



Wellesley College Friends of Horticulture

Spring 2011 News

WCBG's Edible Ecosystem Garden: A Cutting Edge Exploration in Ecology and Botany

by Dave Jacke, Dynamics Ecological Design; and Keith Zaltzberg, Regenerative Design Group

Dave Jacke has been a student of ecology and design since the 1970s, and has run his own ecological design firm since 1984. He holds a B.A. in Environmental Studies from Simon's Rock College and a M.A. in Landscape Design from the Conway School of Landscape Design. He is the author of the two-volume book, *Edible Forest Gardens*, the definitive reference text in this new area of horticulture.

Keith Zaltzberg is an ecological designer who draws on his experiences as an instructor and organic farmer to create beautiful, vital and productive landscapes. Keith holds a B.S. in Environmental Design from the Department of Landscape Architecture and Regional Planning at the University of Massachusetts - Amherst.

How well can we design a plant community that mimics the properties, principles, patterns and processes of natural ecosystems but produces food and other products useful for humans? The desire to explore this question lies at the heart of Wellesley College Botanic Gardens' newest project: the Edible Ecosystem Demonstration Garden. The first of its kind at a college botanic garden, the Edibles

Garden represents a major new thrust in ecological research: experiments in regenerative, whole ecosystem design. This landscape, designed with the assistance of a number of students and the support of many academic departments, mimics the forest in structure and function while providing diverse yields of food, habitat, and research opportunities.

Mimicking the mutually-supportive relationships found in healthy forest ecosystems, this garden will build and cycle nutrients efficiently, allowing for high yields from a low-input system. Students and researchers will evaluate these dynamics over time, reshaping the edible ecosystem as our understanding deepens. The overarching goal of the new garden—to provide ample opportunities to learn about food-producing ecosystems in an aesthetically appealing setting—further WCBG's focus on food of all kinds.

The Edibles Garden is designed to inhabit a portion of the meadow slope west of Observatory Hill. The site's variable conditions support the development of several distinct edible habitat types: old fields, shrub thickets, open woodland, denser woodland edge, and mature tree

understory, all within $\frac{3}{4}$ of an acre. The landscape's topography suggests the feeling of a bowl, and the garden design enhances this feeling by planting trees and shrubs whose mature sizes descend in height as one moves east. The design concept of a "bowl of fruit" comprises the core of the garden: semi-dwarf fruit species that will be able to reach up for the sun without blocking views, astronomical observations, or shading the garden any further.

Low vegetation will be planted in the upper reaches of the west slope. At the top of the hill, major sight-lines from the telescope pads outside the newly-renovated Whittin Observatory will be maintained. The meadow oak, the predominant tree specimen to the southwest, will be pruned to improve the views for astronomy students in a key sector of the night sky, and to increase the area receiving at least 6 hours of sunlight during the growing season. The garden design includes the development of the area under the oak's canopy into an outdoor classroom.

The mosaic of habitats in the Edibles Garden will provide a diversity of foods for creatures of all kinds.

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Carly Gayle '13 and Fei Mok '10 took part in the seminar on the design of the garden last spring.

Notes from the Director

Spring 2011

Greetings from an incredibly snowy campus! We are having a winter to remember. In mid-January the thermometer went down below -10 Fahrenheit, maybe low enough to knock back the wooly adelgids that have been spreading through the hemlock trees on campus. Ever the optimist, I'm also hoping that the more tender trees and shrubs were adequately protected by their blanket of snow (it's at least two feet thick at the moment). There will be a lot of pruning needed, between the cold, the heavy snow, and the icing event in early February that encased even the tiniest twig in crystal; since trees wear their history in their form, the winter of 2010-11 will leave its mark for years to come.

This winter also saw the re-opening of the Whittin Observatory. I am happy to report that the major trees close to the building were well protected during the construction, thanks to John Olmsted and arborists from the Grounds department working with the construction managers and Senior Garden Horticulturist, Tricia Diggins. Even better, the renovated building truly embraces and celebrates its setting amidst the Arboretum. Looking down a long hallway, a narrow floor-to-ceiling wall of glass at the end frames a glorious Western Red Cedar just beyond, and a new classroom added on the north side of the building is lined with windows looking right into the canopy of massive old hemlocks. This classroom is now in use by Environmental Studies and Geosciences students by day, and Astronomy students by night, expanding the Observatory's purview to include the earth and its inhabitants as well as the skies.

With the Observatory construction finished, plans for the Edible Ecosystem Demonstration Garden on the slope below are moving forward (see article on page 1). It is now a forest of stakes, marking the placement of trees and shrubs as well as pathways. We are all eager to see those stakes replaced by living trees, but it is likely that only the Nut Grove part will go in this spring, as the areas with fruit trees, berries, and perennial vegetables need to be sheet mulched for at least a full growing season to beat back the crown vetch that is doing its best to take over the existing meadow. The baby nut trees arrived in the fall and are wintering over in the "nursery" space between the greenhouse ranges.

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The snow-covered steps to Observatory Hill.

My Favorite Places

An Exhibition by Maria Raffi

March 15 – May 15

Wellesley College Botanic Gardens' Visitor Center

Artist Reception
Wednesday, March 30
4:30-6:00 p.m.



From the artist Maria Raffi –

I remember looking at a painting of a snowy scene of the Science Center meadow with Del Nickerson, retired Senior Horticulturist of the Wellesley College Botanic Gardens. He commented on how beautiful the blues and purples were in the snowy scene before us. I was puzzled and replied "What blues and purples? That is white snow!" Del gently pointed his finger to the waves of blue and purple within the snow mounds. He explained that the blues and purples are the shadows in the snow which make the painting or else it would simply be a white paper. Morning, afternoon or evening light dramatically changes the scene.

Later, I took a watercolor course with Susan Swinand sponsored by the Friends of Horticulture. Oh what a pleasure it was to see the paint fill in the pores of the paper right before my eyes. Sometimes the color flowed beautifully all by itself and I was just an observer. Yet more often, I would quickly tear up the piece because I could not get the colors right.

I hope that my watercolors entice you to take a leisurely stroll around the campus and enjoy its abundant beauty. Could it be true that there is a landlocked siren at Lake Waban beckoning you?

Maria Raffi is a retired Wellesley College employee and lives in Ashland with her husband Sergio.

Showtime at the Greenhouse

The evenings of January 27 and 28 were show time for the Ferguson Greenhouse plants, at least for the chosen few selected for the interest of their structure, the drama of their leaves, and possibly because they grew or could be placed a sufficient distance from their featured neighbors to avoid viewer collisions in the dark greenhouses. This year the annual Light Show even had the services of a local lighting expert. He provided shielded lights that could be directed onto the swollen form of the barrel cactus or the hanging roots of the banyan fig without blinding the viewer. He also helped guide Senior Horticulturist Tony Antonucci as he climbed among the cacti in the Desert House or the tree trunks and vines in the Tropic House to place light boxes in preparation for the show.

So, which plant was this year's 'Idol'? Everyone had her favorite. Maybe the venerable Durant camellia whose contorted purple-lit branches looked like violet snakes swimming in the air. Or the mighty screw pine, *Pandanus utilis*, revealing its twisted heart and sword-like leaves in a ghostly blue-green. Or the *Nepenthes* hanging in the air in the Hydrophyte House, each pitcher shining red or blue or green from the mini-light lodged in its throat. Or even the *Zygopetalum* orchid, its back-lit petals gently glowing a mottled maroon and gold like patterned silk. This year though, the real answer might be 'none of the above.'

The star of the show—the one visitors clustered around and exclaimed over—was the 'app.' You know, one of those little programs you buy for your smart phone at the App Store to find the cheapest gas or read *The Boston Globe*. The greenhouse app gave Light Show visitors information about a featured plant after a bar code was scanned. What are those lavender-gray zig-zaggy sticks, for example? The app tells you that they are stems of the fishbone cactus, *Selenicereus anthonyanus*, native to southern Mexico. There is more information about its preferred habitat and pictures of the plant in daylight with its bloom. It's like having a knowledgeable docent whispering in your ear just what you want to know.

The app was the creation of students in Professor Orit Shaer's lab for Human Computer Interaction including Consuelo Valdes '12 and Michelle Ferreirae '13. Jenn Yang '12, the Dorothy Thorndike Intern, supplied the plant knowledge for the app. It is not yet available at the App Store, but students could get it loaded onto their smart phone or iPod Touch at



Students showed the College Trustees how to use the app on their iPads.

the lab before the show. Some pre-loaded iPads were available to be borrowed by visitors. Since the show fell on the evening before the Board of Trustees' meeting, the College Trustees were invited to stop by. When they arrived, the iPads loaded with the app were demonstrated and then loaned. Soon the greenhouses were full of small groups exclaiming at the lit plants and the information they discovered on their iPads. Some of them were intrigued enough to go on to the computer lab afterwards, where Professor Shaer and students demonstrated other projects.

The app the students developed is the launching pad for something bigger. Michelle explained that new plants can easily be added. You can imagine that some day visitors to the botanic gardens—students at all levels, casual drop-ins, docents-in-training—will be able to download the app from the App Store to their own device or come to the Visitor Center and borrow one to take themselves on a guided tour of the plants. 🏠

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The New Focus

by Vivi Leavy '62, WCFH Docent

From the balcony outside Science Center Director Cathy Summa's new office on the fourth floor the Focus looks far away, like the plaza of a medieval city seen from the bell tower. You expect to see crowds of townsfolk gathered. Originally designed for administrative offices, the conversion to an open gathering place with a new café seems so organic that there must be architects somewhere smiling about the new use.



When you listen to Cathy Summa '83 talk about the changes, put the medieval analogy into your back pocket because the new purpose of the Focus is pure 21st century. The goal is to show the kinds of science happening throughout the building to people passing through—students, professors, visitors and administrators. “Science tends to be hidden away in labs where people can’t see what we do,” she says. “It’s up to us to draw in our students, the next generation of leaders, and help them develop literacy in the sciences, technology, engineering and mathematics. Our challenge is to engage our students and transmit to them the excitement that we who work in the sciences have for it.”

The Focus will make science visible. “It’s a science playground,” explains Cathy. Among the first projects to take the stage there is a two-part, six-foot green wall of edible plants from the greenhouses. Students from the Environmental Horticulture

class will measure its inputs and monitor its health and its contributions to indoor air quality. Students in a Methods in Environmental Science lab will determine if the green wall plants absorb unhealthy levels of aluminum from the wall structure into their leaves. Psychology professor Jeremy Wilmer is creating an interactive installation for his research project called Test My Brain. Geosciences has purchased a stream table and its Introductory Geology lab will take place right there in the Focus to study river flows. It’s hard to imagine passing by a stream table without wanting to at least put a finger in. The Lab for Human Computer Interaction is planning to install its new ‘coffee table’ computing surface there, which is not like those in dormitory living rooms. Its surface is a huge computer screen and groups of students can gather around it to present projects and work and study together. The Focus is also a space to showcase what students are doing—one of them, a Computer Science major, will be installing her interpretive senior thesis project there.

If these projects sound interesting, get on over to the Focus and see them. Unlike the stuffed birds and the buffalo head, they won’t be there forever. As the community has new ideas for what they would like to see, new projects will be featured. Eventually there will be new furniture and lighting too. And how about using all the vertical space in the atrium? Maybe there could be projections of the night sky from the Observatory on the upper walls. Stay tuned. Science is looking more and more exciting in the Focus. 

Wellesley’s Green Wall

Wellesley’s Science Center has a “green wall”—a vertical garden of plants—in its new living room, the renovated Focus area on the ground floor near the new café. The wall is the brainchild of Botanic Gardens Director, Kristina Niovi Jones and made its public debut in the Visitor’s Center in January at the Light Show. It was months in the making though.

When Kristina was invited to contribute to the new Focus space she recalled a student green wall project from several years ago. A vertical garden with edible plants would be just the thing. Although the plants on the student’s wall did pretty well, the engineering of the wall itself took much too much attention and was beset with problems. An internet search revealed a solution. In the intervening years construction of a green wall had gone from being a do-it-yourself project to one with many systems and suppliers. A local horticulturist proved to be a valuable source of both planting structures and advice.

While early green wall structures were all hydroponic with plants embedded in an artificial growing medium, today vertical gardeners tend to use a special soil mix in 4-inch deep segmented trays, starting out the new plants on the horizontal and only raising them into the standing frame when they have developed roots sturdy enough to support themselves.

The Thorndike Intern Makes a Difference



In the words of John Thorndike:

A visit to the beautiful Ferguson Greenhouses shortly before Christmas produced a conversation with the present Dorothy Thorndike Intern, Jennifer Yang '12. Jenn is majoring in biology and told me she spends much time at the greenhouses. Her ebullient enthusiasm about her work and the opportunity to be at Wellesley was so very heartening to me that I knew that Dor would have been very pleased to have heard it also.

“Friend” WCBG on Facebook and enjoy Jenn’s regular updates on happenings in the Botanic Gardens. Jenn also publicizes WCBG events to her fellow students, leads tours, developed content for the Light Show’s iPod app, and sponsored a photo contest. Jenn’s internship was established in memory of John’s wife Dorothy Dudley Thorndike DS '75 to extend her love of learning about plants. The next intern, the third to hold the position, will be announced at the Thorndike Tea on April 29.



An assortment of lettuces for one structure and a mix of herbs for the other were started in trays and nurtured by the greenhouse staff in preparation for the opening of the Focus in February. The 6-foot tall walls are not intended just to be an attractive part of the scenery. They really can be eaten. Students may clip off bits of herb or lettuce to enhance their salads. The plants also contribute to the health of the Center’s indoor air by removing some pollutants and by absorbing carbon dioxide and adding oxygen to the environment. And finally, this being Wellesley, they will be used for research. How much water and fertilizer do they need, with and without biochar added to the soil mix? What kind of light and how much? Do the aluminum trays contribute any toxicity to the leaves? That last is a question environmental remediation specialist Associate Professor Dan Brabander and his students plan to investigate.

When you visit the Focus to get a cup of coffee or grab a sandwich, don’t just enjoy the sight of green plants growing there. If you are hesitant to taste, run your fingers over the lemon thyme; admire the variegated sage; smell the oregano; think of the new knowledge they are providing.



Pam Gordon

Lemon Thyme

Growing Wisdom: The Regeneration Farm Journal

by Nicole Uhrain '12, 2010 Summer Farm Fellow

Regeneration is the farm started and maintained by Wellesley College students, situated in the community garden space on the College's "North 40." Regeneration's members strive to farm organically, advocate food justice, and raise consciousness of sustainable agriculture in our communities. During the summer of 2010, Nicole and fellow intern Genevieve Goldleaf '12 planned, planted, weeded, watered and harvested on the farm plot, ran a weekly farmer's market at the Wang Campus Center, and provided produce to the student-run El Table café in Founders. This past fall, Nicole produced a beautifully illustrated farm journal complete with calendars, planting tips, and knowledge gained from the summer's endeavors. It is her intent that the journal will be added to in subsequent years, and the accumulated wisdom passed on to future Wellesley farmers. Here are some excerpts and sketches from her journal.

Weeds

There are countless inhabitants of our little plot who lived there long before we claimed it as our own. Your first instinct may be to pull weeds blindly.



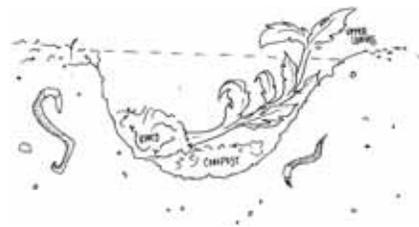
Before you deem them a nuisance, take a moment to reflect. Familiarizing yourself with local plants and their characteristics can be incredibly useful, if for no other reason than learning to combat certain weed problems more effectively. I challenge you to take a moment to learn from some

of nature's most tenacious children. Keep in mind that the garden is a shared space. An organism's value is not equal to the amount of usefulness you find for it. The garden is home to diverse populations: insects, songbirds, hawks, rodents, rabbits, microorganisms, weeds. Be respectful of their right to be there. If you must claim space for yourself and your needs, do so mindfully, and with as little environmental impact as possible.

Tomatoes

Our tomato plants first poked their way out of the seed-starter mix, blinking and nosing toward the light with their two tender leaves, no thicker than

toothpicks. They quickly acquired their true leaves and outgrew their seed flats. The poor things stopped growing when we neglected to transfer them into larger pots, but once we gave them room to grow they flourished, outgrowing larger pots in succession until it was time to put them into the ground. We were very excited. We were met with surprise when our newly transplanted tomatoes were less than stunning. In fact, they looked a bit like the scrawny kids that get picked last in gym class – leggy, drooping and insecure. We resolved to find a way to nurture them, turn them into the beefy, robust tomatoes we knew they could be.



When transplanting tomatoes, you must ensure that you set the stage for your plants to be *stable*. There is nothing more nerve-racking than beautiful tomato plants that fall over and break under their own weight. A great way to prevent this is by transplanting tomatoes diagonally; burying most of the plant allows the stem to produce even more roots. We tried many methods of transplanting



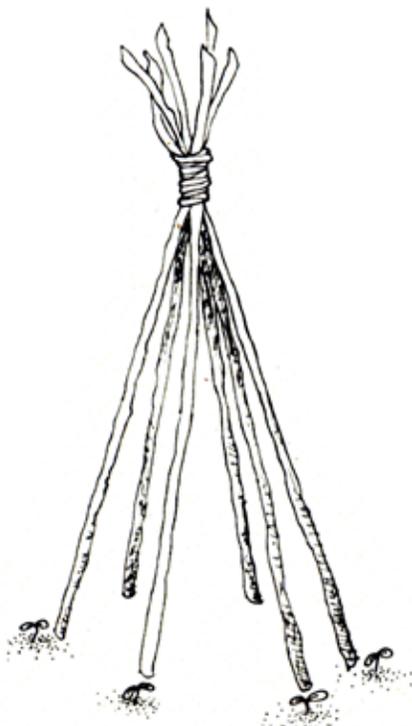
Nicole Uhrain '12 amidst her sorghum in the North 40 garden.

tomatoes, but this one was by far the most effective: the plants were more solid and far stronger than any others. Before burying the tomatoes, throw a generous handful of compost in the hole.

Another thing to keep in mind during the transplanting process, as well as during the entire growing season, is the importance of listening to your own body and instincts. Humans are just as much a part of nature as any other living thing, although we may sometimes forget this fact. Your body and mind respond to the seasons just as plants do. Ask yourself: is it truly warm, or does it seem that the sun is a bit fickle? How cold are the nights compared to the days? Does it really *feel* like summer is here? Pay close attention to weather forecasts and predictions of unseasonably cold or hot weather; let your instincts and good sense guide you the rest of the way.

Peas

Peas were a bittersweet crop for us in 2010. They were planted early, and by the time summer was in full swing our little pea plants were showing a lot of promise; some of them had already begun to flower. Then one morning, without warning, I arrived at the plot to find that the peas were gone. Not broken, not just nibbled, but completely devoured. Peas would have been our first harvest, and we were looking forward to it with the pride and joy that parents must feel. But our peas were gone. This was the decisive moment in our fence-building action. It was not long before the fence had been erected and it looked like peas could be planted again, but by then we were caught up in other farming feats and forgot about peas until much later in the season.



Swiss Chard

The most beautiful things in our garden were the rows of rainbow Swiss chard. It was easy to grow and thrived alongside our row of kale. We planted chard early in the season, and continued harvesting even after the first frost. Like other greens, chard can be succession planted. They grow in

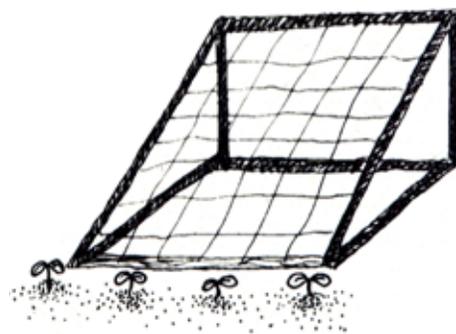
the same habit as other greens, so you can harvest the outer leaves and let the inner leaves continue to emerge.

Cucumbers

Our first cucumber harvest was not so much a harvest as a trickle, consisting of about three cucumbers. When we peeked into the leaves for signs of life and found the fruits hanging there, sprung up almost overnight, it was a most triumphant moment. That was only the beginning of the summer's sizeable harvest, but it evoked in us a sense of pride – all our hard work had finally begun to show tangible results. Cucumbers are extremely avid growers – they start off teensy but within a few weeks they will be crawling out of the beds. They love to climb, and will curl around anything even slightly vertical. It is easy to make or buy trellises. One type is triangular with a wooden base and a wire covering, designed to allow the vines to climb up and the fruit to hang down through the wire, making it easy to pick. Be sure that when choosing fencing for trellis wiring, you choose one with large enough holes that the fruits do not get stuck as they mature. We encountered this problem quite a bit with our handmade chicken-wire trellises.

Squash

By far the most explosive of our vegetables was squash. During the height of the harvest, we picked squash nearly every day, and could not manage to sell them all at our farmer's markets. Our patty pan variety was buttery and flavorful. Our wheelbarrows



were also laden with a giant Italian heirloom crookneck, huge, tender, and dramatically curved. Try planting a mixture of unique varieties and conventional, recognizable varieties. Because they are so explosive, try not to plant too many of each variety – you may become overwhelmed.

Pumpkins

Chipmunks adore pumpkin seeds. They can somehow break into a closed greenhouse annex, get under a weighted-down flat tray (which we placed upside down over the seed flats to prevent such intrusions), and pick out the tasty seeds beneath. Out of the four or so attempts to plant pumpkin seedlings, the chipmunks sabotaged at least three. We had two meager transplants to work with, in the end. After you have seedlings ready – and hopefully you will have done this by about mid-May – find a nice, well-drained area to transplant them. The only thing unique about pumpkins that I have learned so far is simply that animals seem to prefer them over their squash cousins. The only two pumpkins we ended up having were discovered one morning completely hollowed out by tiny little teeth. There was no pumpkin left to pick.

Closing Remarks

Our future depends on sustainable agriculture. Our goal is to set an example to combat conventional methods that exploit the earth's fertility for short-term gain. We must nurture a relationship with the land that is lasting. Working alongside nature's cycles, rather than against them, we work to enrich our plot and leave it just as we found it – and if possible, better than it was before. For this reason we choose not to employ harmful pesticides, herbicides and fertilizers. Through composting and other methods, we return the nutrients we use to the soil where they belong. We understand that we do not own nature – that on the contrary, we are at its mercy – and in preserving its bounty, we preserve ourselves. 

Programs

- All classes are held in the WCBG Visitor Center unless otherwise noted.
- For classes over the lunch hour: Bring your own lunch or walk to local shops.
- Materials Lists may be found on our website on the Courses page.
- Parking on campus is restricted. Use of the Davis Parking Garage or car pooling from off campus is encouraged.

To register for classes, use the form on page 11 or visit www.wellesley.edu/WCFH and print a registration form.

Champion Natives for Your Garden

When making plant choices, a responsible gardener needs to consider much more than color and form. Long-time gardener and naturalist **Robin Wilkerson** looks at the reasons to go native and introduces a choice collection of beautiful indigenous plants.

Monday, April 25 **HOR 11 070**
2:00 p.m. tea, 2:30 p.m. lecture
Members \$10 / Non-Members \$15

The Allure of Orchids



Botanist **Carol Govan** has been researching and drawing the orchids in the Ferguson Greenhouse collection. She has stories to share from ecology and botany to literary references and representation. Carol will reveal an orchid's allure.

Monday, May 23 **HOR 11 080**
2:00 p.m. tea, 2:30 p.m. lecture
Members \$10 / Non-Members \$15

Ink Brush Painting

Capture the essence of different plants and flowers using expressive gesture strokes based on Asian ink brush painting traditions. Working with black ink and watercolor, **Nan Rumpf** helps you interpret plant forms with brush and ink. Also explore rice paper washes using Assam tea and watercolor.

4 Saturdays: April 30; May 7, 14, 21
1:00 p.m. – 4:00 p.m. **WCC 11 112**
Members \$125 / Non-Members \$160

It's a Small World— Macro-Digital Photography

Zoom in and discover Macro Photography with **David Kahn**. Check with WCFH for complete list of course requirements. Please bring your lunch as David plans a special presentation over lunch hour.

Sunday, May 1 **DIG 11 101B**
10:00 a.m. – 4:00 p.m.
Members \$75 / Non-Members \$95

Art as Way of Seeing and Knowing

A journey of discovery for serious artists at all levels. Draw or paint using materials that suit your expressive intentions. In a warm and supportive atmosphere, award winning artist/educator **Susan Swinand** offers critiques and suggests projects to spark your creativity.

7 Wednesdays: May 4, 11, 18, 25;
June 1, 8, 15 **WCC 11 203**
1:00 p.m. – 4:00 p.m.
Members \$200 / Non-Members \$250

Plant Painting for the Petrified

In a relaxed atmosphere, **Sarah Roche** guides you through the elementary stages of illustrating plants. Your observational skills grow as you experiment with your first line drawings. Explore composition and color choices as you enjoy the process of creating botanical art. Please bring to the first class sketch paper, HB, B, 2B pencils, and white plastic eraser.

4 Wednesdays: May 4, 11, 18, 25
9:30 a.m. – 12:30 p.m. **BAC 11 010**
Members \$125 / Non-Members \$150

History of Botanical Art

Carol Govan introduces illustrations from a variety of eras and artists and techniques for reproducing original images. A private viewing in Margaret Clapp Library Special Collections highlights the College's extraordinary world-class collection of rare manuscripts. Bring a hand lens for looking at samples.

3 Thursdays: June 2, 9, 16 **BAC 11 112**
9:30 a.m. – 12:30 p.m.
Members \$100 / Non-Members \$125

WCBG Florilegium: Wildflowers

All abilities welcome
Go outside with **Carol Govan** and **Sarah Roche** to observe botany in action in the College's meadows. Record the flowering plants using pencil and pen sketches and dry brush watercolor.



Elena Balmaseda-Scherer

3 Thursdays: June 23, 30; July 7
9:30 a.m. – 3:30 p.m. **BAC 11 141**
Members \$225 / Non-Members \$275

The Art and Fun of Nature Journals

Develop a healthy, inspirational, creative habit for a lifetime of keen observation. Join **Elizabeth Farnsworth**, scientific illustrator and ecologist, to learn about and enjoy the art and addictive activity of keeping a nature journal. All materials provided.

*Offered in collaboration with
New England Wild Flower Society*

Note location:

Garden in the Woods, Framingham
Sunday, July 10 **BAC 12 030**
1:30 p.m. – 4:30 p.m.
Members \$33 / Non-Members \$39

Foundations in a Week

All abilities 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.

5 days: Monday, August 1 – Friday, August 5
9:30 a.m. – 2:30 p.m. **BAC 12 101A**
Members \$250 / Non-Members \$300

The Secret Lives of Honey Bees

Back by popular demand! **Heather Mattila** unravels the secret life of honey bees, including the different kinds of bees that are found in hives and the jobs that they do, as well as the means by which honey bees communicate to ensure that the end result of their interactions is a healthy and productive colony.



*Offered in collaboration with
Arnold Arboretum of Harvard University*
**Note location: Hunnewell Building,
Arnold Arboretum Jamaica Plain**
Tuesday, May 10th **HOR 11 030B**
7:00 p.m. – 8:30 p.m.
Members \$10 / Non-Members \$15

For more information
on programs and courses,
visit www.wellesley.edu/WCFH
or contact WCFH
at 781-283-3094
to be sent a program brochure.

ON THE ROAD ON THE ROAD: New Hampshire -- From Rocks to Roses

Join us as we day-trip from Wellesley College by car north to visit Bedrock Gardens in Lee, NH, and other nearby gardens of note with an optional stop at Fuller Gardens. Includes lunch.

Contact us to be sent details as they are available.

Tuesday, June 28, 2011 7:30 a.m. – 6:30 p.m. **TVL 11 200**
Members \$48 / Non-Members \$60

Creating Environments

The Work of a Landscape Designer

Vella Chan '90, recently joined Friends of Horticulture after attending Reunion. She is a licensed landscape architect who has worked in the US and Hong Kong, taught at the New York Botanical Garden, is active with her local chapter of the American Society of Landscape Architects, and is a member of the NYS Board for Landscape Architecture. Feel free to contact her with any questions. vella_chan@yahoo.com.



"I am a landscape architect." As a young practitioner telling friends, family and new acquaintances about what I do, I would often explain that the profession is not yard work/gardening as many unfamiliar with it seemed to think. I suspect that some of you who say you are studying horticulture also receive similar remarks.

My first exposure to this profession was as a Wellesley student when I took an elective titled "Landscape Architecture and Garden Design" taught by Peter Fergusson of the art history department and author of a book about the college's landscape. My childhood love of being around plants led me to spend leisure time in the greenhouses behind the Science Center. Some of you may remember one of the greenhouse rooms features water-loving plants placed around a small pond; I spent many hours reading or sketching while breathing in the great smells of the greenhouse. After graduation, I was lucky to find work in a nonprofit that raised funds for projects for a New York City park and became acutely aware of the benefits of urban parks. This is when I decided to study the design of the environment and become a landscape architect. At graduate school, my courses included art and design studios, ethnography, topographic and site grading, soils, and plant communities and identification.

Landscape architects are called on to analyze, plan and design environments as well as manage and advocate for the stewardship of the natural environment. The scale of work can be anywhere from small gardens to large urban and regional projects. As a designer, you have to think critically yet have a holistic understanding of the space and goals: how it is integrated within its overall context; how it will be used and maintained; what concepts inspire the design. From there, you design the experience of the place to address various programmatic factors, and finally for the plant-philes, you can choose plantings based on the conditions of sunlight, moisture, soil, size, massing,

seasonal interest, evergreen, colors, flowers, fruit, etc.

In the course of my career, I have worked on a range of projects including academic and business campuses, parks, residential properties, streetscapes and public spaces, cemeteries, and transportation corridors. Over the years, I became more aware of the various niches where landscape architects become voices for advocacy and education.

Currently, there are trends in landscape architecture that align this profession with horticulture and environmental issues. These connections - all under the broad term of sustainability - include the use of different plant species for water filtration, phytoremediation, habitat creation, conservation and restoration, and urban/suburban agriculture. "Green" applications are fast becoming the norm as legislation mandates sustainable practices and growing public awareness demands it. Municipalities and private development now task landscape architects to work with or even direct engineers and building architects in a variety of large and small-scale projects that require sound land use and planning. Landscape design which incorporates areas that serve a greater purpose such as managing storm water and erosion, reducing the urban heat envelope, and improving air and water quality are all in the landscape architect's scope as well as designing an aesthetically pleasing view. A great example is Wellesley College's transformation of a parking lot into what is now known as Alumnae Valley.

There are so many ways to integrate horticultural interests into one's life. And these varied pursuits can be transformational on many different levels, whether it's impacting public health and the environment, or the simple enjoyment of nature's art for one's own well-being.



More classes of interest ... complete details online or contact WCFH office.

Going Underground with Elaine Searle
3 days: Tues., April 19 – Thurs., April 21
9:30 a.m. – 4:30 p.m.

Elements: Beginning Watercolor
5 Saturdays: April 30; May 7, 14, 21, 28
9:30 a.m. – 12:30 p.m.

Beginning Botanical Watercolor Skills
4 Tuesdays: June 7, 14, 21, 28
9:30 a.m. – 12:30 p.m.

Conifers – More than Just Pretty Needles
3 days: Fri., June 10 – Sun., June 12
9:30 a.m. – 3:30 p.m.

Roses: An Exercise in Form and Dimension
4 days: Mon. and Wed., June 13, 15, 20, 22
9:30 a.m. – 2:30 p.m.

New England Flora 2011
6 days: Tues. and Wed., June 29; July 12, 13;
Aug. 9, 10; Sept. 14 9:30 a.m. – 2:30 p.m.

Botanical Textures: Gouache with Kelly Radding
4 days: Tues. and Thurs., July 19, 21, 26, 28
9:30 a.m. – 3:30 p.m.

Tonal Review with Carol Ann Morley
Thurs., Aug. 11 9:30 a.m. – 3:30 p.m.

Bring in the Garden
3 days: Fri., Aug. 12 – Sun., Aug. 14
9:30 a.m. – 3:30 p.m.

Perspective Review with Carol Ann Morley
Thurs., Aug. 25 9:30 a.m. – 3:30 p.m.

Leaves as They Grow
3 days: Fri., Aug. 26 – Sun., Aug. 28
9:30 a.m. – 3:30 p.m.

**Harvest Time At The Farm:
Painting Locally Grown Produce**
4 days: Tues. and Thurs., Sept. 6, 8, 13, 15
9:30 a.m. – 2:30 p.m.

Among the specific habitats planned are:

Nut Grove: a mid-height tree canopy adjoining the tall forest to the west of the garden. The canopy is intended to be dense, allowing little light to trickle through when mature. Its understory will consist of large patches of groundcover.

Fruit Woodland: a few well-spaced, drought tolerant, semi-dwarf fruit trees with a few fruiting shrubs thrown in for good measure. A few patches of densely planted perennial vegetables present themselves here. The understory will consist of diverse, edible, soil-improving, beneficial-animal attracting, and ground covering plants.

Eddow (edible meadow): will grow where low vegetation is needed for aesthetic and practical purposes, and where soils are too dry for trees to thrive. It consists only of herbaceous vegetation, including perennial grain species. There will be some areas surrounded by barriers, which will prevent the vigorous root crops planted within them from taking over the meadow. This habitat will be mown at least once per year to keep woody species to a minimum.

Fruit Thicket: which provides an edge environment and wildlife corridor between the habitats. The overstory consists of densely planted patches of low- to medium-height shrubs; the understory is intended to be a variety of groundcover polycultures.

The fine art of species selection for ecosystem design can wrack the brains of the best of us. One must weigh large sets of variables about any given habitat while attempting to match many different plants to these variables. Wellesley College students worked with us to research edible plant species that require minimal care while still yielding well, and supporting plant species that enhance soil fertility and help minimize pest and disease outbreaks. The results of their research were presented at the College's Ruhlman Conference this past spring.

Major paths and areas of the Edibles Garden were staked out on Observatory Hill in 2010. This spring, we will commence sheet mulching to control crown vetch and other weeds, and plant our first round of woody species. Friends of Horticulture volunteer docents can look forward to adding the Edibles Garden to outdoor tours, as it will tell a compelling story to visitors, be comfortably designed to accommodate tour groups, and is situated only a short walk from the Visitor Center. Be sure to check out WCBG's new garden whenever you get to campus—its growth toward maturity and natural succession will make it an ever-evolving, delicious place to enjoy. 🏡

Edible Ecosystem Weekend! Workshop and Implementation Party Saturday, April 2 - Sunday, April 3

Dave Jacke and Keith Zaltzberg will lead an intensive workshop in our new Edible Ecosystem Garden. Begin Saturday morning with a site walk and introductory talk on the theory behind "edible ecosystems." Join us for as much of the weekend as you can, immersed in a mix of hands-on learning and formal presentations on the design process, land management strategies, and ecosystem design. Gain valuable experience as part of a work team planting baby trees, transplanting and propagating existing vegetation, and laying down the largest weed-suppressing sheet-mulch the town of Wellesley has ever seen. The exact schedule will depend on weather and soil conditions.

If you can extend your weekend, the festivities will continue Monday with a focused field day tying up loose ends and tucking in the newly planted trees and shrubs.

There will be a fee for this program. For questions or to register contact the Friends Office: 781-283-3094 or horticulture@wellesley.edu.

Partial List of Proposed Plant Species

Nut Grove

Dwarf Korean chestnut *Castanea crenata*
Chinquapin *Castanea pumila*
Plum yew *Cephalotaxus harringtonia*
European filbert *Corylus avellana* cultivars

Fruit Woodland

Pawpaw *Asimina triloba* 'Taytwo'
American persimmon *Diospyros virginiana* 'Ruby'
Goumi *Eleagnus multiflora*
Semi-dwarf Asian pear, 3-on-1 combo, *Pyrus bretschneideri* 'Chojuro-Kosui-Kikisui'
Semi-dwarf European pear, 3-on-1 combo, *Pyrus communis* 'Seckel-Bosc-Comice'
Contorted jujube *Ziziphus jujube* 'So'
Perennial sweet leek *Allium ampeloprasum*
Groundnut *Apios americana*
Woodland strawberry *Fragaria vesca* 'Intensity'

Eddow

Indian ricegrass *Achnatherum hymenoides*
Asparagus *Asparagus officinalis*
Fennel *Foeniculum vulgare*
Giant sunflower *Helianthus giganteus*
Jerusalem artichoke *Helianthus tuberosus*
Wild bergamot *Monarda fistulosa*

Fruit Thicket

Black chokeberry *Aronia melanocarpa*
Oregon grape *Mahonia aquifolium*
Japanese bush cherry *Prunus japonica* 'Nakai'
Arctic raspberry *Rubus arcticus* ssp. *stellarcticus*

Notes from the Director *Continued from page 2*

In the fall, Botany Fellow Alden Griffith and I planted the long-awaited Climate Change Monitoring Garden just outside the Science Center. This garden is part of a nationwide project organized by the Chicago Botanic Garden (CBG) to investigate plant responses to changes in climatic variables. There are two parts to this project: 1) Project Budburst (www.budburst.org), a citizen science initiative through which individuals of all ages collect phenological (plant life cycle events) and demographic data on a variety of plants across the U.S., and 2) the Climate Change Monitoring Gardens, now being piloted at five botanic gardens around the country (Wellesley's is the northeastern representative). With genetically identical plants, data monitoring tools, and trained researchers and volunteers collecting data, this second component provides a scientifically rigorous check on the large-scale data collected by citizen scientists. The aim of the project is to provide opportunities for the general public to discover and understand how their environment, especially plant communities, is changing relative to climate, while collecting data that are of utmost importance to climate change researchers. The CBG propagated cuttings (clones) of several long-lived native plant species, including *Baptisia australis* (false indigo), *Penstemon digitalis* (beardtongue), *Physostegia virginiana* (obedient plant), *Monarda fistulosa* (bee balm), and *Panicum virgatum* (switchgrass), from individuals representing four different climate hardiness zones throughout the U.S. So we'll see whether more southern individuals of *Penstemon*, for example, respond differently to the likely later snowmelt this spring, compared to *Penstemon* individuals from the north; plus, we'll be able to compare their responses to those of their identical twins growing in Seattle, North Carolina, and Chicago. This is a very powerful approach that separates the influences of genetics and environment. The garden includes a climate station with a variety of sensors connected to a data logger. This spring will be a preliminary period in which we'll see how well all the transplants survived the winter and standardize our data collection methods with the other gardens. Then, in subsequent years, the Environmental Horticulture class and Friends volunteers will record their observations and become part of this national "ecological antenna."

Last but not least, our Greenhouse Light Show was bigger and better than ever this year, as an estimated 500 people attended and photos from the show were published in *The Boston Globe* (see p. 3 for more on the show). You can see photos on the WCBG Facebook page, or check out Wellesley Chemistry professor Flick Coleman's amazing photos here: <http://www.wellesley.edu/Chemistry/Flick/greenhouseshow/>.

NAME: _____

ADDRESS: _____

PHONE: Home: _____ **Work/Cell:** _____

EMAIL: _____

If applicable, Wellesley College Class _____ CBA student ? _____

_____ I would like information on volunteering at WCFH.

Mail this completed form and your payment to :

Wellesley College Friends of Horticulture

106 Central Street, Wellesley, MA 02481-8203

COURSE REGISTRATION

See programs and classes information and cancellation policy

Course ID#	Class title	Fee
_____	_____	_____
_____	_____	_____
_____	_____	_____

SEPARATE CHECK FOR PROGRAM FEES \$ _____

made payable to: *Wellesley College Friends of Horticulture*

WCFH cannot accept credit cards for course fees. Checks or cash only please.

MEMBERSHIP IN WCFH

(for the academic year July 2010-June 2011)

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Account number: _____

Exp. date: Month : _____ Year : _____

or **SEPARATE CHECK FOR MEMBERSHIP GIFT**

made payable to: *Wellesley College Friends of Horticulture*

My membership gift for the current academic year \$ _____

LOGO ITEMS FOR SALE

WCFH Tote Bags _____ at \$15 each tote bag = \$ _____

WCBG / WCFH Mugs _____ Pair(s) of mugs at \$15 = \$ _____

WCBG Recycled Fleece Vest

_____ Women's Medium \$40 each = \$ _____

_____ Women's Large \$40 each = \$ _____

_____ Men's Large \$40 each = \$ _____

_____ Men's Extra-Large \$40 each = \$ _____

Shipping / Handling at \$5 for each vest, tote, pair of mugs = \$ _____

SEPARATE CHECK FOR LOGO ITEMS. TOTAL = \$ _____

made payable to: *Wellesley College Friends of Horticulture*

WCFH cannot accept credit cards for merchandise. Checks or cash only please.

We have a great team of Friends volunteers, staff, and the Dorothy Thorndike Intern working together on these outreach events, and are reaching more and more students. The greenhouses are stuffed to the rafters with student projects, class experiments, and the horticulture class plants, not to mention the permanent collections. With the outside landscape frozen solid, we are so lucky to have the greenhouses!

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

Kristina

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



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Up for an Oscar!

Our own Jennifer Redfearn '03 (Environmental Studies) coproduced and directed *Sun Come Up*, an award-winning film about the relocation of Carteret Islanders, whom the film calls the first climate change refugees. The film is up for an Academy Award in the Documentary (Short Subject) category. View the trailer and contribute to the relocation fund on the web: <http://www.suncomeup.com/film>

Jen received a Friends of Horticulture grant to support her research in 2002. You can help current talented Wellesley students in their own explorations of plant-based science. Consider a memorial gift, a donation in honor of a special person, or just because you care 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"

ON THE ROAD
with the Friends of
Horticulture
Tuesday, June 28
Join us as we day-trip
from Wellesley
College north to visit
gardens of note.
For details see
bottom of page 8.



ANNUAL MEETING of the Friends of Horticulture

and Awards Ceremony for Certificate in Botanical Art and Illustration
Botany Fellow Alden Griffith will speak on "Plants, People and Planet."

Monday, June 6, 2011

3:00 p.m. reception; 4:00 p.m. program



printed with soy-based ink on recycled paper

Redfearn Wins an Oscar!

The film won an Academy Award