



# Wellesley College Friends of Horticulture

## FALL 2005 NEWS

### The Cool Temperate House: Displaying the Four Seasons

by Mike Schroeder '58, WCFH Docent

The Margaret C. Ferguson Greenhouses' Cool Temperate House is an art gallery with a horticultural bent. Much displayed here is the result of years, sometimes decades or centuries, of crossing and selecting and nurturing by patient plant hybridizers focused on creating a plant more visually pleasing or botanically unusual. Every season has its special display of plants moved to the Cool Temperate House when in peak bloom enhanced with permanent residents that reside there all year long.

*Every season has its special display of plants moved to the Cool Temperate House . . .*

#### AUTUMN

Symbols of Japan's imperial family, chrysanthemums have become for us a cheerful first act in our horticultural school year. Each Fall many forms and colors of blooming chrysanthemums are on display. Their exact origins are lost in antiquity. These earliest of mums would have been yellow single daisy flowers, with composite heads of sterile florets (the petals) circling disks of fertile florets. As early as 15<sup>th</sup> century BCE mums, probably *C. morifolium* which no longer exists in the wild, were cultivated in China for medicine, salad and decoration. Eventually they were introduced to Japan in 9<sup>th</sup> century and to the western world in 17<sup>th</sup> century.

By that time chrysanthemums already ranged from daisy-like flowers to large rounded or shaggy heads in shades of red or yellow. In recent years, hybridizers from Japan, England, France, and the US have developed a staggering variety of modern mums including singles or doubles with rows of petals so thick only a breeder with scissors can find the fertile disk flowers to pollinate. Their petals may droop, twist or be shaggy or

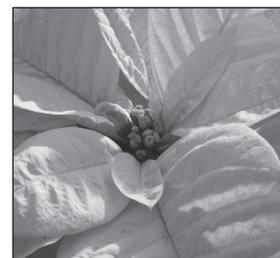
shaped like spoons; their color may be shades of red, purple, orange, white, or mixed, but not the wished for but elusive blue.

Here at Wellesley, the WCBG staff takes cuttings from a variety of "mother" plants every spring as seedlings from hybrids would be unreliable, possibly even reverting to the leggy chrysanthemums that grow wild in Japan. This year new mum cuttings from an outside source were purchased and grown over the summer in the greenhouses.

Whatever the source of flowers, the WCBG tradition of the cascading mums remains. Pots of immature mums are trained to grow up a trellis of chicken wire. When the buds are set, the chicken wire is carefully bent downward into an arch. The leaves and the flowers orient themselves upward while the stems are trapped in a cascading form by the trellis.

In this Fall season of fading flowers outside, one can begin to appreciate the "bones" of the garden. In the greenhouse the most dramatic bones are the branches of the century old camellia in the center of the room. It will bloom in late winter until early spring, but now is the season to observe the intricate twisting and bending of its grey-green, algae-covered

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CHRYSANTHEMUM  
"PLYMOUTH SPRAY"  
by Rebecca Saunders '61

# Meet Kristina Niovi Jones — New Director of WCBG

*What makes your pulse rate jump?* Kristina Niovi Jones, new Director of the Wellesley College Botanic Gardens, likes to apply the pulse rate test for any endeavor. For Kristina, working with plants definitely passes the pulse rate test.

Before assuming directorship of Wellesley College Botanic Gardens, Kristina was a research associate at Harvard University, where she did research in plant ecology, speciation, and conservation biology. Prior to this she was an Assistant Professor at Wellesley College and Middlebury College. She has spent time chasing bees, trying to understand the consequences of their behavior on plants. Her research culminated in a chapter in *Cognitive Ecology of Pollination* (L. Chittka & J. D. Thomson, eds., Cambridge University Press, 2001). She has also studied the influence of herbivory (animals' consumption of plants) on fireweed (*Epilobium augustifolium*), testing the assumption that native predators control a potentially invasive native species in its native environment.



Kristina Niovi Jones

years ago when her three children were infants, students became accustomed to the sight of Kristina's baby playing in her Science Center office, often accompanied by the family dog. In addition to being an appropriate accommodation for her work and her child at that point in her life, Kristina had another goal in inviting students to meet her baby. She believes that a part

of mentoring young women, a high priority for her, is actively demonstrating how women can have both career and family. Additionally, getting students psyched about a topic has always been a motivation in her research. Kristina considers Wellesley College an ideal situation for her because of her interest in engaging women in science and research.

Perhaps Kristina is active in encouraging and mentoring women in biological science because she almost took a very different career path herself. Growing up in San Francisco, she remembers many youthful forays into horticulture in her shady back yard, where among other things she tried growing tomatoes. Her biggest educational influence in her childhood years was her fourth grade teacher, who sparked Kristina's interest in ecology when she admonished her students not to step on the ants. This same teacher had her class analyze a "mystery substance" and keep a journal detailing the experiments they did with the substance: putting it in water, planting it, etc. (The mystery substance turned out to be brine shrimp eggs.) Despite this early interest in the natural world, Kristina took minimal biology in high school, instead concentrating in math.

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*Dear Friends,*

*I am thrilled to be joining you in your mission to stimulate interest in and disseminate knowledge of horticulture and botany. The Wellesley College Botanic Gardens truly provide the ideal context for the pursuit of my two primary professional goals: to expand scientific and environmental literacy, and to increase the participation of women in science. Science is intimidating to so many people (including lots of otherwise self-confident Wellesley students), but really it is only a small step from an attraction to the beauty of flowers and landscapes to a fascination with the intriguing lives of plants and the workings of natural systems, and from there the possibilities are endless! We have the botanical resources to lead people on this kind of journey, and between the Friends and Tony, Tricia, David and me in the greenhouses and gardens, we have the knowledge and enthusiasm to make it happen. I can't wait to get started, and I welcome any and all ideas you may have for the gardens and collections.*

*Hope to see you at Wellesley soon!*

A handwritten signature in dark ink that reads "Kristina". The signature is fluid and cursive.

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# Plant Health Care — An Update on the Outside Gardens

by Tricia Diggins, WCBG Horticulturist

Last spring we finally started acting on a previously neglected component of maintenance of the Arboretum and Botanic Garden—plant health care. We brought in the Hartney-Greymont tree company to do some structural pruning (to improve a tree's structure and hopefully prevent storm damage) and dead wood pruning. They also did some spraying for hemlock wooly adelgid and winter moth.

Plant health care (PHC) may be a new and trendy term but it does accurately describe how we should be thinking about caring for plants, especially trees, in our landscapes. Trees need special attention because we want new ones to grow and thrive and we want old ones to live as long as possible. There are many similarities between PHC and human health care. Humans are advised to eat right, exercise regularly, manage stress and wear a seatbelt. With the exception of exercising regularly the same holds true with plants. Plants need proper nutrition, control of stresses like drought and soil compaction and avoidance of mechanical injury from mowers and other equipment (the seat belt equivalent). As with humans, when something goes wrong treatment can be expensive and even with the healthiest lifestyles things can go wrong. Examples of this are the introduction and explosion of two tree eating insect populations, hemlock wooly adelgid and winter moths.

Winter moth, a small, green, European caterpillar, is a new pest to Massachusetts. It has already done a lot of damage to trees in Plymouth County over the past few years and it is moving west. It reached Wellesley in large numbers last fall. The adult stage, the moth, is very noticeable because the males are flying in late November through January (the females don't fly) when there isn't usually a lot of insect

activity. The eggs are laid in trees at this time and in the early spring the caterpillars hatch and start to do their damage. The larvae often start to feed in unopened buds at this stage where they are unreachable by pesticides. This is potentially devastating economically for fruit growers when plants like blueberries have their flower buds destroyed. After the caterpillars leave the buds they can be sprayed with several pesticides, including Bt, which are effective and fairly non-toxic to people and other organisms. Research is being done into releasing an insect predator of winter moth but it will be a number of years before the predator insect population catches up with the moth population.

Will winter moths cause the same devastation as gypsy moths in the early 1980's? It's too early to know the full impact of winter moth so there is no need to panic. A healthy tree can take defoliation, even complete defoliation, and survive well. Spraying insecticide is an option best used as part of an integrated approach where tree health and the risks of pesticide use is evaluated. Winter moths are at a nuisance level right now in Wellesley, they are not killing trees. I made the decision to have trees sprayed that were older and under stress in a section of the Botanic Gardens that had a high population of the moth. Any pesticide use has impacts, even the safer biorationals. Bt, which targets caterpillars, could kill a desirable butterfly caterpillar. But if a tree's survival was threatened, a pesticide could be considered a necessary medicine.

For more information go to the UMass Extension website at: [www.umassgreeninfo.org](http://www.umassgreeninfo.org) 

## Bio-rational Pesticides

Many pest managers view daily pest management situations through the eyes of 'control' or 'eradication.' This 'nuclear bomb' approach has created many problems, as we are all well aware. Ideally, the best strategy is to identify and remove only the pest, which leads to minimal disruption of the system. This allows us to implement a 'surgical approach' where as an analogy, we remove the tumor without having to remove the organ to which it's attached. Until recently, insect managers didn't have all the tools necessary to achieve this goal. However, within the last decade, many new and exciting products have emerged (or have been greatly improved in efficacy) that now allow for such implementation; many of these have become available just in the last couple of years. We classify many of them as "**Bio-rational**" pesticides. These compounds achieve several currently desired goals of pest managers and the public because they are very selective by primarily removing just the pest, usually don't persist in the environment, are much safer to handle and apply when compared to most chemical pesticides, and they tend to protect beneficial organisms. Some of the more commonly used and effective bio-rational pesticides are horticultural oils, insecticidal soap, NEEM, *Bacillus thuringiensis* (Kurstaki) (Bt), entomopathogenic nematodes, and Insect Growth Regulators (IGR's).  
*Robert D. Childs, Entomologist,  
UMass Extension Landscape, Nursery,  
and Urban Forestry Program,  
December 2004, Green School*

# DNA Microarray Analysis of Global Gene Expression Patterns of *Phot1* and *Phot2* Mutants in *Arabidopsis thaliana*

by Yu-Tzu (Debbie) Liu '06

Today's Wellesley College students are active and engaged with more than the challenging and diverse curriculum. Debbie Liu is an amazing woman who is majoring in both Biological Sciences and East Asian Studies, a Davis First-Year Mentor, and president of HuiOHawaii, the club on campus for people from Hawaii who are interested in the culture.

According to Debbie, "I do like to keep myself very busy. I think it all started last year when I was the House President of Bates and President of the Taiwanese Cultural Organization. I realized that I could manage more than just academics and somehow doing anything less made me feel like I had way too much extra time."

In her "spare time" this year Debbie is co-chairing the November 2005 Boston Intercollegiate Taiwanese Student Association (BITSA) Conference, an annual one-day event featuring various workshops related to Taiwanese-American issues and Taiwanese politics, economics, and culture. Each year it is hosted by various member schools, traditionally in bigger universities like Harvard, MIT, and last year at Brown. She recalls, "I really wanted BITSA to come to Wellesley, so we wrote up a proposal and the proposal won over Harvard's."

We appreciate Debbie's willingness to share the story of her Independent Research project which received a Friends of Horticulture grant last academic year. We wish all the best in her senior year at Wellesley and as she graduates Wellesley to "make a difference in the world."

With the support of The Wellesley College Friends of Horticulture, I spent my junior year doing Independent Research (BISC 350) under the guidance of Professor Gary Harris in the Biological Sciences Department. My project incorporated the use of the newly emerging technology of DNA microarrays to investigate the

mechanisms involved in blue light excitation of photoreceptors to cause chloroplast migration in plant *Arabidopsis thaliana*.

DNA microarrays allow whole genomes to be monitored on a single chip, the size of a microscope slide, to give a better picture of the interactions among thousands of genes simultaneously. I used DNA microarrays in my project to compare gene expressions in normal and *phot1phot2* double mutant *Arabidopsis* plants. By analyzing the differences in how genes are expressed, upregulated, or downregulated in the normal and mutant plants, insights into cellular pathways leading to chloroplast migration can be elucidated. *Phot1phot2* double mutants are plants that have been mutated so that they no longer have photoreceptors, or phototropins, *phot1* and *phot2* to regulate light-induced movements. With normal plants, blue light induces many adaptive responses, one of which being chloroplast migration towards blue light of relatively low intensity (chloroplast accumulation) but away from high-intensity blue light that can cause photodamage to the chloroplasts (chloroplast avoidance). *Phot1phot2* double mutant plants lose this ability to respond to light. By studying mutants and their changes in expressions of particular genes, one can pick up specific genes expressed in a cell that are necessary for and involved in chloroplast movement.

Running microarray experiments, which is a very recent and advanced field of research performed mainly at large research institutions and biotech companies, gave me the opportunity to work with professors from various universities and correspond with researchers all over the country for guidance and advice in this booming



Debbie Liu

field of study. During my semester of research I had the opportunity to work with Dr. Rahul Patharkar at Harvard, Massachusetts General Hospital (MGH) in Professor Jen Sheen's lab, Harvard Medical School Department of Genetics, where I was able to optimize the extraction of total RNA from *Arabidopsis thaliana* leaves. Correspondence with Professor Shaobin Hou at the University of Hawaii Manoa, Microbiology Department; Fenglong Liu, Ph.D., from the Institute for Genomic Research; and Jenny Xiao,

Ph.D., Stanford University, Entomology also helped with this optimization process. The second semester of my research was focused on running microarray experiments and working with computer software Cluster 3.0 and Java TreeView for data analysis.

My Independent Research BISC 350 experience has been phenomenal. It has taught me how to network and look for resources in the scientific community, and has allowed me to apply knowledge gained from the classrooms to practice, aiding me in composing my own protocols in experiments. I've gained a level of self-dependency when faced with set-backs in obtaining good results, so that rather than feeling lost and confused, I can take control of my experiment by picking apart each step of the protocol to identify possible experimental flaws or investigate alternative methods for experimentation. The most valuable lesson I've learned from all this is that research is most gratifying when *you* are running the experiments and not when your experiments are running your life. As a senior, I am doing research at the MIT Cancer Research Center working with another fast-growing field of research: siRNA for gene delivery and silencing. 

# A GOOD AGE: Vision-impaired Seniors Make Tropical Escape

by SUE SCHEIBLE, *The Patriot Ledger*, March 7, 2005

*The Margaret C. Ferguson Greenhouses with their welcoming plants brighten the day of many visitors. Last winter a special group from a nearby town came for a tour. They were accompanied by reporter Sue Scheible, whose weekly column "Good Age" features human-interest stories on the experiences of local senior citizens. It appears in The Patriot Ledger, a Quincy, MA-based newspaper serving Massachusetts' southeastern communities. We thought that you would enjoy reading her account of their visit. (For more news from The Patriot Ledger, including archives of Sue's columns, visit [www.southofboston.com](http://www.southofboston.com).)*

*Reprinted with permission from Sue Scheible's 'Good Age' column in The Patriot Ledger on March 7, 2005.*

What better escape in the middle of winter than a fragrant haven that feels like the tropics? And you get to touch the plants, including the purple trumpet vine and the red powder puff.

"This is like Costa Rica!" Jean Dudley, 80, exclaimed as she entered the Wellesley College greenhouses a week ago.

"Oh, it smells great!" added Dorothy Locke, 91, leaning forward in her wheelchair to inhale the heady scent of a large pink hyacinth.

The tour had begun in the desert house with the cacti and other succulents, where docent Gail Kahn said, "You notice that many of the plants in this desert room are grey or grey-green? That is so they can deflect the sun and stay cooler. It's fascinating how plants can adapt."

The people on the tour knew a thing or two about adapting. They were members of the Vision Group at the Milton Council on Aging and have macular degeneration, an eye disease that gradually takes away sight. All have had to adjust to varying difficulty and loss.

"The hardest thing was giving up my driver's license," said Phebe Miller, 80, who is legally blind and can no longer read.

"I can still read the paper with a magnifying glass, but what scares the heck out of me is when I won't be able to drive," said Dudley. "You can't always depend on your friends to take you places."

The Vision Group has quickly grown to 25 regular members, several in their 90s,

since Cathy Smyth, outreach coordinator for the council, founded it last year. As many as one-fifth of the council's seniors who are older than 80 have some sort of vision loss.

"There is a real need for support for people with vision impairment," Smyth said. "And these are all healthy, active people."

The group meets monthly to hear a speaker and have lunch. The seniors have learned ways to adapt their homes to remain independent as their sight declines, and Smyth also arranges for several special trips each year. All five on the greenhouse tour had some vision remaining.

With her white hair, soft facial wrinkles, sparkling eyes and air of happy curiosity, Locke was thoroughly enjoying the outing. She began losing her sight four years ago and said she finds the group "keeps you up-to-date and takes your mind away from your troubles. You are with other people who have the same thing."

Smaller than usual because of illness and the weather, the group of five women also included Fran Bertuccio, 80, and Lill Hartigan. Another volunteer docent, Jill



Photo credit: USA BUJ/The Patriot Ledger

*Volunteer docent Jill Whiting (right) shows outreach worker Cathy Smyth and Dot Locke a tulip during a trip to the Wellesley College greenhouses.*

Whiting, as well as Smyth and Frank Tevenan, a retired MBTA bus driver who drives the Milton Council on Aging van, also served as escorts.

The college greenhouses include 14 glass houses, 12 of them open to the public, and the Milton seniors took in a half dozen.

They stopped often to examine or feel some of the unusual plant structures and delicate blossoms. In the warm, temperate house, the bull horn acacia had hollow thorns and tiny bits of protein on the tips of its leaves. The cycad tree, growing since 1922 and 12 feet tall, looked "like a warrior standing with his arms over his head" or "a castle," they said.

At the powder puff tree, native to Bolivia and Ecuador, Kahn clipped a brilliant red blossom and passed it around so that everyone could feel it. Locke reached forward, rubbed it against her cheek, and purred, "Wonderful!"

Mary Ann Sullivan, the Milton council director, admires how seniors losing their sight can focus on the positives in their lives. "They aren't 'poor me' at all," Sullivan said "And the trips let them know they don't have to be excluded from society just because of vision issues. With a little adaptation and support, most can lead a normal happy life." 

## The Harriet B. Creighton Botanic Gardens Fund

The Friends of Horticulture are pleased to announce the establishment of the Harriet B. Creighton Botanic Gardens Fund as a tribute to Miss Creighton, Class of '29, the Ruby F. H. Farwell Professor of Botany Emerita, and science faculty at the College from 1940 to 1974. We are indebted to Gertrude Dever, a long-standing supporter of many projects associated with the Wellesley College Botanic Gardens, whose generous gift made this fund a reality last summer. Miss Dever designed this fund to provide financial support for physical enhancements envisioned for areas surrounding the Botanic Gardens' Visitor Center and Ferguson Greenhouses. Such future enhancements include woody and perennial gardens, pathways, stairs, stone walls, as well as printed materials and plant labels for educational purposes.

Additional gifts to this fund by other donors are welcome. If you would like to contribute to this fund in memory of Miss Creighton, please send your contribution to Development Services, Wellesley College, Harriet B. Creighton Botanic Gardens Fund, 106 Central Street, Wellesley, MA 02481.

Please make checks payable to: Wellesley College. Thank you! 



Wellesley College Planned Giving Director Peter Doyle (left) and Science Center Administrative Director Rosamond White (right) accept Gertrude Dever's fund-establishing gift at a WCBG Visitor Center reception on July 25, 2005.

### KRISTINA NIOVI JONES

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At Stanford University, Kristina's anticipated course of study was unexpectedly diverted when a class she wanted to take was full. She registered for Introductory Evolutionary Biology instead and became enthused by biological sciences. The professor who taught the course did summer research at the Rocky Mountain Biological Laboratory in Colorado. Kristina took summer classes at the laboratory, located eight miles up a dirt road high in the Rocky Mountains. Her association with the laboratory has continued to this day, where she has performed field research in plant ecology and plant-animal interactions, taught courses, and mentored students. Lately her three children have accompanied her during her summers in Colorado, digging in the dirt and chasing grasshoppers.

Kristina is excited about assuming the directorship of the Botanic Gardens. She feels that Wellesley College has unique

resources for the study of plant ecology, biology, conservation and diversity. She would like to spark interest in the Wellesley College Botanic Gardens among students by utilizing the outdoor spaces as laboratories. BISC 108 students could adopt a plant or a spot in the Botanic Gardens, making a monthly recording of what the plant is doing and how it is responding to its environment. Science and botany students could study diversity of soil microbes in native vs. non-native species, how pest management affects soil microbes, and the spread of invasive plants in certain areas of the Botanic Gardens. For some projects, data could be collected by classes every year; for instance, yearly data could track the spread of invasives and the rate of recurrence in areas where they are removed.

For the general public, Kristina would like to enhance the attraction of the Botanic Gardens with self-guided tours, improved signage and visitor displays, emphasizing the life of plants and plant communities.

Kristina is also looking forward to again teaching BISC 108, an introductory horticulture course for non-science majors that satisfies Wellesley College's laboratory requirement. The course is appealing to students because they get to play in the greenhouses in the middle of winter. Kristina finds that many students come into the course loving plants and nature but maintain that they "can't do science." Her goal is to engage and intrigue them, and two ways she's found to accomplish this are by relating the information to food and to humans. (For instance, both plants and people have hormones.) Along with the obligatory nitty-gritty of plant biology, the curriculum includes environmental literacy and discussion of current topics in the field. Kristina enjoys teaching non-science majors, and she finds a broad cross-section of students in her class. And if any of her students finds that plants pass the pulse rate test, Kristina will be happy to suggest further classes and devise projects to help that student explore botany and biological science. 

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## Friends of Horticulture Memorial Book Fund

In 1993, the Friends of Horticulture established a Book Fund to supplement the Biology Department faculty's book budget. Since then, the Fund has underwritten numerous Science Library purchases in several plant related fields as often suggested by faculty.

Lisa Brainard, Science Library Staff member, is responsible for choosing and ordering the books. When she reported on the past year's purchases, she said "This 'extra' money is actually going to help the Science Library a lot. I'll be able to cover important horticultural and botanical topics that we've been unable to cover in the past such as biodiversity, ecology of introduced or non-native plants, plant genomics, etc. It's great!"

Nick Rodenhouse, Assistant Professor, Biology Department, wrote in a thank you note "...books are the soul of the... college. They turn students on..."

Kaye Peterman, Associate Professor, Biology Department, commented that "...additions to the botanical collections of the library...enrich the opportunities for our students."

You, too, can help enrich Wellesley students' lives. A gift to the Fund is a gift to Wellesley College, and if you are an alumna, it will be credited toward your class gift. All checks should be made out to *Wellesley College* and sent to the Resources Office with the notation that it is to go to the *Friends of Horticulture Memorial Book Fund*.

### Book purchases 2004-2005

*Breeding New Plants And Flowers.*  
SB123 .W45 2002  
*Genetically Modified Organisms: Transgenesis In Plants.* SB123.57 .T67 2003  
*A Naturalists's Guide To Seashore Plants: An Ecology For Eastern North America.*  
QK110 .C68 2003  
*Ecological Agrarian: Agriculture's First Evolution In 10,000 Years.*  
S589.7 .G74 2003  
*Root Hairs: The 'Gills' Of Roots, Development, Structure And Functions.*  
QK644 .B48 2003  
*Emulating Natural Forest Landscape Disturbances: Concepts And Applications.*  
SD143 .E5 2004  
*Towards Forest Sustainability.*  
SD387 .S87 T68 2003

*Plant Development And Biotechnology.*  
QK725 .P562 2005  
*Dangerous Garden: The Quest For Plants To Change Our Lives.* qQK99 .A1 .S79 2004  
*Ecology And Control Of Introduced Plants.*  
SB613.5 .M94 2003  
*Sustainable Horticulture: Today And Tomorrow.* qSB319.95 .P65 2004  
*Garden And Climate.* SB472.45 .S855 2002  
*Science And The Garden: The Scientific Basis Of Horticultural Practice.*  
SB318 .S35 2002  
*Geographical Genetics.* QH455 .E67 2003  
*Photobiology Of Higher Plants.*  
QK757 .M393 2003  
*Plant Genomics And Proteomics.*  
QK981 .C85 2004  
*Reaching For The Sun: How Plants Work.*  
QK50 .K46 1997  
*Genetically Modified Planet: Environmental Impacts Of Genetically Engineered Plants.* SB123.57 .S74 2004  
*Drafting A Conservation Blueprint: Practitioner's Guide To Planning For Biodiversity.* QH75 .G73 2003  
*In Vitro Plant Breeding.* SB123.6 .T35 2002  
*Gardens Of The World: Two Thousand Years Of Garden Design.* 🌱

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## Welcome to Gail Kahn

Meet Gail Kahn, the Friends' new Administrative Assistant. Her favorite color is purple although it might be yellow tomorrow, and she thinks of the Wellesley College Botanic Gardens as "my spa, because it's spiritual, relaxing, and just takes you away!"

Three years ago when she saw an ad for docents to conduct tours of the WCBG, Gail joined the Friends of Horticulture volunteer corps. It seemed like a natural to her because of her background in the sciences. This former stay-at-home mom of two daughters, now 19 and 21, holds a Master's degree in Earth and Planetary Science from the Massachusetts Institute of Technology. Admittedly an indifferent gardener, Gail credits Carol Govan,

WCFH Docent Trainer, for fueling a desire to learn about plants and to use that knowledge to introduce others to the fascinating world of horticulture so often taken for granted.

With a wealth of volunteer experience and a particular knack for publication design and publicity, Gail now puts these skills to work in an environment unlike



Nancy Webb (left) and Gail Kahn (right) keep the Friends Office running smoothly.

any other she's known. "Volunteers are truly appreciated here. Having volunteered elsewhere, where a lot of hard work was expected, and little appreciation shown, this is great. And it's a wonderful social experience."

The next time you visit the WCBG "spa", Gail invites you to stop in the Visitor Center office, say hello, and ask how you can become part of this wonderful volunteer organization. 🌱

## COOL TEMPERATE HOUSE

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branches. It comes to us from the College's founders, Mr. and Mrs. Henry Fowle Durant, who along with other affluent New Yorkers, Bostonians and Philadelphians took a fancy to all the varieties of camellia newly developed in the 19<sup>th</sup> century. Originating in the subtropics of China, Japan and nearby countries, camellias were brought as exotic gifts by naval ships to Europe in the 1700's and then to America. Of the 250 known camellia species, three are routinely hybridized for horticulture, and one, *C. sinensis*, provides black and green tea.

Arching over the door to the Tropical Room are two other woody plants. These Italian cypresses, *Cupressus sempervirens*, were grown here from seed brought from near the Temple of Delphi. Ancient as they may look, they are relatively young. No longer found in the wild, Italian cypresses live up to 1000 years and reach 30 meters high. By age ten they bear fragrant seeds in cones that may require the intense heat of wildfires to open. Our trees, trapped in pots with their roots escaping to invade the graveled benches, will not reach such size but do bear cones.

## WINTER

As winter approaches, the tawny yellows and purples give way to reds, bright pinks and whites of poinsettias, cyclamen, amaryllis and Christmas cactus. *Euphorbia pulcherrima* (poinsettias) would be blooming wild in this season in Mexico and in gardens in San Antonio. Hummingbirds attracted by the bright red leaves that masquerade as petals would be feeding on the copious nectar produced in the tiny clusters of yellow flowers. Sports of nature and clever nurserymen have brought us white and pink. Montezuma II (1480-1520) had

poinsettias carried from the lowlands to his Aztec capital in the mountains where the red bracts were used for dye. The first recorded religious use of poinsettias was in Nativity processions by Franciscan monks in the 17<sup>th</sup> century. A US ambassador named Poinsett found the flower growing by the roadside in Mexico and brought it home; hence the name.



WCBG Staff Tony Antonucci and David Sommers manipulating chicken wire to form the cascades.

Take time to look at the reduced inflorescence of flowers clustered in the middle of the showy red, white, or pink bracts next December. Several cup-like structures called cyanthia

hold separate female and male flowers that have no petals or sepals. In each cyanthium you can see several red stamens with anthers that look like two balls and a single pistil is sticking out of the cup on a stalk or pedicel. The swollen ovary holding the seeds has a three-parted stigma that earlier received the pollen. Another strange structure that looks like an ear attached to the cyanthium is a gland for nectar: another alluring feature for the pollinator.

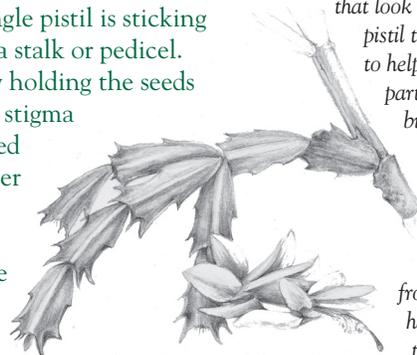
*Cyclamen persicum*, adding variety to our holiday flowers, grows in its native Mediterranean region in the cool months of autumn, winter and spring. Cyclamen tubers are tricky to divide, so growers plant seeds in pots, leaving the plants undisturbed until they go dormant in the second growing season. Unlike chrysanthemums, cyclamens are still found in the wild, including *C. coum*, a cold-hardy cousin of dry woodlands in Russia, Turkey, and Bulgaria. Plant hunters from the Cyclamen Society make expeditions to Turkey, Israel, Iran, and the Greek Isles in search of new species.

Yet another in the panoply of holiday flowers is the Christmas cactus,

*Schlumbergera bridgesii*, a native of Brazil and not a cactus at all. Its cousin, *S. truncate*, blooms around Thanksgiving. A more distant cousin, placed in a different genus, *Rhipsalidopsis gaertneri*, blooms at Easter. Growers do a bit of manipulating to get the blooming times on schedule. Christmas cactus needs cool temperatures around 50 °F and 13 hours of complete darkness to set buds. Once the buds are set, more light will not stop the bloom. Propagating is an easier process as the flattened but fleshy leaf-like stems, called *cladophyls*, root readily. These plants are tough, some known to be over 70 years old. In Brazil hummingbirds are probably the pollinator. Those of us without hummingbirds in our living rooms or greenhouses can pollinate by hand and be rewarded with bright red fruits the following year.

### Thanksgiving Cactus

*Schlumbergera truncata* Cactaceae Family  
This flower has many tepals (petals and sepals that look the same), many stamens and one pistil that extends out beyond the stamens to help prevent self-pollination. This particular plant was blooming in June but was not coming out of the end of the last stem segment but the one before the end as you can see.



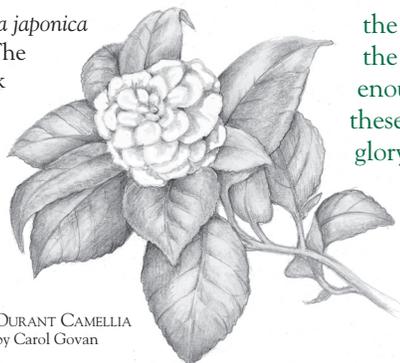
THANKSGIVING CACTUS  
by Carol Govan

Maybe this is why it is blooming instead of at Thanksgiving. The flower and new stem pieces emerge from the areoles (clustered spines or hairs). In the cactus family photosynthesis usually takes place in the green stems.

## SPRING

Even before the last poinsettia fades away, the spring show begins. One member of the cast is the huge California geranium, *Senecio petasitis* carried in from its resting place in the Hydrophyte House to show off its clusters of yellow daisy-like flowers, which eventually produce bristly seeds carried off in the breeze created by a passing visitor. Another *Senecio* species, *S. mikanoides* from South Africa, climbs the greenhouse wall just past the door to the student house. Fuchsias with dangling inflorescences in reds or red and blue, and pink hyacinth, with deep purple stamen that encircle a yellow sticky style, call to flower-starved, winter-weary visitors.

**Durant Camellia** *Camellia japonica*  
Theaceae (Tea) Family. The winter blooms of soft pink and white are quite beautiful. Compare the leaves with nearby tea plant, *Camellia sinensis*.



DURANT CAMELLIA  
by Carol Govan

For much of the summer the huge pots of crinum lilies, *Crinum giganteum*, a member of the amaryllis family used medicinally for its anti-inflammatory, anti-lymphocytic and analgesic properties, will have lain on their sides in the courtyards between the greenhouses looking like clusters of giant daffodil bulbs jammed into pots. This treatment replicates the harsh seasons they are adapted to survive. At the beginning of the longer days, they are brought in and set upright. When a sturdy fountain of foliage grows out of the bulbs, the plant is considered worthy of display and is placed in the main room. In late February or early March two-foot flowering stalks produce elegant pale white flowers that cup sideways like receiving hands.

Meanwhile other bulbs, breaking their dormancy months in advance of the outdoor season, begin to brighten the room. The dramatic luster of the tulips and daffodils draws us to the center of their symmetry, assuring their genetic survival as surely as their simpler pre-horticultural ancestors assured theirs by drawing pollinators. We may not be willing to pay a fortune even for Rembrandt tulips as did the Dutch in

the days of Tulipmania in the early 1500's, but we pay enough each fall to replant these harbingers of garden glory, to keep tulip breeders busy.

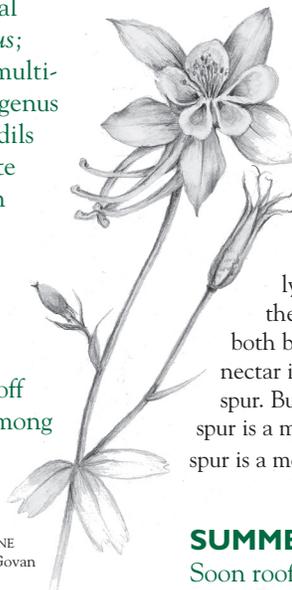
Daffodils, also native to the Mediterranean, especially Spain and Portugal, were

cultivated by the Egyptians and Greeks and reached England by the 1200's. They may even have arrived earlier with the Romans who thought they had healing powers. Wordsworth's dancing daffodils may have been naturalized wild ones, all very small, *N. bulbicodium*, *N. poeticus*, or *N. jonquilla*. [The Botanical name for daffodils is *Narcissus*; the jonquil, *N. jonquilla* is a multi-stemmed species within the genus *Narcissus*.] Varieties of daffodils increased slowly until the late 1800's and early 1900's when thousands were created.

Large pots of *Ophiopogon japonicus* in each of four corners of the main seasonal display room show off bright blue berries nestled among narrow strap-like leaves and seldom fail to attract the visitor's notice.

This Japanese wildflower has become an unwelcome traveler and is listed as a Global Weed. Other permanent residents are the acacias. Some have ferny bi-pinnate foliage, some have leaf petioles broadened and flattened into structures called *phyllodes*. In the adjacent alcove, *Ficus carica*, the common fig, bears a fig or two with internal flowers that wait, most likely in vain, for a little pollinating wasp to creep within. The clerodendrum's gnarled trunk seems to announce that it is an old resident. Meanwhile on the other side of the door to the student house, the mandevilla wildly claims struts, pipes and neighboring pots as ice from a late season storm clatters onto the glass roof. That is the nature of the greenhouse experience.

COLUMBINE  
by Carol Govan



As April advances the crinum flowers are gone, the azalea spent, and the *Senecio* tucked away in the Hydrophyte House until next February. The sunniest side of the roof has been whitewashed to soften the intensity of the sun shining through glass. Gradually the greenhouse begins to display the spring garden we are longing for outside. Foxglove, columbine, delphinium and Canterbury bells coaxed to an early awakening in other houses are brought in to open their buds in public. Pelargoniums, salvias, and dahlias compress summer into this indoor spring. This is when nasturtiums begin their climb into our celebrated arch.

There is still exotica to be found. The South African *Clivia miniata*, colored like orange sherbet, is in full bloom, and there is a woody variety of impatiens called "Parrot's Beak" with a bright red and yellow flower that is hard to the touch.

**Columbine** *Aquilegia*  
*Ranunculaceae* (Buttercup Family). Look closely in late spring when the nasturtium and the columbine are both blooming. Each has a long spur with nectar in a swollen area at the tip of the spur. But they are different: the columbine spur is a modified petal and the nasturtium spur is a modified sepal.

## SUMMER

Soon roof vents and windows must be opened to release the heat. Annuals grown from seed come into their own. The nasturtium arch is laden with orange blossoms. Bumble bees, carpenter bees, wasps, and other native pollinators fly in to enjoy this early and exotic feast. As our own spring and summer gardens burst into bloom, we may become unfaithful and visit the greenhouses less frequently. The permanent residents carry on – the rosemary, the olive, the acacias, the cypress, and, of course, the camellias. Others journey outside for summer vacation and to be washed with rain. A trip back in summer is worthwhile to see how they all fare in natural heat and what is blooming in the long days of summer. 🌱

### A bulb by another name...

The daffodil bulb is a perennial bulb, actually a bud, with its flowers arising from axillary (side) buds and its foliage coming from the apical (central) bud. Tulips by contrast are annual bulbs, the central apical bud producing the flowering stem. A new crop of flowers must come from new bulbs that form from axillary buds. Crocuses are modified stems called corms; the next year's flower must come from corms that grow above the old one. Cormels may form around the stem base.



## ON THE ROAD WITH THE FRIENDS OF HORTICULTURE Mount Desert Island, Maine

July 2005

Twenty Friends of Horticulture embarked on a phenomenal four day journey from Wellesley to Bar Harbor, Maine. Barbara Rapport '44, a summer-time resident of Mount Desert Island, organized our visits to noteworthy private and public gardens as well as talks and guided tours by local experts. This successful trip has spurred the Friends to plan more such trips. Destination suggestions and tour planning assistance most welcome. Watch future newsletter for more details! 

## PROGRAMS AND COURSES

*Unless otherwise noted, all courses take place at WCBG's Visitor Center.*

To register or for complete course offerings:

- email horticulture@wellesley.edu
- call 781-283-3094
- visit our website: [www.wellesley.edu/FOH](http://www.wellesley.edu/FOH)

### Wetlands of Eastern North America: A Photographic Journey

HOR 0603

Ian Adams, Environmental Photographer

Friday, October 28, 7:00 – 8:00 p.m.

Hunnewell Building, Arnold Arboretum

Co-sponsored with Arnold Arboretum of Harvard University, New England Wild Flower Society, and Massachusetts Audubon Society Visual Arts Center

Researchers estimate that since 1780, agricultural, urban and industrial development has destroyed more than 50 percent of the 250 million acres of wetlands marshes, swamps, bogs and fens that existed in the United States in pre-settlement days. See the last remaining wilderness areas in the eastern U.S., from the quaking bogs of the Northwoods and Midwest to the coastal marshes and vast cypress swamps of the Southeast.

Members \$8 / Non-Members \$10

### Digital Garden Photography Seminar

HOR 0604

Ian Adams, Environmental Photographer

Saturday, October 29, 8:00 a.m. – 5:00 p.m.

Hunnewell Building, Arnold Arboretum

Co-sponsored with Arnold Arboretum of Harvard University, New England Wild Flower Society, and Massachusetts Audubon Society Visual Arts Center

This one-day intensive seminar will answer your questions about digital garden and landscape photography. Topics will include selecting and using digital cameras, tripods and filters; optimizing exposure and depth-of-field; photographing garden vistas, abstracts and close-ups; photographing at night; using your personal computer to fine-tune your garden images. During an afternoon field photography session on the grounds of the Arnold Arboretum, Ian will demonstrate some of the techniques taught in the

morning class for the staging, lighting, and composition of garden photographs. Bring your digital camera if you have one, a tripod, and a lunch and beverage.

Members \$95 / Non-Members \$110

### Touring Franklin Park

HOR 0605

Christine Poff '81, Executive Director, Franklin Park Coalition

Monday, November 7, 9:00 a.m. – 3:00 p.m.

Meet to carpool in Wellesley College's Gray Parking Lot

Christine Poff '81, Executive Director of the Franklin Park Coalition, gives us a personal tour of Franklin Park. Although not a "tended garden," the grounds are a cherished, Olmsted-designed green space in the geographic heart of the city -- a place for people from all walks of life to meet and share the outdoors.

Hot and cold sandwiches for lunch are available on your own at the Golf Clubhouse in the park.

Members \$15 / Non-Members \$18 / Free for WCFH Volunteers

### Computer Workshop for Artists

Wendy Hollender, Botanical Artist and Teacher

Session 1:

SBA 0601

Saturday, November 12, 9:30 a.m. – 3:30 p.m.

or

Session 2:

SBA 0602

Sunday, November 13, 9:30 a.m. – 3:30 p.m.

Learn what hardware and software are necessary to take your art work digital. Wendy will demonstrate Adobe Photoshop and explore altering layouts, repeating patterns, changing or improving colors, and adding background patterns and borders. See creative ways to reproduce your artwork on paper and fabric including note cards, stationery, fine art giclée and other digital reproduction prints, scarves, wall hangings, pillows, etc.

Bring a toned graphite drawing and/or a color drawing or painting to be reproduced. Bring your own lunch or walk to local shops.

Each session limited to 8 participants.

Per session: Members \$120 / Non-Members \$150

**Place & Garden, Form & Structure:  
A Writing Workshop**

WLS 0611

**Paula Panich, Garden Writer and Teacher**

Thursday, December 1 – Friday, December 2, 9:00 a.m. – 5:00 p.m.

**New England Wild Flower Society, Framingham, MA**

*Co-sponsored with Arnold Arboretum of Harvard University and  
New England Wild Flower Society.*

In this two-day workshop, Paula Panich will teach you how to read as a writer does, taking apart articles on plants and gardens with (metaphorical) screwdrivers and wrenches to see how they are made. There will be an emphasis on constructing feature articles, which are complex pieces of writing. Special emphasis will be made on writing about place. Students will leave the workshop with a lead paragraph, a “nut graf” (the second paragraph of a story, which grounds the reader in details), and a plan for finishing an article. Experienced and novice writers alike are welcome.

Class is limited to 15 students.

Lunch is included.

*Members \$265 / Non-Members \$315*

**Inspired Containers for Winter**

HOR 0606

Saturday, December 10

9:30 a.m. Registration; 10:00 a.m. – 12:00 noon Workshop

Alison and Molly Campbell of Hen and Chick Gardens return for an encore container workshop—this time focusing on winter. Learn the tricks of the trade for blending an exciting assortment of winter greens, berries, and fruits to create a dazzling seasonal arrangement. Bring your favorite container and they will provide inspiration and instruction for you to carry away a winning winter container.

Class size is limited to 15 participants.

Containers should not exceed 14” in diameter.

*Members \$60 / Non-Members \$75*

**Holiday Botanical Art Studio**

BAC 0633

**Sarah Roche, Botanical Illustrator**

2 Tuesdays: November 29; December 6

10:00 a.m. – 1:00 p.m.

Use your botanical art skills to create a unique piece of artwork to enhance your holiday celebrations. We will work in watercolor and pen and wash to produce accurate representations of botanical subjects.  
*Members \$75 / Non-Members \$95*

**Fundamentals of Tonal Drawing  
with Carol Ann Morley**

**Session One:**

BAC 0603

3 Days: Tuesday, January 3 – Thursday, January 5

9:30 a.m. Registration; 10:00 a.m. – 4:00 p.m. Seminar

or

**Session Two:**

BAC 0604

3 Days: Friday, January 6 – Sunday, January 8

9:30 a.m. Registration; 10:00 a.m. – 4:00 p.m. Seminar

The study of form in black and white builds a strong foundation essential to representational drawing and painting skills. The course will focus on discerning tonal values, constructing the tonal scale, applying graphite pencil techniques and surface textures. Working from botanical shapes such as flowers, fruits and berries, students will learn how to make botanical studies that have clarity, balance and visual depth.

All levels of students welcome.

Class size is limited to 12 participants.

Bring your own lunch or walk to local shops.

Each 3-day seminar: *Members \$225 / Non-Members \$275*

**Reunion 2005**

A popular new tradition at Wellesley Reunions is to tour the Botanic Gardens. During Reunion 2005, over 250 alums attended guided tours of the outdoor gardens and many more took self-guided walks plus a look around the Ferguson Greenhouses. Spouses and children participated in Family Time activities early Saturday morning designed to coincide with the class meetings. Consider planning a visit during your next reunion! 🌿



*Erica Quigley and Cassandra Johnson, both Class of 2000, take advantage of the welcoming shade provided by Aesculus hippocastanum, (European horse chestnut) during their first Wellesley reunion.*

Reunion 2005 Photos by Harry Quigley, husband of Christina Wohl Quigley '70 and father of Erica Quigley '00.



*Ever ready to explore new worlds, reuniting alums exploring the Hunnewell Arboretum. Many alums report that they never visited the Botanic Gardens prior to taking a reunion tour. Are you one of them?*

# Volunteer Appreciation Day 2005

Nancy Dean Kingman '53, WCFH Docent Co-chair, organized a wonderful day last June for the Friends' volunteers. A great time was had by all who toured five outstanding and varied gardens and lunched at the Kingman's home in nearby Acton, Massachusetts. 🌱

*WCFH volunteers getting ready to be appreciated at Volunteer Appreciation Day 2005.*



## History of Botanical Art

SBA 0603

Thursday, January 19, 9:30 a.m. – 3:30 p.m.

(snow date: Thursday, January 26)

*Co-sponsored with the New England Wild Flower Society.*

Join us as we explore the development and history of botanical art from its early stages through the twentieth century. Using both artistic and scientific illustrations, artist and naturalist Carol Govan will lead us in the study of the many techniques involved. After an opportunity for lunch, Carol takes us to the Margaret Clapp Library's Special Collections Room for a private viewing of an extraordinary collection of rare manuscripts and some of the earliest printed herbals, floras, monographs, nature prints and periodicals.

Recommended text: The Art of Botanical Illustration by Wilfred Blunt, reprinted by Dover Publications.

Limited to 18 participants.

Lunch is available at Collins Café or bring your own.

Members \$48 / Non-Members \$60

## Incorporating Natural Processes of Succession into the Landscape Garden

WLS 0613

Larry Weaner, Landscape Designer

Friday, January 27, 9:00 a.m.-1:00 p.m.

New England Wild Flower Society, Framingham, MA

*Co-sponsored with the Arnold Arboretum of Harvard University and New England Wild Flower Society.*

In this highly interactive workshop designed for professionals and experienced amateurs, well-known landscape designer Larry Weaner will explore the dynamic ecological processes that occur in our native woodlands, shrub lands and meadows. Through a series of case studies, he will illustrate their direct application in the designed landscape, offering techniques for incorporating successional processes, and discussing solutions to commonly encountered design challenges.

Fee includes morning danish and coffee. Participants are welcome to bring a lunch and join the instructor following the seminar.

Members \$80 / Non-Members \$95

## Looking Closely: Learning to Use Plant Keys SBA 0604

2 Thursdays: February 9, 16, 10:00 am-1:00 pm

*Co-sponsored with Arnold Arboretum of Harvard University.*

Are you puzzled about plant and tree identification? Using two simple pocket-sized keys, artist and naturalist Carol Govan will demonstrate how a key's questions about shape or appearance of botanical parts give clues to family and genus relationships. Discussions include both coniferous and broad-leaved New England trees, identification of corresponding leaves, and how deciduous trees survive winter freeze. Close botanical observation of winter twigs will help you to discover that all twigs DON'T look alike.

Fee includes 2 books published by Nature Study Guides: Tree Finder: A Manual for the Identification of Trees by Their Leaves by May T. Watts, and Winter Tree Finder by May T. Watts, and Tom Watts.

Members \$70 / Non-Members \$90

## Calligraphy for Botanical Labeling with Cynthia Henrich

Winter 2006:

BAC 0605

3 Days: Tuesday, February 21 –

Thursday, February 23

10:00 a.m. – 3:30 p.m.

(snow date: Friday, February 24)

or

Spring 2006:

BAC 0606

3 Days: Friday, March 24 –

Sunday, March 26

10:00 a.m. – 3:30 p.m.

Copperplate, the highly readable, practical and beautiful script of 18th century English writing masters, is appropriate for many occasions, including labeling botanical artwork. Cynthia Henrich, experienced calligrapher and teacher, has designed this three-day Copperplate calligraphy seminar to be simple, interesting, and as easy to learn as possible. No experience is necessary.

Lunch: Bring your own or walk to local shops.

Each 3 day seminar:

Members \$150 / Non-Members \$195 🌱

## WINTER HORTICULTURAL LECTURE SERIES

Co-sponsored with Arnold Arboretum of Harvard University, Massachusetts Horticultural Society, New England Wild Flower Society, and Tower Hill Botanic Gardens.



### ***Tales of Passion, Obsession, and Other Firsthand Reports from the Garden*** ***Paula Panich, Garden Writer and Teacher***

Wednesday, November 30, 7:00 – 8:30 p.m.

**Wellesley Community Center, Wellesley, MA**

Spend an enlightening evening with Paula Panich as she unearths written tales of sex, lying, cheating, greed, and other first-hand reports from the garden. Hear the voices of witty and world-weary writers (ever think of Chekhov's garden outside that cherry orchard?) who know it's not all about the Garden of Eden.

**WLS 0601: Members \$18 / Non-Members \$21**

### ***Exceptional Native Perennials for Creative Gardening*** ***Bill Cullina, Nursery Director, New England Wild Flower Society***

Thursday, January 12, 7:00 – 8:30 p.m.

**MassBay Community College, Wellesley, MA**

Bill Cullina will profile some of the outstanding native perennials yet to be discovered by the green industry and gardening public. In addition to little known wild species, this talk will highlight some of the exciting and cutting edge breeding work that is being done to horticulturally "enhance" our wildflowers and provide the gardening public with tough, adaptable, and beautiful garden plants.

**WLS 0602: Members \$18 / Non-Members \$21**



### ***Natural Landscape Design: Meadow, Woods, and Water*** ***Larry Weaner, Landscape Designer***

Thursday, January 26, 7:00 – 8:30 p.m.

**MassBay Community College, Wellesley, MA**

Through a series of case studies, Mr. Weaner will present techniques for integrating native plant compositions and ecological processes into residential landscapes. Projects will be described from inception to maturity, providing a behind-the-scenes look at both the practical and aesthetic considerations involved in creating gardens that reflect the beauty and grace of the natural world.

**WLS 0603: Members \$18 / Non-Members \$21**

### ***Outside the Not So Big House: Creating the Landscape of Home*** ***Julie Moir Messervy, Author and Landscape Designer***

Thursday, February 16

7:00 p.m. Reception and Book Signing; 7:45 p.m. Program

**MassBay Community College, Wellesley, MA**

Join one of today's top leaders in landscape design, Julie Moir Messervy '73, as she removes traditional design barriers between the home and its surroundings to produce a unified design — the landscape of home.

As featured in her new book *Outside the Not So Big House*, Julie's groundbreaking approach helps homeowners, gardeners and professionals explore ways to embrace the habitat of home, compose journeys, link inside to outside and craft the elements of nature, extending the presence of home out onto the land.

**WLS 0604: Members \$25 / Non-Members \$30**



For full description, see WCFH program brochure or Web site [www.wellesley.edu/FOH](http://www.wellesley.edu/FOH).

# Wellesley College Club Members Find a “Secret Garden”

“I never knew! So many different plants and trees . . . I can’t wait to come back in the Fall; the colors must be stunning.”

“I’ll definitely be back to visit the greenhouses during those cold winter months.”

“It’s beautiful, so quiet and calm, and it’s just around the corner.”

On June 21, members of the Wellesley College Club discovered their own “Secret Garden” when they took advantage of the opportunity to tour the Ferguson Greenhouses, the Hunnewell Arboretum and Alexandra Botanic Garden as part of a special program offered jointly by the Friends of Horticulture and the College Club.

Led by docent and new WCFH Visitor’s Center administrative assistant, Gail Kahn, the group began their adventure of discovery in the greenhouses where they journeyed from the desert to the tropics and everywhere in between—all under one roof, and just up the hill from the College Club. Then out to the Arboretum, with its marsh and meadow, lilacs and honeysuckle. With over 500 species of woody plants in 53 families, every turn in this extraordinary



naturalized setting, brought a view more beautiful than the last. Finally, the group strolled across the path, and into the Botanic Garden with its rare specimen trees and shrubs, hidden waterfalls, and the lovely, brook-fed Paramecium Pond.

For these College Club members, the introduction to the Friends of

## Join the College Club — Experience Another of Wellesley’s Best Kept Secrets

As a member of the Friends of Horticulture at the Sponsor level or higher, did you know that you are entitled to join the Wellesley College Club? With its restaurant, banquet facilities, special function rooms, overnight guest accommodations, and a year-long calendar of special events, the College Club is a great place to entertain friends, host a special, catered function, or just stop by for a casual lunch or dinner; maybe before or after a visit to the greenhouses or botanic gardens! To learn more about the Wellesley College Club and its membership benefits, visit [www.wellesley.edu/Collegeclub](http://www.wellesley.edu/Collegeclub).

Horticulture was an eye-opening experience. Although each is a frequent visitor to the College Club, no one had been aware of the extraordinary horticultural resources that are literally just around the corner. 🌿

## On Exhibit in the WCBG Visitor Center Through November 10

### Hooked on Lichens: Three perspectives

*A multi-media presentation  
featuring work by*

**DEBORAH LIEVENS**  
Photographer

**ANITA SEBASTIAN**  
Botanic Artist

**MARGARET “PEGGY” WEBER**  
Mixed media Artist

## What Lichens Are

from *Lichens of North America* by Irwin M. Brodo

Lichens are unique in the world of vegetation in that they can not be neatly classified into any of the ordinary categories we think of as “plants”. The reason is simple: a lichen is not a single entity, but a composite of a fungus and an organism capable of producing food by photosynthesis. Lichen fungi can associate with green algae or cyanobacteria (the latter also known as blue-green algae), or sometimes both, and none of these three groups are plants in the strict, modern sense (which now include mainly mosses and vascular plants). The special biological relationship found in lichens is called symbiosis. The resulting composite of a fungus and its photosynthetic symbiont (photobiont for short) has been such an evolutionary success that there are close to 14,000 species of lichens in the world, tremendously diverse in size, form and color. They are found from the poles to the tropics, from the intertidal zones to the peaks of mountains, and on every kind of surface from soil, rocks and tree bark to the backs of living insects! 🌿



## Coastal Botanical Art by Wendy Hollender

Wellesley College Botanic Gardens' Visitor Center  
November 13 – December 10, 2005

*"Plant morphology fascinates me. Examining flowers under the microscope opens up a whole world of possibilities for inspiration. The plant life cycle is awesome. Nature is a perfectionist when it comes to the arrangement of color and form.*  
Wendy Hollender: [www.whartdesign.com](http://www.whartdesign.com)

**Friday, November 11, 4-7 p.m. and Saturday, November 12, 4-7 p.m.**

You are cordially invited to meet artist Wendy Hollender, preview the Visitor Center exhibit, and have the opportunity to purchase Ms. Hollender's work.  
*(a portion of the proceeds to benefit Friends of Horticulture)*

For more information and directions: [www.wellesley.edu/FOH](http://www.wellesley.edu/FOH) [horticulture@wellesley.edu](mailto:horticulture@wellesley.edu) 781-283-3094

### WELLESLEY COLLEGE FRIENDS OF HORTICULTURE

[www.wellesley.edu/FOH](http://www.wellesley.edu/FOH) email: [horticulture@wellesley.edu](mailto:horticulture@wellesley.edu) office: 781-283-3094

### REGISTER FOR ALL PROGRAMS

NAME: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

PHONE: HOME \_\_\_\_\_

PHONE: WORK \_\_\_\_\_

E-MAIL \_\_\_\_\_

If applicable: Wellesley College Class of \_\_\_\_\_

\_\_\_\_\_ I would like information on volunteering at WCFH.

#### HORTICULTURE PROGRAMS

##### Wetlands of Eastern North America

HOR 0603 \_\_\_ October 28; M \$8/NM \$10

##### Digital Garden Photography Seminar

HOR 0604 \_\_\_ October 29; M \$95/NM \$110

##### Touring Franklin Park

HOR 0605 \_\_\_ November 7; M \$15/NM \$18/WCFH Volunteers FREE

##### Tales of Passion, Obsession

WLS 0601 \_\_\_ November 30; M \$18/NM \$21

##### Writing Workshop

WLS 0611 \_\_\_ December 1-2; M \$265/NM \$315

##### Inspired Containers for Winter

HOR 0606 \_\_\_ December 10; M \$60/NM \$75

##### Exceptional Native Perennials

WLS 0602 \_\_\_ January 12; M \$18/NM \$21

##### Natural Landscape Design

WLS 0603 \_\_\_ January 26; M \$18/NM \$21

##### Incorporating Natural Processes of Succession

WLS 0613 \_\_\_ January 27; M \$80/NM \$95

##### Outside the Not So Big House

WLS 0604 \_\_\_ February 16; M \$25/NM \$30

PROGRAM TOTAL \_\_\_\_\_ SEPARATE CHECK FOR PROGRAMS, please, payable to: Wellesley College Friends of Horticulture.

Make check(s) payable to: **Wellesley College Friends of Horticulture**

Mail to: Wellesley College Friends of Horticulture, 106 Central Street, Wellesley, MA 02481-8203

#### MEMBERSHIP IN THE FRIENDS OF HORTICULTURE

(for the academic year July 2005-June 2006)

Young Alum:	\$15	Donor:	\$250
Member:	\$50	Supporter:	\$500
Sponsor:	\$100	Sustainer:	\$1000 and beyond (thank you)

#### MEMBERSHIP TOTAL \_\_\_\_\_

(Separate check for membership, please, made payable to: Wellesley College Friends of Horticulture)

#### ART COURSES:

##### Computer Workshop for Artists

SBA 0601 \_\_\_ November 12, M \$120/NM \$150

SBA 0602 \_\_\_ November 13, M \$120/NM \$150

##### Experienced Watercolor Painting

WCC 0622 \_\_\_ Winter 2006, M \$165/NM \$215

##### Botanical Drawing and Painting—Foundations

BAC 0612 \_\_\_ Winter 2006, M \$200/NM \$250

##### Botanical Drawing and Painting—Techniques

BAC 0622 \_\_\_ Winter 2006, M \$200/NM \$250

##### Holiday Botanical Art Studio

BAC 0633 \_\_\_ Nov 29; Dec 6; M \$75/NM \$95

##### Fundamentals of Tonal Drawing

BAC 0603 \_\_\_ January 3-5, M \$225/NM \$275

BAC 0604 \_\_\_ January 6-8, M \$225/NM \$275

##### History of Botanical Art

SBA 0603 \_\_\_ January 19, M \$48/NM \$60

##### Learning to Use Plant Keys

SBA 0604 \_\_\_ February 9, 16; M \$70/NM \$90

##### Calligraphy for Botanical Labeling

BAC 0605 \_\_\_ Winter 2006, M \$150/NM \$195

BAC 0606 \_\_\_ Spring 2006, M \$150/NM \$195



WELLESLEY COLLEGE  
Friends of Horticulture  
Science Center  
106 Central Street  
Wellesley, MA 02481-8203

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## Your Membership Dollars at Work

**Providing** free guided tours for small groups of adults and school students.

**Helping** to strengthen the Botanic Gardens' plant collections and informational displays.

**Encouraging** interest in horticulture and botanical sciences using the resources of the Botanic Gardens.

**Underwriting** student and curatorial interns who enrich their own horticultural knowledge while providing much needed assistance to the Botanic Gardens staff.

**Hosting** College events to encourage appreciation for the Botanic Gardens by prospective and current students, alumnae, and others.

**Funding** guest lecturers, student research grants, course-related field trips, books for the Science Library and more.

**Offering** an ever-expanding variety of programs, courses, botanical art classes and field trips to members and the general public.

**Volunteering** to help in the Visitor Center and funding staff positions to manage the Friends of Horticulture Office and its many activities.

*Thanks for supporting  
the Friends of Horticulture!*

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