sometimes sinister behavior. It is these invisible fairies who dance all night and leave a ring of trampled grass in the morning. Anyone who is unfortunate enough to enter such a fairy ring will be immediately enthralled with the music and dancing and will dance till they are exhausted or possibly die. Since the victim becomes invisible to observers outside the ring it is difficult to rescue the enraptured dancer. Days and even years may pass before they are rescued even though it only seems like minutes to the captive. Certainly a place to avoid.

The myths are doubtful but the science is not completely clear either. Fairy rings can also be rings of dead grass or unusually luxuriant green grass circles. Within the circle and under the surface is a large interconnected threadlike mycelium. The mushrooms which may appear are the fruiting bodies from this hidden network and contain the reproductive portion, that is, the spores. Many fairy rings are believed to be composed of just one large underground plant cell with multiple nuclei.

There are two types of rings. The rings found in the woods are called tethered because the fungi live in association with trees. The Arboretum ring would be a tethered ring. Rings found in meadows are free because they are not connected with other living organisms. The meadow fungi can affect the grasses in two different ways depending on the individual species of fungus or the type of association with the roots of the grass. For example, the mycelia of the fungi may become so dense that water movement into the soil is inhibited, causing the plants to discolor and leave a ring of dead tissue. Other types of fungi have the opposite effect, that is, they promote rapid luxuriant growth due to the breakdown of organic matter or the release of growth-stimulating plant hormones. The fungi continue to grow and the mycelium enlarges year after year, expanding the circle. In the western US, parts of some rings are 600 years old.

Fairy rings may appear in a nicely kept lawn as well as in wooded areas. The owner of the lawn fixated on a perfect green expanse would be better off dancing with the fairies than trying to get rid of the ring. The nutrient source for the fairy ring may be old tree stumps or roots, especially if the area was previously wooded. The rings will eventually disappear after many years when the rings expand to meet. Otherwise the old nutrient-producing wood will have to be removed or the mycelia will have to be excavated, blended into all the soil and spread over the lawn. It’s either patience or a lot of work.

There are probably 40 to 60 different species of mushrooms which can grow as fairy rings, but the best known is the fairy ring champignon, Marasmius oreades also known as the “Scotch Bonnet.” It is an edible mushroom usually found in lawns and grassy areas from May to September. However, it is easily confused with two other highly poisonous mushrooms and more importantly, you wouldn’t want to pick mushrooms out of a dancing ring and be at the mercy of a vengeful fairy.

WCBG fairy ring Fall 2009 (Photo by Mary Coyne)

Bibliography
Wikipedia, Fairy Ring.
Test Your Spice Knowledge

The 2009 Greenhouse Light Show on December 3 featured spices of the world. Plants produce a huge variety of chemicals to protect themselves from pests, disease, and herbivores. We find many of these chemicals to be quite tasty. In addition to flavoring food, spices are used as coloring and preservative agents. Investigating traditional medicinal uses of some spices has resulted in new drugs. At the Light Show, Dorothy Thorndike Botanic Gardens Intern Jizhou Wang ’11 played the village wise woman, highlighting the medicinal properties of ginger and turmeric from her “village pharmacy” at the bench in the Tropic House. Jizhou explained, “Ginger has been important in Chinese medicine for many centuries. Its anti-inflammatory properties are said to alleviate pains and fever. Turmeric is nicknamed ‘nature’s healer.’ Curcumin, the chemical compound that gives turmeric its yellow color, has antibacterial, anti-inflammatory, antiviral, and antifungal properties. In India, people rubbed fresh turmeric on their wounds. It is a powerful antioxidant that may be efficacious against cancer and cystic fibrosis.”

Student research on spices for the Light Show turned up many interesting facts.

What do you know about spices? Take this quiz and see!

1. What is the culinary difference between an herb and a spice?
2. This spice, by monetary value, is the most widely traded spice in the world. It is found on almost every dinner table in America.
3. Vanillin, a compound chiefly found in vanilla, is also found in which other of these foods: roasted coffee, oak-aged wine, olive oil, lychee, maple syrup.
4. European explorers gave this New World spice its name because they thought it combined the flavors of cinnamon, nutmeg and cloves.

During the trip to Scottsdale, Ruth and her sister Mary Waldo ’44 visited local nurseries. None of the golden barrel cacti they found were large enough. Then they found a large nursery whose employee drove them out to the larger stock of plants in the back lot, where he said, “Pick which one you want.” Ruth’s hand-picked golden barrel cactus was boxed and shipped back to the College. When the cactus arrived, its spines were covered by hundreds of styrofoam peanuts. It didn’t make it in time for the Flower Show, but it was planted in the center bed of the Desert House upon its arrival in 1985 and has been a much-admired part of the collection ever since. Its growth prompted the installation of a plexiglass shield to protect visitors from its formidable spines. In the past couple years, the cactus has begun blooming, which certainly adds to everyone’s enjoyment of this remarkable plant.

At her station in the Tropic House, WCBG Thorndike Intern Jizhou Wang ’11 shares her spice stories with Light Show visitors.
Field Botany
Continued from page 1

think that it speaks more to the changing ways by which we study plants. While biologists still mostly focus their work within specific taxa like plants or animals, we largely think in terms of processes and scales. For example, cellular biologists may largely “speak the same language,” regardless of which species they study. Similarly, I overlap broadly with many of my animal ecologist colleagues in terms of literature, interests, and training. Botany has thus expanded into many scientific disciplines and is woven throughout all scales of biology. Additionally, knowledge of plants has become increasingly relevant to today’s complex social and environmental issues.

As Kristina Jones wrote in the Fall 2008 newsletter, the changing ways in which we think about Botany have coincided with increased interest in all aspects of plants at Wellesley.

To help capture this interest, Field Botany was designed to introduce students to plant identification and systematics and also to broadly cover the multitude of ways in which plants interact with each other and their environment. Thus the course is described as a “combination of What’s that wildflower? and Why does it grow over there and not here?”

In the first part of the course we dove into the key anatomical and morphological features that are useful for identifying plants: Is that a leaf or a leaflet? Are these petals or just colorful sepals? Where’s my hand lens? We then looked into how plant systematists are able to put together evolutionary histories, and studied some of the major plant families found in the Northeast: Okay, it has multiple simple pistils and no stipules – it’s probably in the Ranunculaceae.

The students continued to explore and identify plants on their own throughout the semester as part of their “species accounts” project. Almost every week students were required to identify, draw, and describe two plant species found locally. By the end of the semester they had collectively identified nearly 100 different species of vascular plants in 51 families! I was hoping that this would be a relatively fun assignment to help get students outdoors and engage them in botany, but I was blown away by the dedication and detail that they put into their species accounts. And while I was not grading based on drawing ability, this assignment really proved to be an artistic outlet for students – many of the sketches and pressings were stunning.

Throughout the rest of the semester we worked our way up the ecological scale asking questions about individuals: What determines ‘optimal’ seed size? How do plants respond to increased carbon dioxide?; populations: How can we assess the extinction risk of rare plants?; and communities: When might plants facilitate each other? What happens to a forest after a major disturbance? In the laboratory, students worked in pairs to examine plant-pollinator interactions and tree seed dispersal and as an entire class to study forest species composition and white pine demography. They also worked individually to examine plant-plant interactions in the greenhouse. This last project was particularly fun for me as I got to interact with each student to help her design her own experiment. The student-teacher role was soon reversed as I became their lab assistant, helping to plant seedlings and wash roots, etc.

I was extremely impressed with my students’ enthusiasm and commitment, and also for their useful feedback on a new course. Field Botany will be offered again next fall and I’m already looking forward to tweaking it here and there to improve and streamline things – a process that will never end, I’m sure. Another thing that I can look forward to is the continued support from everybody at the Botanic Gardens and Friends of Horticulture. Their willingness to help and advise was invaluable and greatly appreciated by me and the students.

One of the goals of the class is to engage students in botany every time they step outside. I hope that after this class, my students will notice that taking a simple walk through the woods feels different – that there are so many questions to ask and plants to explore.
ON THE ROAD with the Friends of Horticulture

Gardens of the Lake Sunapee area, New Hampshire

Wednesday, June 23, 2010
7:30 a.m. — meet in Gray Lot to carpool
7:00 p.m. — expected return to Gray Lot

Join us as we daytrip from the College to visit private and public gardens of note.

Remembering Mary
by Anne Sinnott Moore ’56

Devoted to Wellesley, Mary Dooley Bragg ’40 served the College in every capacity. She was a frequent volunteer for her class; she was a tireless worker for every benefit sponsored by the Wellesley Alumnae of Boston; she gave happily of her time from the darkest corner of the Alumnae Hall ballroom, sorting out rummage for Clothes Cupboard to benefit the Students’ Aid Society, to the fourth-floor meeting room in Green Hall where she sat on the College Board of Trustees.

In 1983, Mary crafted a letter to local alumnae, suggesting that a group of alumnae and friends get together to support the botanical resources of the College. This appeal came hard on the heels of the Ferguson Greenhouse restoration, a costly project to prevent the total collapse of old and dilapidated buildings. As a member of the Friends of Art, Mary was aware of the support that could be achieved by such an organization, and she seized on the opportunity to do the same for the greenhouses, arboretum and botanic garden. Thus was born the Friends of Horticulture, the second of the four “Friends” groups now established at Wellesley College.

Once this new Friends group was up and running, Mary served as the first President of the organization, with an office in one small room of the Simpson Infirmary, and a card file of names on which to begin to build an organization by recruiting docents, attracting donors, and establishing an education program for members and the public. Over the intervening years Mary continued as an active and much appreciated member of the Friends of Horticulture Steering Committee until her recent death in December 2009.

Mary lived the motto of her College: “Non ministrari, sed ministrare” (not to be served, but to serve). Her spirit of service lives on in the vital organization of members and volunteers that she founded: Wellesley College Friends of Horticulture.
Ink Brush Painting Workshop
Explore ink brush painting with Nan Rumpf. Capture the essence of plants and flowers using expressive gestural strokes based on Asian ink brush painting traditions.
Saturday, April 3
1:00 – 4:00 p.m.  WCC 10 103
Members $35 / Non-Members $45

It’s a Small World — Macro-Digital Photography
Zoom in and discover Macro Photography with David Kahn. Check with WCFH office for complete list of camera requirements.
Fri., April 9 (Snow Date: Fri., April 16)
10:00 a.m. – 4:00 p.m.  DIG10 101B
Members $75 / Non-Members $95

WOW—Botany is Exciting!
Enjoy early arrival of spring in the WCBG Greenhouses as Carol Govan introduces botany to you using basic terminology, direct observations and journaling to explore seeds, roots, shoots, flowers, and fruit.
Saturday, April 10
9:30 a.m. – 2:30 p.m.  BAC 10 020
Members $50 / Non-Members $65

Elements of Drawing: Composing Spring Blooms
Observe spring waking up with Jeanne Kunze and draw spring blooms on both woody and herbaceous plants. For beginners as well as more advanced artists.
5 Saturdays: April 24; May 1, 8, 15, 22
1:00 p.m. – 4:00 p.m.  BAC 10 135
Members $225 / Non-Members $275

Botanizing Together: The Beauty Within
With Carol Govan as your guide, be amazed by the beauty of intricate form and design as you focus in on plant structure. Bring sketchbook, a plastic eraser, a kneaded eraser, 2H and 2B pencil, and hand lens.
2 Saturday mornings: May 1, 8
9:30 a.m. – 12:30 p.m.  BAC 10 041
Members $50 / Non-Members $65

Plant Painting for the Petrified
In a relaxed atmosphere, Sarah Roche guides you through the elementary stages of illustrating plants. Experiment with your first line drawings. Explore composition and color choices as you enjoy the process of creating botanical art.
4 Wednesdays: May 5, 12, 19, 26
9:30 a.m. – 12:30 p.m.  BAC 10 010
Members $125 / Non-Members $150

Landscape in Spring
Step into the garden and start painting!
Discover the joy of painting outdoors with visual artist and painting instructor Susan Swinand in the ideal setting of the College's Botanic Gardens. This course is for both the beginner and the more experienced artist working in any wet media such as watercolor, oil, or acrylic.
7 Weds.: May 5, 12, 19, 26; June 2, 9, 16
1:00 – 4:00 p.m.  WCC 10 203
Members $200 / Non-Members $250

Field Sketching in the Gardens
No previous experience necessary except a love of plants.
Carol Govan encourages you to make sketches – not formal drawings – to increase your understanding of trees and learn to focus on features useful in identifying specimens. Bring sketchbook/notebook, #2 pencil, and hand lens.
3 Tuesdays: June 1, 8, 15
9:30 a.m. – 12:00 noon  BAC 10 030
Members $60 / Non-Members $75

Beginning Botanical Watercolor Skills
Sarah Roche introduces you to watercolor paints and papers and guides you through a series of fun beginning botanical watercolor exercises. In this relaxed, informative seminar with plenty of helpful demonstrations, you will work to develop the drybrush watercolor painting skills necessary for accurate representations of botanical forms. Drawing experience required.
4 Wednesdays: June 2, 9, 16, 23
9:30 a.m. – 12:30 p.m.  BAC 10 126
Members $150 / Non-Members $200

Botanizing Together: Signs of Spring
Observe plants and their associates (insects, butterflies, mushrooms) and nature journal with Carol Govan! Bring sketchbook, a plastic eraser, a kneaded eraser, 2H and 2B pencil, and hand lens. The gardens can be damp under foot in spring. Please dress appropriately for the weather.
2 Saturday mornings: June 12, 19
9:30 a.m. – 12:30 p.m.  BAC 10 044
Members $50 / Non-Members $65

New England Flora 2010
Follow plants through the growing season with Carol Govan. Expand your creative botanical art and illustration skills through the close study of natural plant communities and seasonal changes. Between meetings, study independently and create accurate illustrations of a local habitat.
7 days:
9:30 a.m. – 2:30 p.m.  BAC 11 211
Tues., June 22
Tues., July 6
Thurs., July 8
Tues., August 17
Thurs., August 19
Thurs., September 9
Tues., September 21
Members $360 / Non-Members $450

WCBG Florilegium: Wildflowers
Carol Govan and Sarah Roche take you outside to observe botany in action in the College's meadows and then record what you see with pencil and pen sketches and dry brush watercolor. All abilities welcome.
3 days: Mon., June 28 – Wed., June 30
9:30 a.m. – 3:30 p.m.  BAC 10 141
Members $225 / Non-Members $275

ON THE ROAD
Wednesday, June 23, 2010
See page 7 of this newsletter for details of a one-day garden tour in the Lake Sunapee Region, NH.

Friends of Horticulture
Foundations in a Week

Find out what the buzz is about.
All abilities are welcome!

Sarah Roche introduces botanical drawing and painting and teaches you how to realistically render botanical forms. Instructional focus includes observational skills, drawing development, composition, design, and watercolor technique through demonstrations and tutorials.

All levels welcome.

5 days: Mon., July 12 – Fri., July 16
9:30 a.m. – 2:30 p.m.  BAC 11 101 A
Members $250 / Non-Members $300

Elements of Drawing: Larger than Life

Focus in on a flower blossom and record your observations as an attention grabbing enlargement. Under the guidance of Jeanne Kunze see flowers in a new way and record detail not possible at a smaller scale. For beginners as well as more advanced artists.

2 days: Sat., July 24 & Sun., July 25
9:30 a.m. – 3:30 p.m.  BAC 11 031
Members $150 / Non-Members $190

Elements of Drawing: Full Circle

Jeanne Kunze helps to build your drawing skills while you create a wreath illustration of branches, leaves, and flowers that keeps the summer alive all year long. For all artists.

2 days: Sat., August 21 & Sun., August 22
9:30 a.m. – 3:30 p.m.  BAC 11 032
Members $150 / Non-Members $190

Drawing in the Garden

Capture the shape and movement of flowers sitting amongst them during visits to private gardens. With Carol Ann Morley to guide you, choose to render flowers in either colored or graphite pencil. For advanced beginners.

3 days: Mon., July 12 – Wed., July 14
9:30 a.m. – 3:30 p.m  BAC 11 140
Members $250 / Non-Members $300

Rose Techniques

Explore rose morphology as Sarah Roche teaches you dry brush watercolor techniques for accurate rendering of these complex flowers. Advanced watercolor skills required.

4 days: Mon., July 19 – Thurs., July 22
9:30 a.m. – 2:30 p.m.  BAC 11 241
Members $225 / Non-Members $275

Botanical Textures in Graphite

Texture-ize your botanical illustrations by focusing in on the defining textures of leaves, bark, roots, stems, and petals with Susan Fisher as your guide. Drawing skills required.

3 days: Tues., July 27 - Thurs., July 29
9:30 a.m. – 3:30 p.m.  BAC 11 232
Members $300 / Non-Member $375

Volunteer with the Friends

Wellesley College Botanic Gardens (WCBG) depends on its many Friends of Horticulture volunteers to assist the WCBG in gardening tasks, host campus events, lead tours, work on special research projects, and share their enthusiasm with other plant lovers.

Volunteer Meetings are the third Monday of the month.

Spring 2010 Volunteer Training
Mondays 9:30 a.m. – 12:00 p.m.
March 29; April 5, 12, 26; May 17, 24, 2010

For more information about membership and volunteering, contact Friends of Horticulture.
781-283-3094     horticulture@wellesley.edu

The Mission of the Wellesley College Botanic Gardens is two-fold:
• to increase participation in science by engaging people with a diverse array of outstanding botanical resources for teaching, research, and exploration, and
• to promote scientific and environmental literacy in the college and broader communities, using aesthetic appeal and dynamic programming to stimulate interest in the natural world.

Volunteer with the Friends

Spring 2010

More classes of interest...

complete details online in our Spring-Summer Program Brochure or contact WCFH Office.

Versals: Botanically Illuminated Letters
Sat., April 17 – Mon., April 19
9:30 a.m. – 3:30 p.m.

Spring Flowers: A Studio Focus
Tuesdays, May 4, 11, 18, 25
9:30 a.m. – 12:30 p.m.

White Flowers: A Studio Focus
Thursdays, May 6, 13, 20, 27
9:30 a.m. – 12:30 p.m.

Birds in Botanicals with Kelly Radding
Thurs., June 3, 10, 17, 24; July 1
9:30 a.m. – 3:00 p.m.

Colored Pencil Fundamentals
Fri., July 9 – Sun., July 11
9:30 a.m. – 3:30 p.m.

Color Mixing for All Artists
Fri., July 30 – Sun., August 1
9:30 a.m. – 3:30 p.m.

Composition by Design
Tues., August 3 – Thurs., August 5
9:30 a.m. – 3:30 p.m.

Calligraphy for Botanicals: Italic
Saturdays: August 7, 14, 28
10:00 a.m. – 4:00 p.m.

Bouquet Garni with Sarah Roche
Mon., August 9 – Thurs., August 12
9:30 a.m. – 2:30 p.m.

Rendering Trees with Dick Rauh.
Tues., August 31 –Thurs., Sept. 2
9:30 a.m. – 3:30 p.m.
Welcome Cathy Summa

Friends of Horticulture is pleased to welcome Cathy Summa ’83 as the new Director of the Science Center. Cathy describes herself “in learning mode” since starting her position in mid-January. She already knows and loves the greenhouses and arboretum, and shares WCFH’s interest in science outreach. “I’m interested in using the natural world to help everyone develop science literacy,” she explains. “Plants are part of that world. You can’t just look at plants without thinking of the larger systems, from soil to water management to the environment as a whole.”

A Wellesley College graduate with a major in Geology, Cathy went on to receive her Ph.D. in Earth, Atmospheric and Planetary Sciences at MIT. Her most recent position was Professor and Chair of the Department of Geoscience at Winona State University in Minnesota. While at Winona she also earned an M.S. in Education with a specialty in Science Education.

In addition to administrative and facilities oversight which includes the Visitor Center and Friends office staff, Cathy will serve on WCFH’s Steering Committee. WCFH chairs and staff look forward to working with her in promoting our mutual “passion for plants” to the College and beyond. “The bustle and scurry at the Visitor Center is a clear indicator of the value the community places on the services you provide,” Cathy concludes. “The place is alive with far more than plants!”

### Diana Beresford-Kroeger

**The Power and Purpose of Trees: A Walk with Diana Beresford-Kroeger**

The Arnold Arboretum proves the perfect classroom for renegade botanist Diana Beresford-Kroeger. She will lead you among trees from around the globe, describing their subtle and not so subtle qualities that contribute to the environment. Mixing lore and chemistry, fact and theory, Diana will broaden your understanding of the inherent importance of trees to the lives of all on this planet.

**The Arnold Arboretum proves the perfect classroom for renegade botanist Diana Beresford-Kroeger.**

Thursday, May 20 2:00–4:00 p.m. H0R 10 091 Hunnewell Building, Arnold Arboretum, Jamaica Plain

Members $25 / Non-Members $30

**Trees for Life: Planting the Global Forest**

Though schooled in classical botany, medical biochemistry, organic and radio-nuclear chemistry, as well as experimental surgery, Diana Beresford-Kroeger’s thoughts about trees are anything but classical. She has a collection of ideas, some radical, for how trees can be used to affect climate change as well as human health. According to Beresford-Kroeger, we have yet to fully understand the function and contribution of trees. In this lecture Diana will espouse the intrinsic values of particular trees, explain her hopes for reforesting the planet, and share some of the lore that fuels her passion to continue her research on trees.

Thursday, May 20 7:00pm–8:30 p.m. HOR 10 092 Hunnewell Building, Arnold Arboretum, Jamaica Plain

Members $15 / Non-Members $20

Notes from the Director

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maps from the height of the spice trade, and posters from a 16th century herbal (a spectacular book housed in Clapp Library’s Special Collections) describing some of the spice plants we had on display. This Light Show was a potent mix of biology, history, ethnobotany and chemistry, with tantalizing scents of whole and freshly ground spices and tasty spice cookies for good measure. (See page 5 for Test Your Spice Knowledge! quiz and page 11 for the spice plants featured in the show.)

Several student research projects are ongoing in the greenhouses and outdoor gardens, and an enthusiastic group of nine students is helping to design the new edible forest garden (see Melanie Kazenel’s article on page 3). In upcoming newsletters they will describe their experiences, but I do want to reiterate how wonderful it is to have Alden Griffith here as Botany Fellow, co-mentoring these students on top of teaching and conducting his own research. I’m very happy to report that he has accepted the third year option of the fellowship and will be teaching Field Botany again in the fall. Friends of Horticulture is underwriting this third year – thank you so much to all our members for providing such tangible support of botany at Wellesley!

Last but not least, we are all very proud to be graduating our first Certificate in Botanical Art students this spring. When Mary Coyne, Carole Ely, and Sarah Roche proposed this program in 2005, it seemed like a good fit, but I had no idea that it would be so wonderful. We have a team of superlative botanical artists and naturalists as teachers, and students come from near and far to participate, a tribute to the great work of Sarah, Carole, Gail Kahn, Eileen Sprague, and the rest of our terrific instructors. We have much to celebrate at the first graduation in June.

Enjoy the spring renewal, and I hope to see you at Wellesley soon!

Kristina Niovi Jones, Director
Wellesley College Botanic Gardens
kjones@wellesley.edu 781-283-3027
Logo Items for Sale

WCFH Travel Tote Bag .......................$15.
Black polyester bag approx. 14" x 14" x 3" with web trim, front pocket with bright green Wellesley College Friends of Horticulture logo, mesh side pocket, flat bottom, and zip top closures.

WCFH Mug  .......................2 for $15.
Terracotta colored glaze on flower pot-shaped 14 oz. mug, dark green logo of Wellesley College Botanic Gardens on one side and Wellesley College Friends of Horticulture logo on reverse.

WCFH Recycled Fleece Vest ...................$40.
Women's and Men's vests with full zipper front and lower security pockets 75% recycled polyester/25% polyester, decorative flatlock detailing at side front seam lines on women's vest and around front and back armholes on men's vest. Bright green logo of Wellesley College Botanic Gardens on left chest.

- Women's Medium Chest 36-38” Hip 37-39”
- Women's Large Chest 39-41” Hip 40-42”
- Men's Large Chest 43-46” Hip 41-44”
- Men's Extra-Large Chest 47-50” Hip 45-48”

Other sizes by special order and pricing.

To order your logo items, please use the form on left or go on-line to www.wellesley.edu/WCFH and print a logo merchandise order form.

Mystical Trees 2009

- American Chestnut – Castanea dentata
- American Elm – Ulmus americana
- American Hazelnut – Corylus americana
- American Linden – Tilia americana
- Eastern Hemlock – Tsuga canadensis
- Black Walnut – Juglans nigra
- Pitch Pine – Pinus rigida
- Shadbush – Amelanchier canadensis
- Sugar Maple – Acer saccharum
- Tulip Tree – Liriodendron tulipifera
- Tupelo – Nyssa sylvatica
- White Pine – Pinus strobus
- allspice – Pimenta dioica
- annatto – Bixa orellana
- black pepper – Piper nigrum
- cardamom – Elettaria cardamomum
- cinnamon – Cinnamomum zeylanicum
- clove – Eugenia caryophyllus
- cumin – Cuminum cyminum
- curry leaf – Murraya koenigii
- ginger – Zingiber officinale
- ice cream bean – Inga edulis
- juniper berry – Juniperus communis
- tamarind – Tamarindus indica
- turmeric – Curcuma longa, C. domestica
- vanilla – Vanilla fragrans

Light Show 2009 Spices

Answers to Test Your Spice Knowledge quiz:
1. Herbs come from the leaves or stems of a plant, while spices come from the fruits, seeds, bark or roots.  2. Black Pepper  3. All of them.  4. Allspice
SEE WHAT PLANTS ARE … ALL ABOUT!

Sundays, 1:30-4:00 p.m.

All About is a free series of family explorations with a multi-faceted approach combining science, close observation and art. Each independent session focuses on a particular feature or type of plant. This multi-age educational experience designed to appeal to all ages from tots to grandparents is an interactive, informal way to become familiar with botanical concepts through many learning pathways.

All About is taught by Wellesley College Visiting Scholar Katie Griffith, a naturalist and environmental scientist with a strong interest in family education.

All children must be accompanied by an adult. However, even without a child to bring along, adults are encouraged to come and spend an engaging afternoon immersed in the natural world of the Botanic Gardens. Dress appropriately for going outdoors into the Botanic Gardens.

FREE, pre-registration by prior Friday at noon is required.
Space is limited. Call 781-283-3094 or email horticulture@wellesley.edu.

Sunday, April 11 – Seed Dispersal
We’ll look at seeds of all sorts and discover how they move away from the mother plant.

Sunday, May 16 – Flower Shapes and Colors
We’ll explore how a flower’s shape and color attracts the right pollinator for the plant.

Sunday, June 13 – Trees
We’ll explore our biggest plants – trees – their bark, twigs, leaves, and survival strategies.

Sunday, August 15 – Pollination
In the Butterfly Garden we’ll observe and record pollinators seeking nectar rewards.

Sunday, September 19 – Forest Communities
We’ll hike part way around Lake Waban to look at different species of trees and shrubs co-existing.

ANNUAL MEETING of the Friends of Horticulture
and Awards Ceremony for Certificate in Botanical Art and Illustration
Sarah Roche, Certificate Education Director, will speak on Botanical Art Today.
Monday, June 7, 2010 3:00 p.m. reception; 4:00 p.m. program