



# Wellesley College Friends of Horticulture

## SPRING 2007 NEWS

### The Annex at 100:

### “A Beautiful Little Greenhouse For Laboratory Purposes”

by Gail Kahn, WCFH Docent

Tucked behind the Tropic House between the west and center greenhouse ranges, the oldest greenhouse at Wellesley does yeoman's duty in providing cool conditions for over-wintering plants, forcing bulbs, and extending bloom life. This petite wood-frame greenhouse is distinctly different in construction from the Lord & Burnham-designed Ferguson Greenhouse complex erected in 1922. How old is this greenhouse? What is its name? Where did it come from and how did it come to be built? The answers to these questions are more mysterious than expected.

College folklore has a lot to offer; a thorough search of the College Archives reveals that there is as much falsehood as truth in the popular stories. The birth date of the Annex has long been

thought to be 1906; this turns out to be off by one year. After a July 1907 vote by the Trustees, the greenhouse and associated facilities were built in the summer of 1907, making this summer its 100<sup>th</sup> anniversary. College folklore also places its



Photo by Mary D. Coyne

and provided plants and flowers for use in decorating College Hall and other buildings.

When the college formally acquired the conservatory greenhouses after Mrs. Durant's death in 1917, President

*Botany Annex in its current location.*



*Drawing of Annex by Loli Hernandez '08 as part of studio work done during greenhouse visits in fall 2006 for ARTS 105: Drawing 1 with Joel Janowitz, Visiting Assistant Professor of Art.*

original location as an addition to the Durant conservatory. This romantic tie to the original greenhouses of Wellesley College is alas untrue.

The true tale is an insight into the evolution of botanical science at Wellesley. Henry Durant, the college's founder, and Susan Hallowell, its first head of Botany, bestowed a passion

for horticulture and botanical science to the young women of the college. The Durants generously offered their private conservatory for the use of the students. These greenhouses held the Durants' substantial collection of tropical and semi-tropical species

Ellen Pendleton signed the "Rules Governing the Administration of the Botany Greenhouses of Wellesley College." These stated that "these houses are maintained by the College strictly for Academic Purposes in connection with the Instruction in the Department of Botany," although it then goes on to say, "The plants in these houses may also be used for Decorative Purposes ..." Flowers from the greenhouses were to be used to decorate the Chapel on Flower Sunday, the first Sunday of the academic year. Plants and flowers were also to be provided for "not more than three other functions each year and then at the request of the President only ... The Director of the Greenhouses or Head of the Botany Department will select and send to the President's House from time to time such plants and flowers as can be supplied without interfering with the academic work of the house." Clearly the college was struggling to balance the original purpose

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# Notes from the Director – Spring 2007

Hello from Wellesley! We've had a busy fall and winter in the botanic gardens. A major highlight was the Light Show in the greenhouses, held after dark on December 13. At least two hundred people came to see the theatrically lit greenhouses, with tiny spotlights drawing attention to unusual plant architecture. Perhaps most dramatic were the "pitchers" of *Nepenthes alata*, lit from within so that the liquid inside and even some

unfortunate insects that fell prey to this carnivorous plant were visible through the translucent pitcher walls. Also on special display were aerial roots on pitch-apple (*Clusia rosea*), the leaf-like stems of ribbon bush (*Homalocladium platycladum*), moth orchids (*Phalaenopsis* sp.) hanging as they do in nature "upside down" from trees in the Tropical House, the remarkable prop roots of screw pine (*Pandanus utilis*), the convergence on a spherical growth form in the baseball plant (*Euphorbia obesa*) and an unrelated cactus (*Ullbemannia pectinifera*). Staff along with Friends of Horticulture and student docents gave tours, telling the stories of the highlighted plants. The Creighton Room was filled with plant-related activities, and continually packed with visitors of all ages. The Light Show fulfilled its objective of

Photo by David Kahn



Caudiciform display at Light Show 2006

enabling people to see amazing plants in ways they never had before. We'll do it again, with a different theme, next year!

The Light Show also highlighted our winter display of caudiciforms, which ran from November through February in the Seasonal Display House. Caudiciforms are a diverse group of plants with a shared feature of a distinctively swollen caudex (the axis of the plant, i.e. main stem and/or root). Some have a sculptural quality, many are culturally significant, and all have interesting stories, such as hottentot bread (*Fockea edulis*) or baobab (*Adansonia digitata*), a single mature specimen of which can support a village on its vast store of water. Short versions of these plant stories are available as a free booklet in the Visitor Center, or as a download from our website: [www.wellesley.edu/WCBG](http://www.wellesley.edu/WCBG).

As we bring together different collections of our greenhouse plants for seasonal displays, we will also pull together their stories, building the base of knowledge about our remarkable plants. Gail Kahn from the Friends' Office and the WCBG staff enjoy tracking down plant stories, but we also welcome other plant lovers who would like to join in this endeavor. Contact Gail ([horticulture@wellesley.edu](mailto:horticulture@wellesley.edu) or

781-283-3094 x. 4) or me to find out the current focal collection and how you can help!

One current focus is a permanent collection that has had a wonderful renovation: the ferns and their allies in the Mabel A. Stone Cryptogam House. The lovely room had become dominated by a few aggressive species, especially on the tufa-lined walls. We removed most of the repetitive specimens, making space for different ones from other houses.

Elizabeth Farnsworth, co-author of the newly revised *Peterson Field Guide to Ferns* (a field guide that manages to be easy to use, botanically accurate, and comprehensive!) spent two days verifying the identities of our specimens and also recommended some interesting additions for the collection. New metal labels identify the family and area of origin as well as names of the specimens. The room looks great, and provides much more of a learning opportunity for visitors.

This winter's weather conditions have sparked much discussion here on campus. How will the timing of spring events, including bud burst and flowering, be altered? Will plants and populations of pollinating and herbivorous insects respond differently to increased temperature, soil water availability, and day length? Our new docent club is keeping an eye on the progression of spring in the gardens, recording observations through nature journaling and photographs. Students, Staff, and Friends all bring their unique perspectives and talents to this fun and informal group. Come and join us if you're in the area – we meet on the first and third Friday of each month, starting at 1:30 in Room 155 in the Science Center (near the greenhouses).

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# Hydrangea Flowers and Anthocyanins

by Sonja Hicks, Wellesley College Professor Emerita and WCFH Docent

Our familiar garden hydrangea, a shrub with variable pink or blue inflorescences, is *Hydrangea microphylla*, first sent from China by Sir Joseph Banks in 1770. In a well-tended Wellesley garden with a near neutral pH, the flowers are likely to be pink. On nearby Cape Cod with its canopy of shrub pines and oaks, the flowers are blue. Why the difference?

The color is due to anthocyanin pigment (a flavanoid) Delphinidion-3-monoglucoside. The aromatic rings of this molecule absorb light in the visible region of the spectrum, i.e. they will appear colored to us. But why would this molecule be blue sometimes and red other times?

If you had pure anthocyanin in solution and added acid, it would not turn blue. But when the shrub is in acid soil the flowers are blue. What is going on? The color is altered by formation of complexes with aluminum (Al) or iron (Fe). Soil particles generally carry negative charges which bind Al and Fe ions. In acidic soils with pH<5.5, Al and Fe ions are free and bind with the anthocyanin to form blue compounds. In soils with pH>6, the pigments are pink.

The availability of aluminum is a key factor in hydrangea flower color. Gardeners can alter the color of many hydrangea cultivars by changing the pH of the soil. Adding lime raises the pH and produces pink flowers. Lowering the pH by adding aluminum sulfate or acidic organic material such as pine bark mulch can turn the flowers blue. The exact amounts of these soil addendums will vary according to the soil. Some pink hydrangea cultivars such as 'Alpengluhen,' 'Pia,' and 'Kardinal' will never produce blue flowers. Lowering the pH for these plants will result in pink-purple flowers.

This leads us to another question. What is the botanical purpose of the anthocyanin? The plant uses up

energy and nutrients to make these molecules. Usually the color of flowers serves to attract pollinators. These large flower heads are actually clusters of many small flowers. While some cultivars buzz with bumblebees, others have showy but mostly sterile flowers with no functional stamens or pistils. Even so, they have attracted humans who serve much the same function as the pollinators in propagating and spreading the plants. Was this intentional?

Anthocyanins also function as protective pigments. Plants in which growth is limited by environmental stress (phosphate deficiency, cold, high salt content, etc.) tend to have reddish leaves. Such stresses require the plant to slow down



*Hydrangea flowerhead*

the light reactions of photosynthesis to avoid chemical imbalance. The anthocyanin pigments shade the leaf mesophyll cells where the chlorophyll is, thereby reducing the rate of photosynthesis.

Humans also make use of anthocyanins. We

have then in the macular pigment of our eyes where they protect our rods and cones from photo damage, allowing us to enjoy hydrangea flowers and their varied colored flower heads.

*Be sure not to miss Sonja's newest lecture 'A Pharmacy in Your Garden' at WCFH's Annual Meeting on Monday, June 4 at 4 p.m. following the Celebration for the new WCBG Education Garden. See back cover of this newsletter for more details.* 🌱

## I 9 4 I WELLESLEY rah! I 9 4 I WELLESLEY

MANY THANKS to Wellesley College Class of 1941 for their generous gift of art display lights in the WCBG Visitor Center. This thoughtful gift brightens the approach from the Creighton Room into the Desert House and has already been appreciated by winter visitors who paused to study "Apple of My Eye", an exhibit of Sarah Roche's botanical art students and "Aerial Photography" by Alex MacLean, amazing horticultural shots taken from his private airplane. Be sure to look up to check out the new lights when you come to see "Inspired by Nature": a juried exhibition of student works from Sue Swinand's classes in the Ferguson Greenhouses during 2006 and 2007.

### Inspired by Nature

In the Visitor Center  
April 1 – June 10, 2007

Since 1998, visual artist and instructor Susan Swinand has taught watercolor painting to students at the Wellesley College Botanic Gardens. This juried exhibition of works by students of Sue Swinand's classes in the WCBG during 2006 and 2007 displays the individual vision and creativity of her students, all shaped by the watercolor technique and design principles that Susan imparts.

# A Visit to the Eden Project

by Anne Manners, WCFH Docent

During late May of 2006, I had the good fortune to visit The Eden Project in Cornwall, England. This unique horticultural resource was built on the site of a former china clay pit mine, long out of use for supplying Cornwall's china makers. The mining process left a scar in the earth sixty meters deep covering an area equivalent to thirty-five football fields. As part of the site reclamation, a seventeen meter thick layer was sliced off the top of the depression's edge and used to build up the pit's bottom. Twelve dump trucks and eight bulldozers spent six months shifting 1.8 million tons of dirt.

Still amazingly large, the depression now has abundant gardens carpeting its sloping sides and is the home to three glasshouse reported to be the biggest conservatories in the world. Constructed of bubble-like sections reminiscent of honeycombs, each climate-controlled dome grows plants from different parts of the world—the Humid Tropics Biome, the Temperate Biome, and the Outdoor Biome.

The Tropics Biome, large enough to contain the Tower of London, is the most spectacular habitat of this seven-year-old botanic garden, as plants in tropical climates grow much more quickly than those in temperate zones. There are over 1,000 plant species including cola, rubber, rice, coffee, sugar, mango, bamboo, spices, pineapple, and cashew—natives from Malaysia, West Africa, South America, India, China, and the Middle East. To keep this biome humid, there are automatic misters overhead, ground level pipes to irrigate the soil, and a massive waterfall. Informational displays focus on rainforest conservation and land cultivation including illustrations of how a family growing their own foodstuffs would live in Malaysia, Africa, or India. There are also palms and plants from which dyes are made and those from which we get pharmaceutical products.



The Warm Temperate Biome contains plants which might be found in the Mediterranean, South Africa, or California. Vignettes of the landscapes of these areas as well as kitchen gardens have been created. Here you will find fruits and nuts, olives, cork, peppers, citrus fruits, grapes, eggplant, tobacco, sunflowers, and even some cut flowers. The Warm Temperate biome keeps moisture levels down with vents which are opened even during relatively cool periods.

The Outdoor Biome represents plants from the entire temperate world including parts of Asia, America and Europe, as well as the upper slopes of tropical mountains. They include tea plants, ferns, horsetails, mosses, maize, wheat, flowers, lavender, hemp, and barley. When I visited, the Outdoor Biome had a wonderful display of all different types of tulip bulbs—a colorful sight to behold!

In undertaking the Eden Project, Eden Trust aimed “to break down barriers to communication, sharing information and ideas with the widest possible audience, and to explore the potential for working with the grain of nature, bringing together science, art, technology, and commerce to create a constituency for change—then help to put it into action.” My visit to this ambitious botanical garden was a truly amazing experience, and I recommend it highly. Be sure to include an outing to the Eden Project on your travel wish list. 🌱

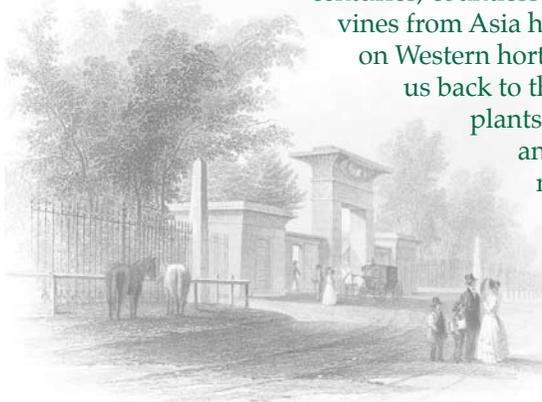
## Facets of Mount Auburn Cemetery: The Asian Connection with Daniel J. Hinkley

Tuesday, April 10, 6:00 p.m., The Rabb Auditorium, Boston Public Library

*Presented in cooperation with the Arnold Arboretum, Massachusetts Horticultural Society, Mount Auburn Cemetery, New England Wild Flower Society and Wellesley College Botanic Gardens. Lecture Series sponsored by the Anthony and Mildred Ruggiero Memorial Trust.*

Since the golden age of plant exploration in the late 19th and early 20th centuries, countless species of trees, shrubs and vines from Asia have had an enormous impact on Western horticulture. Dan Hinkley will lead us back to the origins of many of these plants—Japan, China, Taiwan, Nepal and Korea—while examining newly introduced taxa from this part of the world that may have lasting impact on our gardens in the years ahead.

**Lecture free to the public  
with a reception following.  
No reservation necessary.**



## THE ANNEX AT 100

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of the Durant conservatory with the academic needs of its botany professors and students.

While the Durant greenhouses juggled competing interests during the early years of the college,

botanical science continued to grow in importance. In her 1906-07 report to the college, President Caroline Hazard wrote, "It is gratifying to report that the work in Botany is being more largely chosen, the numbers

having doubled in the last three years." The following year, she reported, "The largest science department in college, numerically speaking, is Botany." The department rapidly outgrew its facilities and desperately needed dedicated laboratory space. There was one office for the ten instructors in the department, and the existing science labs were in constant use. A student who wanted to meet with her instructor had no choice but to do so within earshot of all the other teachers and students in the crowded office. These conditions existed for all the science departments. While the President and Trustees knew that the construction of a new science building loomed on the far horizon, they deemed the facilities crisis in Botany to be sufficiently severe to warrant the construction of a Botany Annex. Consisting of an office, lecture room, plant physiology laboratory, and a small greenhouse, this small complex was built as an addition to the Dower House dormitory in the southeast corner of the campus, not far from the Durant greenhouses.

As Harriet Creighton, Professor of Botany from 1940 to 1974, noted, "For its day it was very advanced for an undergraduate college, though certainly a modest outlay."

President Hazard described the new facility with enthusiasm. "The Botany Annex, as we call this room, has



*Botany Annex in its original location*

proved a most excellent addition. It is the best laboratory we have, with light on three sides, laboratory tables of the most modern equipment, water introduced for the use of the instructor and the students, and a beautiful little greenhouse for laboratory purposes, opening directly out of it."

The laboratory of the Botany Annex was the site of an informal dedication ceremony in the fall of 1907. Professor Margaret Ferguson and other members of the Botany Department hosted President Hazard, Mrs. Durant, and alumnae of the department. The guest of honor was Susan M. Hallowell, Wellesley's first Professor of Botany. Guests were served a "dainty lunch," and Professor Ferguson spoke of Professor Hallowell's work in building the department as that of "planting a tree, whose roots were laid deep and strong, whose trunk rose firm and permanent, and whose branches symmetrical and beautiful, were extending themselves full of vital energy and fulfilling the law of their origin."

In the first twenty years of its active use, the Botany Annex and associated greenhouse saw the passage of hundreds of botany students who pursued work in plant physiology, plant propagation, preparation of herbarium specimens, and classification of the flora in the neighborhood of Wellesley. But Margaret Ferguson and others in the sciences were adamant about the need for modern facilities. "What is true of the Botany Department is true of all science departments – that scientific work carried on with modern laboratory methods cannot properly be pursued in buildings designed primarily for dormitories."

Instrumental in first the construction of the complex of greenhouses that bear her name and then in the building of Sage Hall, Professor Ferguson designed everything down to the cabinetry in the labs. When Sage was completed, the office, lecture room and laboratory at Dower House were taken over by the dormitory and ultimately became part of Orchard apartments. The Botany Annex greenhouse, or "Annex" as it came to be called, was moved to its present location in 1927.

What is the legacy of this oldest greenhouse? Though not the first greenhouse at Wellesley, it was the first to be built by the college. Its function was clearly dictated from the start: "a beautiful little greenhouse for laboratory purposes." There were no conflicting statements about academic versus decorative uses of the plant material in this greenhouse. As such it provided a model for the Ferguson Greenhouses that followed.

The Annex is the germ of the "laboratories under glass" concept coined by Professor Ferguson. It follows the design principle set forth by Henry Durant: "fitted for its practical ends, but also as exquisite as possible in every detail." And its construction conveyed a clear message: botanical science is a

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# Programs

All classes are held in the WCBG Visitor Center unless otherwise noted.

For a complete listing of programs and/or complete course descriptions, visit our website [www.wellesley.edu/WCFH](http://www.wellesley.edu/WCFH).

For answers to programming questions or if you prefer to be sent the 2006-2007 Program Brochure, call the Friends' Office 781-283-3094.

## Describing Gardens:

HOR 07 107

### A Dialogue with Valerie Easton

Wednesday, April 4, 1:30–3:30 p.m.

Hunnewell Building, Arnold Arboretum, Jamaica Plain

*Presented in cooperation with the Arnold Arboretum, Massachusetts Horticultural Society, New England Wild Flower Society, and Wellesley College Friends of Horticulture.*

Valerie Easton, a seasoned garden columnist and author, will give you some pointers for your horticultural writing—selecting a focus, narrowing the list of details, crafting the lead-in paragraph, and, perhaps most importantly, conveying the atmosphere of the space. She will also address the business of garden writing and how to get your work published. Come to class with ideas in mind and, if possible, a photograph of a favorite garden.

Members \$30 / Non-Members \$35

## A Pattern Garden:

HOR 07 108

### The Essential Elements of Garden-Making

Wednesday, April 4, 7:00–8:30 p.m.

Hunnewell Building, Arnold Arboretum, Jamaica Plain

*Presented in cooperation with the Arnold Arboretum, Massachusetts Horticultural Society, New England Wild Flower Society, and Wellesley College Friends of Horticulture.*

Valerie Easton will explore the fourteen essential design elements, including enclosure, exposure, destination, focal points, water, and scale, that enable gardeners to design individual and compelling outdoor spaces. Valerie Easton's book, *A Pattern Garden: The Essential Elements of Garden Making*, will be available for purchase at the lecture.

Members \$20 / Non-Members \$25

## Landscape in Spring

WCC 07 203

7 Wednesdays: 12:30–3:30 p.m.

May 2, 9, 16, 23, 30; June 6, 13

Susan Swinand offers this outdoor watercolor course for intermediate and advanced levels which covers some of the problems of painting on location: direction of natural light and cast shadows, elements of atmospheric and linear perspective, simplifying to suggest complex masses, and modeling form with light and color.

Members \$175 / Non-Members \$225

## Scientific Botanical Illustration:

BAC 07 213

### Begonias with Jeanne Kunze

4 Thursdays: May 31; June 7, 14, 28; 10:00 a.m.–3:00 p.m.

Under the guidance of experienced botanical illustrator Jeanne Kunze, you will learn to use traditional dip pens, technical pens, and a scraper tool to create weighted, broken, hatch, and cross hatch line-work as well as stipple to illustrate live begonias—their wide range of plant habit, varied leaf shapes, flowers and textures. Jeanne will also show you how to use dried specimens for illustration including methods of making these samples look fresh and alive. *Drawing skills required.* A materials list will be sent upon registration. Bring your own lunch or walk to local shops. Class limit: 12

Members \$225 / Non-Members \$275

## City Trees: Under the Canopy with Wendy Hollender

HOR 07 106

Friday, May 4, 11:00 a.m.–1:30 p.m.

Wellesley College Club, Wellesley, MA

*Presented in cooperation with the Arnold Arboretum of Harvard University, the Garden Club of the Back Bay, and Wellesley College Friends of Horticulture.*

On walks through city parks and boulevards, botanical illustrator and New York City resident Wendy Hollender became enthralled with trees and their morphology. Using her artist's eye for keen observation, Wendy studies tree life cycles year after year and closely examines the subtle changes. Whether you are a country, suburban, or city dweller, Wendy will help you to see these majestic marvels with new appreciation. Fee includes illustrated lecture and lunch at the Wellesley College Club.

Members \$35 / Non-Members \$44

## Designing Mixed Bed Plantings with Scott Scarfone

HOR 07 109

Saturday, May 5, 9:00 a.m.–4:00 p.m.

Hunnewell Building, Arnold Arboretum, Jamaica Plain

*Presented in cooperation with the Arnold Arboretum, New England Wild Flower Society, and Wellesley College Friends of Horticulture.*

Landscape architect, principal and founder of Oasis Design Group, and author, Scott Scarfone will analyze the components of an appealing, well-designed mixed bed. He will deconstruct the whole to get to the essence of the plan and then, using a building-block technique, he will show the careful orchestration that is required to create a visually interesting garden. Scott's book *Professional Planting Design—An Architectural and Horticultural Approach for Creating Mixed Bed Plantings* will be available for purchase. Bring your lunch.

Members \$90 / Non-Members \$108

## Flowering Plant Morphology with Dick Rauh

BAC 08 111

4 days: Monday, July 16 - Thursday, July 19

9:30 a.m. registration, 10 a.m.–4 p.m. workshop

Dick Rauh is a highly regarded instructor and illustrator at the New York Botanical Gardens. In this 4-day workshop you will examine the enormous variety of form and structural adaptation of flowering plants. Through lectures, demonstrations, and laboratory studies, you will learn to recognize major common families, plant parts, and plant growing stages. This course will greatly enhance the accuracy and integrity of your scientific sketches, botanical drawings, and paintings. *Some drawing skill required.* A materials kit of tools and flowers is included in course fee. A list of other materials required will be sent upon registration. Recommend text (not supplied): *Botany Illustrated* by Glimn-Lacy and Kaufman. Please bring lunch or plan to walk to local shops. Class size is restricted to 12—register early.

Members \$325 / Non-Members \$375

On the Road with The Friends of Horticulture  
**Mid-Hudson River Valley Tour with Leslie Land**

Tuesday, June 19 – Friday, June 22, 2007

Join us as we journey by coach from Wellesley College to New York for a four day exploration of the Mid-Hudson River Valley's extraordinary horticultural offerings. Upon arrival in Rhinebeck, we are pleased to welcome as our garden travel guru Leslie Land, writer for The New York Times garden Q&A column, Virtual Hudson Valley pod-cast garden expert, consultant on garden design, and well-known speaker on cooking and gardening. [www.leslieland.com](http://www.leslieland.com)

We look at what makes this ecosystem so rich and how it has been tamed and cultivated. As a local resident with ties to the gardening, agricultural, and conservation communities, Leslie shares her insider's view during visits to premier public gardens as well as explorations of private gardens of Wellesley alumnae and friends.

For more details on this exciting horticultural adventure, visit [www.wellesley.edu/WCFH](http://www.wellesley.edu/WCFH) or contact The Friends of Horticulture at 781-283-3094 or via email [horticulture@wellesley.edu](mailto:horticulture@wellesley.edu).



**Color Mixing for Artists  
with Susan Fisher**

BAC 08 113

3 days: Friday, August 17—Sunday, August 19  
9:30 a.m. registration, 10 a.m.–4 p.m. workshop

Get color confidence from Susan Fisher, Arts Program Manager for the Art Institute at the Arizona-Sonora Desert Museum and president of the American Society of Botanical Artists. Learn a system for combining colors consistently so you won't have to settle for the ones you end up with through trial and error. You will learn how to achieve the broadest possible spectrum. Familiarize yourself with the code to quality paints, and choose pigments that will not fade. The principles taught in this watercolor class also apply to acrylics, gouache, inks, oil paint, casein and egg tempera. Please bring lunch or plan to walk to local shops.  
*Members \$275 / Non-Members \$325*

**Composition by Design  
with Susan Fisher**

BAC 08 131

3 days: Tuesday, August 21—Thursday, August 23  
9:30 a.m. registration, 10 a.m.–4 p.m. seminar

The difference between a 'nice' picture and a 'fabulous' piece is often in the composition. Beginning with study of recognized masters and contemporary professional illustrators, Susan Fisher will help you to learn to place your botanical subject to artistic advantage using the principles of proportion, direction, and flow. Creating your own compositions gives you the insight and expertise that will enhance all of your future illustrations. All are welcome, with no prerequisites. Materials list will be send upon registration. Please bring lunch or plan to walk to local shops.  
*Members \$275 / Non-Members \$325*

**Yupo Workshop with Jeanne Kunze**

BAC 08 081

1 day: Wednesday, August 15, 10:00 a.m.–1:00 p.m.

Catch the buzz about Yupo. Developed for the printing industry to take ink smoothly and richly, this plastic "paper" is now used by watercolor botanical artists for finely detailed works. Learn how to handle the material, to apply dry brush watercolor painting techniques, and to easily correct mistakes. *Drawing and watercolor painting skills required.* Bring your watercolor supplies. Yupo will be provided.  
*Members \$25 / Non-Members \$32*

**The Art of Livable Landscapes**

SYM 07 100

*Symposium includes a preview of "Art Goes Wild: Innovation with Native Plants" designed by W. Gary Smith*  
Friday, May 18, 2006, 9 a.m.–4:30 p.m.

Held at the Crowne Plaza Hotel, Natick, MA  
*Presented in cooperation with the Arnold Arboretum, Massachusetts Horticultural Society, New England Wild Flower Society and Wellesley College Friends of Horticulture*

In celebration of the 75<sup>th</sup> anniversary of Garden in the Woods, the New England Wild Flower Society's premier showcase for North American plants, three prominent designers and horticulturists explore new possibilities for native plants—as artistic garden features, as vernacular expressions of our regional landscape, and as components of livable, sustainable environments for the twenty-first century. The morning talks will be followed by a luncheon and then an exclusive first-hand preview of the Garden's new exhibit, "Art Goes Wild: Innovation with Native Plants," ending with an informal Garden reception.

**RICK DARKE** –

***Native Plants and Livable Landscapes***

Noted author and landscape designer Rick Darke takes a fresh look at the "native" theme and the opportunities and challenges of creating and conserving truly livable local and regional landscapes.

**W. GARY SMITH** –

***Artistic Approaches to Design***

Award-winning landscape architect Gary Smith explores the intersection between ecological design and artistic abstraction, where plants and other artful materials can be used to simultaneously reach sustainable and aesthetic potentials.

**GWEN STAUFFER** –

***Cultural Landscapes and Plant Conservation***

New England Wild Flower Society's Executive Director Gwen Stauffer discusses the synergistic roles of private and public gardens, small and large, in helping to achieve effective plant conservation. You can make a difference!

The fee includes hotel parking, morning/afternoon refreshments, luncheon, and transportation to and from Garden in the Woods for the exhibit and reception.

*Members \$125 / Non-Members \$150*

*More Program listings on pages 9 & 10*

# 'Living Water' Showcases True Spirit of Scientific Inquiry

by Gail Kahn, WCFH Docent

For more than a year, WCFH instructor Carol Govan and Wellesley College Lab Instructor Janet McDonough have been affectionately known to WCFH staff and volunteers as the "pond scum women." In their spare time, the two of them have been engaged in informal, independent research into the minute lifeforms of the different bodies of water at Wellesley College. Using samples they collected from Lake Waban, Paramecium Pond, and Woodland Pond in the Hunnewell Arboretum, Carol and Janet examined and identified microscopic lifeforms ranging from simple cyanobacteria and green algae, to single-celled protozoa, and animalcules like hydras, rotifers, and sponges. Using a digital camera, they were able to take photos and movies of specimens.

The images reveal the strangeness and beauty of these tiny living things. Some strings of algae look like stunning jewelry designs, while another clump looks just like a Delft china pattern. Janet and Carol watched dinoflagellates spinning like minute spaceships, and testate amoebas extending pseudopods out of holes in their tiny shells composed of grains of sand. They found that there are indeed paramecia in Paramecium Pond – but there are even more in Woodland Pond.



Carol Govan drawing her microscopic observations.

*Animalcule is the term that was used by the 17th-century discoverer of microorganisms, Anton van Leeuwenhoek, and is defined as a microscopic or minute organism. Examples are an amoeba or paramecium. They are further identified as wheel, slipper, trumpet, bell, sun, proteus animalcules.*

labs no longer purchase lab grown specimens from scientific companies; students collect lab samples to study living water.

When Janet and Carol are engaged in one of their weekly microscope sessions, anyone walking past the botany lab can overhear their delighted exclamations. Surrounded by sample containers, eyedroppers, and reference texts, they search for answers, each of which usually leads to at least three more questions. Their enthusiasm is contagious. Carol's and Janet's self-directed research is a perfect example of how science can excite and propel people of every age and educational background into a journey of discovery. 🌱



Janet McDonough gathering water samples from Woodland Pond in the Hunnewell Arboretum.

Janet's and Carol's research has culminated in a 'Living Water' presentation to WCFH volunteers, and a poster displaying some of their fantastic photos will be on exhibit in the Visitor Center on Earth Day for the Earth Day Greenathon Festival (see page 10 for more details.) Their research has proved the abundance of certain aquatic lifeforms on campus. Several College

## THE ANNEX AT 100

continued from page 5

worthy study that deserves the most modern laboratory facilities.

The Annex is receiving a special 100<sup>th</sup> birthday present from the college: an historic restoration and a more visible location adjacent to the Cameron Garden between the entrances to the head house and the Visitor Center. As we look ahead to the possible renovation of the Ferguson Greenhouses in the not-so-distant future, the commitment to refurbish the Annex underscores the continuing importance of Wellesley College greenhouses to the students, faculty, and surrounding community.



Proposed new home for the Botany Annex. Sketch by Mary D. Coyne.

## Wintersession EXTD I 15: Introduction to Botanical Art

Thanks for a second successful Introduction to Botanical Art Wintersession course go to the Departments of Art and Biological Science for sponsoring, Friends' membership for underwriting, Sarah Roche and Carol Govan for teaching, Nancy Webb and Gail Kahn in Friends' office for organizing, and Special Collection Librarians Ruth Rogers and Mariana Moller for sharing the Clapp Library's botanical art treasures with the Wellesley College students.

*"...And I just would like you to know that I've truly enjoyed the course. I appreciate and care for plants more now, and I'm so thankful to have received a practice in detailed observational drawing as well as a learning of the watercolor technique. Thank you for making the botanical art so interesting."*

—Wintersession 2007 student Joo Hee Kim '08



*Saintpaulia cv. (African Violet)  
by Joo Hee Kim '08*

### Learn to look at plants in a whole new way ... All abilities welcome!

#### Field Sketching in the Arboretum

BAC 07 030

2 Tuesdays: May 8 and 15  
1:30–4:00 p.m.

Even non-artists will enjoy this class with Carol Govan that teaches the rewarding skill of field sketching in the Wellesley College Botanic Gardens. By making sketches—not formal drawings—you will increase your understanding of trees and learn to focus on features useful in identifying even unlabeled specimens. After observing and recording forms and branching patterns from a distance, move in for a closer look at twigs and buds, bark, leaves, flowers, and fruit. Your quick sketches in the form of note-taking will help you look closer and remember what you have seen. No previous experience necessary except a love of plants. Bring sketchbook/notebook, #2 pencil, and hand lens. Class Limit 12

Members \$50 / Non-Members \$63

#### Plant Painting for the Petrified

BAC 07 010

4 Tuesdays: June 5, 2, 9, 26  
10:00 a.m.–1:00 p.m.

Do you long to draw and paint, yet you feel artistically challenged? Then this absolute beginners' class is designed for you. Sarah Roche, professional botanical illustrator, guides you through the elementary stages of drawing and painting plants—gently encouraging your creative instincts to flourish. The relaxed, informative class introduces you to drawing through observational skills, mark making, line drawing and tonal values and then to painting with an awareness of spatial relationships, composition and color. Materials list will be discussed in the first lesson. Please bring sketch paper and pencils: HB, B, 2B to the first class.

Class limit: 15

Members \$112 / Non-Members \$140



#### Colored Pencil Fundamentals with Carol Ann Morley

BAC 08 142

3 days: Friday, July 20 – Sunday, July 22  
9:30 a.m. registration; 10:00 a.m. –4:00 p.m. seminar

Accomplished botanical artist Carol Ann Morley teaches you how to create a botanical drawing with the versatile medium of colored pencils, creating many different effects. The pigments in colored pencils are translucent and can be applied in multiple delicate washes in much the same way as a watercolor painting. You will learn to mix color hues to create shadows, to make colors recede and advance, to create harmony and contrast, not mud, and the effect of colored pencils on different paper surfaces. Materials list will be sent upon registration. Bring your own lunch or walk to local shops. Class limit: 12

Members \$250 / Non-Members \$300

#### Foundations of Botanical Drawing and Painting with Sarah Roche

BAC 08 101A

5 days: Monday, July 23–Friday, July 27  
10:00 a.m. – 3:00 p.m.

In this 5-day intensive course designed for those who can not attend weekly classes, learn to realistically render botanical forms in pencil and watercolor under the guidance of Sarah Roche, professional botanical illustrator. Sarah will introduce the traditional art and science of botanical drawing and painting. Instructional focus will include observational skills, drawing development, composition, design, and watercolor technique through demonstrations and tutorials. Materials list will be sent upon registration. Please bring lunch or plan to walk to local shops.

Class limit: 15

Members \$200 / Non-Members \$250

More programs and course on page 6, 7, and 10

# Earth Day Greenathon

Sunday, April 22, 1:00 – 4:00 p.m.



Families are invited to stop in at the Greenhouse Visitor Center for crafts and activities to celebrate Earth Day. This year is extra special because we celebrate what would have been the 100<sup>th</sup> birthday of writer, scientist, and ecologist Rachel Carson. 🌱

*Gail Kahn plays "I Used a Plant Today" with young visitors at Greenhouse Kids' Time on Martin Luther King Day 2007. The children answered a series of thought and dialogue provoking questions about plant-based everyday items such as: Did you sit on a wooden chair? Have you read a book or written a note on paper? Did you eat a fruit or vegetable for lunch? Do you walk or play on grass? Are your blue jeans made from cotton?*



## NOTES FROM THE DIRECTOR

*continued from page 2*

Last but not least, we are really looking forward to planting the new Educational Garden across from the Visitor Center this spring. The hardscape is complete, and Mary Coyne is finishing up the planting design (and she snuck a few bulbs in late last fall to greet spring in the new space). We'll celebrate the new garden at the Friends annual meeting on June 4.

I hope to see you at Wellesley soon!

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

## SUMMER 2007 CHILDREN'S PROGRAMS

**NEW FOR 2007!** We've expanded our popular **Plant FBI (For Budding Investigators)** into a series of explorations in plant science, ecology, horticulture, and botanical art.

### Plant FBI: Propagation Partners

CHP 07 111

4 Saturdays: 9:30 am–12:00 noon  
June 2, 9, 16, 23

Explore the wonders of plant propagation in this special hands-on course for teams of one child and one adult partner. First-hand experience planting and potting up jump starts the learning process. Find out how to start and care for seeds and cuttings, what makes good growing soil, and different plants' requirements for water, nutrition, and light. Between each Saturday session your seedlings will have a chance to grow in the Ferguson Greenhouses under the careful watch of the WCBG staff. By the end of the 4-week class, each team of propagation partners should have plenty of young plants ready to be planted into a home garden. Tell us what plants you would like to grow! Teams should bring a snack to each class.

For children 5 years and up with adult partner. Class limit: 8 teams.

Fee covers registration for one child and one adult partner.

\$125 members / \$150 non-members

### Plant FBI: Field Agents

CHP 07 121

4 mornings: 9:30 am–12:00 noon  
Tuesday–Friday, June 26–29

Kids will have the opportunity to explore twenty-two acres of WCBG with observations, science experiments, and nature journaling during this half-day course. The Alexandra Botanic Garden and Hunnewell Arboretum at Wellesley College contain many sorts of habitats and special hidden places. What grows and lives in Paramecium Pond or in the meadow? How do the plants and animals interact? We'll discover many ways to think about this special space: as an ecosystem, a designed landscape, a place with a unique history, and a personal place for play and reflection. Bring a sketchbook or journal, a pencil, and a snack to each class. Dress appropriately for going outdoors into the Botanic Gardens, rain or shine. For children in grades 3-5. Class limit: 12.

\$100 members / \$125 non-members



### Plant FBI: Botanical Illustrators

CHP 08 201

3 afternoons: 4:00–6:00 pm

Tuesday, July 10–Thursday, July 12

Botanical art is a place where art and science interact. When you take the time to draw a plant, you also learn to see its small details and discover the reasons it grows the way it does.

In this fun introductory course with experienced school teacher and botanical art instructor Sarah Roche, kids in grades 4 through 7 create accurate colored pencil drawings that tell the story of how a plant grows. Starting with flowers the first day, the class moves on to fruits and seeds and ends with a drawing of an entire potted plant. Colored pencils are a mess-free and versatile medium and, just like paints, can be blended to produce subtle shades of color. Art and plant materials will be provided. Students should bring a snack to each class. For children in grades 4-7. Class limit: 12. All abilities welcome, no experience necessary.

\$60 members / \$75 non-members

# WCFH Memorial Book Fund purchases 2005-2006

WCFH is indebted to Nancy Dean Kingman '53 who oversees this memorial fund and works with the Science Librarians to fill the requests of faculty and staff for science texts and periodicals. If you would like to contribute to this fund, your contribution may be sent to WCFH office. Please make checks payable to "WCFH Memorial Book Fund" and include a brief note about the memorial. Or contact the Friends office at 781-283-3094 or horticulture@wellesley.edu.

*Gardens of the World.*

Pigeat, Jean-Paul. 2003

*Abiotic Stresses: Plant Resistance Through Breeding and Molecular Approaches.*

M. Ashraf, P.J.C. Harris, eds. 2005

*Journey of a Single Cell to a Plant.*

S.J. Murch, P.K. Saxena. 2005

*Microbial Ecology of the Soil and Plant Growth.*

Davet, Pierre. 2004

*Sustaining Biodiversity and Ecosystem Services in Soils and Sediments.*

D. H. Wall. 2004

*Living Soil: Fundamentals of Soil Science and Soil Biology.*

Cobat, Jean Michel. 2004

*Fungal Disease Resistance in Plants: Biochemistry, Molecular Biology and Genetic Engineering.*

Zamir K. Punja. 2004

*Soil Organic Matter in Sustainable Agriculture.*

Fred Magdoff, Ray R. Weil. 2004.

*Handbook of Seed Physiology: Applications to Agriculture.*

Roberto L. Benech-Arnold. 2004

*Cultural History of Plants.*

Ghillean Prance. 2005

*Essential Garden Design Workbook.*

Rosemary Alexander. 2004

*American Household Botany:*

*History of Useful Plants, 1620-1900.*

Sumner, Judith. 2004

*Native Plants of the Northeast:*

*Guide for Gardening and Conservation.*

Leopold, D.J. 2005 

## PROGRAM REGISTRATION FORM WELLESLEY COLLEGE FRIENDS OF HORTICULTURE

www.wellesley.edu/FOH email: horticulture@wellesley.edu office: 781-283-3094

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

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

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

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

CELL \_\_\_\_\_

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

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

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

Section #	Class title	Fee
_____	_____	_____
_____	_____	_____
_____	_____	_____

PROGRAM CHECK ENCLOSED \$ \_\_\_\_\_

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 2006-June 2007)

Benefactor:	\$2500	Sponsor:	\$100
Patron:	\$1000	Member:	\$50
Supporter:	\$500	Young Alum:	\$15 (5 most recent classes)
Donor:	\$250		

SEPARATE CHECK FOR MEMBERSHIP \$ \_\_\_\_\_  
made payable to: *Wellesley College Friends of Horticulture.*

Cancellations and Refunds: You may cancel a registration and receive a partial refund by calling the WCFH office at 781-283-3094 ext. 4 at least one week prior to the first class. A cancellation fee (\$5 or 25% of the cost of the course, whichever is greater) will be deducted. Special cancellation policies apply to overnight trips. We regret that no refunds or credits can be given for class cancellations less than one week prior to the start of the class or for classes you have not attended.

**Congratulations** to Anne Sinnott Moore '56 for writing and Becky Saunders '61 for illustrating the popular book *Houseplants are Houseguests: Thoughts from an Indoor Gardener*. If you would like to purchase a copy for yourself or a gift, please stop by the Visitor Center or contact the Friends office 781-283-3094 or horticulture@wellesley.edu. Proceeds from books sold by WCFH benefit the Harriet B. Creighton Botanic Gardens Fund.

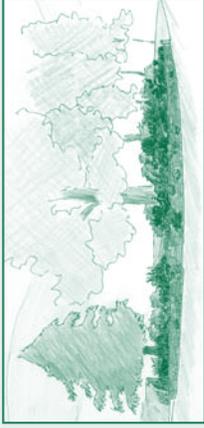
If you would like to help create the new WCBG Education Garden with a direct contribution, please send your check to:  
Development Services—Wellesley College  
Harriet B. Creighton Botanic Gardens Fund  
106 Central Street  
Wellesley, MA 02481



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

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## ANNUAL MEETING OF THE FRIENDS OF HORTICULTURE



Mary D. Coyne

### Monday, June 4

#### 3:00 p.m. *Celebration for WCBG Education Garden*

Reception and Dedication Ceremony, WCBG Visitor Center

Please help us celebrate the generous spirit of those who donated to the Harriet B. Creighton Botanic Gardens Fund to make this new WCBG Educational Garden a reality.

#### 4:00 p.m. *A Pharmacy in Your Garden*

Science Center Lecture

Sonja Hicks, Wellesley College Professor Emerita

Sonja will examine the medical uses of natural products from plants such as feverfew, digitalis, cinchona, and Madagascar periwinkle.

Celebration and Lecture

Free for Members' and College Community / Guest \$5.

RSVP by June 1 requested:

781-283-3094 / horticulture@wellesley.edu

### Green Thumbs—hands-on garden volunteers needed

Green Thumbs is a new hands-on gardener volunteer corps that will gather on a regular basis during the growing season to help maintain the new Education Garden, the Medicinal Garden, the Gray Garden, and other smaller gardens that surround the greenhouses. If you are passionate about plants and would like to assist the WCBG Staff with planting, raking, mulching, watering, and weeding, please contact the Friends Office for a volunteer application at 781-283-3094 x4 or email horticulture@wellesley.edu.