Everyone loves flowers, but imagine how they would appear if you had x-ray vision. Our latest exhibition, *The Inner Beauty of Flowers*, presents just that. Once radiologist Merrill C. Raikes retired, he turned his x-rays away from diagnostic medicine and instead focused them on flowers. The resulting floral radiographs bring to light the inner structure of flowers that normally remains invisible to us. It wasn’t easy for Dr. Raikes to figure out the exact techniques that would produce the desired results, but he finally discovered how to get the detail he was after. He uses equipment that is no longer manufactured, since current day medical x-ray equipment doesn’t produce x-rays suitable for this kind of work. Combined with his artful eye, the results are extraordinary and reveal an amazing world of delicacy and beauty.

I was very impressed by Dr. Raikes’ artwork when he first showed it to me, and I wanted to create an educational exhibit that would display his magnificent floral radiography. Through a collaboration with University of Massachusetts physics professor Robert B. Hallock, we were able to produce an exhibit that not only showcases Dr. Raikes’ art but also explains the science behind the images. Visitors have the opportunity to learn about the way light works, how the eye sees, what x-rays are, and how x-ray technology can be used to create botanical art.

Traditional photography captures images using the visible light spectrum (light that the unaided human eye is able to see) and produces photographs that depict exterior surface, shape, texture, and color. In contrast, x-rays are able to penetrate beyond the surface of objects and enable us to extend our range of perception. Thus, we can see these remarkable interior floral structures. There are some surprises as well — be sure to see what the carnivorous pitcher plant has caught and is hiding in its vessel.

The show is up through September. Don’t miss it — you’ll never look at flowers the same way again!
On February 24, 2010, a major snowstorm hit the Northeast. The Campus Arboretum suffered greatly from the extremely heavy, wet snow, which brought down many branches across campus. Some trees were too severely damaged to be saved. Losses include a large maple on Burton lawn (photo below), an elm on Green Street, and an oak and giant pine (bottom photo) just past the Japanese Tea Hut. The most significant loss was the majestic American beech (top photo) that provided shade for the fern garden and for benches at the Lanning Fountain. Planted in 1937, it had survived another heavy snowfall on April 1, 1997. During that storm, which damaged over 200 trees on campus, a large leader facing the Science Center was torn off the beech.

Although, the Botanic Garden has not yet decided on the all replacements for the lost trees, we expect it to be 50 to 70 years before the Lanning Fountain area appears as it did last summer.
The Moonflower, an Exceptional Cactus of the Amazon River

Rob Nicholson

It is the outliers of a plant family, those plants that challenge our notion of life-form or environmental preference, that are often the most interesting and that often make the most stellar additions to a botanic garden’s collection. Say the word cactus and the great majority of people visualize a spiky ball set in an arid desert landscape. While this is of course a very accurate image, it does not tell the entire story of the Cactaceae, the family of cacti.

With about 130 genera and over 1500 species, it is a relatively recently evolved family. The latest DNA studies suggest a mid-Tertiary origin, about 30 million years before present (2). It is a New World family save for one species, the epiphytic (growing on other plants, but not parasitic) and lithophytic (growing on rocks) Rhipsalis baccifera or mistletoe cactus (we hope to have some interesting research on the Old World exception at a later date). But the life-forms within the family go far beyond spiny balls. I have collected seeds and cuttings of a number of atypical cacti for the Smith College Botanic Garden. In the arid plains around Tehuantepec in Oaxaca, Mexico, I found Pereskia lycnhdiflora. It is a large tree with a spike festooned trunk, and small, oval fleshy leaves, with a deep orange, multipetaled blossom, which we had to struggle gingerly to reach. In moist cloud forests and wet, lowland tropical forests, I collected cuttings of twining epiphytes such as Epiphyllum phyllanthus, Rhipsalis baccifera, and Hylocereus monacanthus. These moisture adapted scramblers are about as far from a suffering ball in the desert as could be imagined.

The moonflower cactus, however, is probably the most atypical of all cacti, as it is not only adapted to a moist environment but also to being underwater for a significant amount of time. It is an epiphyte with flattened clasping stems that grow upward along tree trunks, a chain of reddish or yellowish pads with spiny edges. It is native to the igapó forest zone in the Amazon River drainage basin, that portion of the riverbank that experiences seasonal flooding every year with increases in water level of up to 30 feet. The houses and towns along the river plan for this and are built well back from the low water mark. Even so, during my visit this last year, a 50 year flood event meant some who had been optimistic had to live with water over their floors for a number of weeks. In the wild, the plants I saw at high flood stage were barely above water and we could see more of the plants extending down the trunk into dark black water below. No flowers or fruit were seen but after a long search in the rain we felt lucky to find what we did.

Selenicereus wittii has assumed an almost legendary aura due to its connection with a variety of top-notch botanists such as Richard Evans Schultes, Timothy C. Plowman, and Thomas Croat, but perhaps most of all because of its association with an artist, the late botanical illustrator Margaret Mee.

Margaret Mee was born in England in 1909 but lived a great portion of her life in Brazil, where she journeyed afield to sketch and document the flora she would later paint. During 15 arduous journeys into the Amazonian river system, she captured the opulent flora: its orchids and the extravagant and odd flowers of tropical trees. Perhaps her most famous painting is that of Selenicereus wittii. The story is told in full in her book, In Search of Flowers of the Amazon Forests. In 1978, she completed a painting of the habit of the plant upon a tree trunk, a tangle of red pads with a few fruit. In 1981 she painted a specimen with wilted flowers but was not able to complete the triptych until 1988, when a special voyage brought her to a flower bud just ready to open. It was a trip that involved multiple visits by scouts before she could take a motor launch to the site where the flowers would be opening, displaying themselves and emitting fragrance for one night and then wilting by morning. Her freehand sketches at night and watercolor studies at dawn gave her all the inspiration she needed for later rendering an ethereal painting of the flower, complete with a hazy moon backdrop. Sadly, later that year Mee died in a car crash.

(Continued on page 4)
At Smith, we have been growing a specimen of *Selenicereus wittii* for five years, started as a cutting I received from the Atlanta Botanical Garden while attending a convention there. Their material had come from a specimen at the Marie Selby Botanical Gardens, which had been originally collected on the Rio Curcuriari in Brazil.

Like many plants started from a small rooted cutting, it seems that sometimes it takes five to ten years before the plant reaches a size where it will expend energy on flowering. Such was the case with the moonflower, as it grew slowly, wrapping its crimson pads around a wooden orchid box, the lone cacti among its preening orchidaceous neighbors in the Stove House in Lyman Conservatory. This spring some new growth was evident and rather than new pads forming, the swelling buds had a different look. I hoped for the best. Three flower buds began to elongate and grow slowly from a large pad. We moved the plant mid-pool, out of reach of the 20,000 curious visitors that would soon stream through the Bulb Show.

The trumpet shaped flowers of *Selenicereus wittii* are about 10 to 12 inches long and 4 inches wide, and are fragrant only at night. They open for a single night, advertise their wares to foraging pollinators and, if lucky, get pollinated. An excellent paper by Barthlott et. al. (1) details that this suite of characters would point toward visitation by a night visiting, trap lining (regularly returning to the same plant) pollinator. Although “pollination of *S. wittii* has never been observed in situ,” the authors posit that because of the extreme distance between the petals and the nectaries at the base of the tubular flower that the hawkmoths *Cocytius cruentus* and *Amphimoena walkeri* are possible suspects. That the flower starts out fragrant (positive aroma by human standards) and then changes after two hours into “an unpleasant odor” (again, by human standards) might indicate two suites of pollinators are involved, first moths and then beetles.

We awaited the opening of our blossoms and came in at night to hand-pollinate. I could find no information regarding self-sterility in the taxon but other species in its subgroup of the Cactaceae, the tribe Hylocereeae, regularly set fruit and seed in the Conservatory. We observed the opening of the flowers, noting the lemony scent, and at the appropriate time did a moth dance and applied a little pollen. No pollinators were seen visiting despite open greenhouse vents, but this is hardly a surprise as no local New England moths have co-evolved with night blooming cacti. If fertilization and fruit set occur, this will allow us to distribute seed via our *Index Seminum* (list for our international seed exchange with other botanical gardens), a possible first as I can’t recall ever seeing seed offered in any of the thousands of indexes I have perused over the years.

As more and more botanic gardens include this remarkable species in their collection, I suspect that somewhere Margaret Mee is smiling.

### References


The abstract is available online at [www.springerlink.com/content/u46l421456522755](http://www.springerlink.com/content/u46l421456522755)


The abstract is available online at [www.jstor.org/pss/1224092](http://www.jstor.org/pss/1224092)

### Additional resources:

For an online account of Magaret Mee’s journey to the moonflower see: [www.nonesuchexpeditions.com/margaret-mee/margaretmees-amazon-1/mee_moonflower.htm](http://www.nonesuchexpeditions.com/margaret-mee/margaretmees-amazon-1/mee_moonflower.htm)
Profile: Lynden Miller

When you’re living in a big city there’s nothing better than a warm summer day spent tossing a Frisbee, having a picnic, or enjoying the shade of a tree in the city’s public parks. Actually anywhere you live, well-designed public gardens and parks increase quality of life. A blooming, beautiful garden draws people in, allowing businesses and restaurants to flourish and providing a space for socializing. Sprucing up a park is key to revitalizing a downtrodden city or town, and the wonder of it is, public parks belong to everyone. Anyone can begin to advocate for the greening of their city, but someone needs to take the initiative. Smith alumna Lynden Miller ’60 has done just that.

A renowned public garden designer based in New York City, Miller works tirelessly to bring natural beauty back into public spaces. She comes to landscape design with a painting background, having spent the first 18 years of her career as an abstract landscaper painter. She received a master’s in Studio Art at the University of Maryland and a BA in Art History at Smith, and studied horticulture at the New York Botanical Garden (NYBG). In 1982 she was asked by the Central Park Conservancy to rejuvenate the formal, six acre Central Park Conservatory Garden. Located in the Spanish Harlem area of New York City, the garden had become run down and deserted. After five years of fundraising, designing plantings, hiring a staff, and organizing volunteers, the Conservatory Garden came back to life.

Miller now serves as its director. After the success of the Conservatory Garden became clear, Miller was contacted by the Central Park Zoo, Bryant Park, and the New York Botanical Garden to create redesigns to help attract visitors and increase public funding. For the past 25 years she has been a significant part of redefining the meaning of public parks in New York City.

Lynden Miller uses her artist’s eye in all her horticultural work. Her gardens provide interest year-round, through her use of evergreens and cold hardy plantings. When beginning a new project, Miller considers what the garden will look like in winter and works from there. This unique approach to garden design allows her spaces to attract not only new, but returning and loyal visitors all year. In designing the half-acre Jane Watson Irwin Perennial Garden at NYBG, Miller chose a mix of cool and hot colors to create two different sections. Ensuring that the garden is interesting all year long, she chose many hardy shrubs such as Cotinus coggygria, smokebush, and her beloved Hydrangea quercifolia, oakleaf hydrangea.

Another of her redesigns is midtown’s Bryant Park. This one in particular really stood out to me. As an avid New York City parkgoer, I have always seen Bryant Park as one of the most cherished, beautiful, accessible and populated parks. While walking with Mrs. Miller through the Ladies’ Border at the New York Botanical Garden on one of January’s warmer days, I learned the stories of how certain plants came to find themselves growing in this lovely arrangement in the middle of the Bronx, NY. One Edgeworthia had traveled next to Miller on a flight cross country from the Northwest. Upon hearing this anecdote I immediately thought how much it personified Miller’s character, a woman who spends her life bringing unexpected beauty to unexpected places. Not that the New York Botanical Garden is a place where beauty is unexpected, being one of the premiere botanical gardens in the world. There is beauty everywhere you
Echinacea purpurea species such as horticultural showcase, blossoming over with just a manicured public park, but a true she turned the Conservatory Garden into not to be wrong” (p. 76). Following her intuition deserved better, and the naysayers turned out the Conservatory Garden and its neighbors trash them anyway.’ But I was convinced that give them marigolds and red salvia. They will wouldn’t appreciate complex plantings: ‘Just that the Conservatory Garden’s neighbors Garden’s renovation: “Many people told me from the early stages of the Conservatory Garden’s renovation: “Many people told me that the Conservatory Garden’s neighbors wouldn’t appreciate complex plantings: ‘Just give them marigolds and red salvia. They will trash them anyway.’ But I was convinced that the Conservatory Garden and its neighbors deserved better, and the naysayers turned out to be wrong’ (p. 76). Following her intuition she turned the Conservatory Garden into not just a manicured public park, but a true horticultural showcase, blossoming over with species such as Hydrangea quercifolia, Echinacea purpurea (purple coneflower), Hibiscus moscheutos (mallow), and an assortment of cherry trees.

On the first night of the Smith College Botanic Garden’s Spring Bulb Show this March, Lynden Miller gave the opening lecture. Botanic Garden staff related how during her visit to Smith, Miller could be seen around campus always with her notebook and camera, marveling at the arboretum and gardens, and formulating ideas for her upcoming projects. During the lecture, Miller spoke about her work in New York and what she calls the “power of plants and parks.” Looking back on New York City’s fiscal crisis in the 1960s and 1970s, Miller described the restoration of Central Park as the tipping point that changed New York City. She went through slides of her work relating stories of New Yorkers who had worked tirelessly to bring beautiful public spaces to the city, including some who opened up their private property to the public for the benefit of all. Speaking about her most important accomplishments, Miller said that fighting for the hiring and fair pay for gardeners and maintenance workers of the parks is one of her proudest achievements, since it is her sincere belief that a garden is only as good as the people who care for it. As Miller shared stories of landscape transformations, from waterfront parks to college campuses, her message of the importance of beautifying urban spaces became clear.

“People who design public spaces have a moral obligation to think about the people who are going to use it,” she said reiterating the values that are expressed through all of her work.

Lynden Miller ’60 has been an ardent supporter of the Botanic Garden of Smith College and serves on the Friends of the Botanic Garden Advisory Committee. She will sign copies of her book during Smith’s Reunion II weekend, when she will be celebrating her 50th reunion with her classmates.

In Memoriam: Marion B. Rhodes

On November 11, 2009 the Botanic Garden lost a great friend, Marion B. Rhodes. She had just recently turned 86. Although her first love was the science of botany, realizing that post-war America probably had more jobs for chemists than botanists, Marion earned a B.S. in chemistry in 1948. She received a Ph.D. in polymer chemistry in 1966, and went on to become an accomplished chemist, earning the rank of Professor of Chemistry at the University of Massachusetts in 1989. Marion authored more than 60 professional papers and received numerous awards for scientific excellence.

After retiring in 2000, Marion continued her commitment to education in physical chemistry, offering advanced optical microscopy courses to emerging scientists. At the same time, Marion renewed her love of things botanical and assumed a pivotal role in the volunteer activities at the Botanic Garden at Smith College. Always excited about the plants, Marion’s enthusiasm was infectious. She was eager to learn more and share what she learned, often making presentations at volunteer meetings, passing along her newfound knowledge of particular plants or related subjects, such as plant explorers. Although she admitted that she wished that she had studied botany rather than chemistry, she certainly never gave up studying. Marion assembled a notebook on African plants, a valuable resource for other volunteers. Her reputation for motivating school groups during tours was unequalled.

Marion pursued her interests in ecology and imparted an appreciation for natural systems to friends and family. She was also a gifted photographer, skilled in black-and-white as well as color composition. An active participant in the arts and community affairs, she served on several university and community advisory boards. Marion lived by the philosophy that the only way to implement change was to be a part of the solution.

In keeping with her love of botany and the natural habitats of our planet, Marion designed her own retirement home on the western slopes of Mount Toby, nestled in the mixed pine and hardwood forest. Determined to live in her forest refuge and pursue her love of things scientific, she insisted that she was just fine “up on the hill” with her golden retriever companion. Marion’s journey, from a scientifically curious young woman working nights in a textile mill while attending classes during the days, to uncompromising educator, and internationally recognized scientist, is an inspiration to all of us.
The Other White Goat’s Beard

Many of you are probably familiar with the native goat’s beard, *Aruncus dioicus*, which is a tall herbaceous perennial. It is not commonly used in perennial gardens because its size (4–6 feet tall and 2–4 feet wide) makes it a bit too dominant and difficult to place. On the other end of the size spectrum is *Aruncus aethusifolius*, a species that originated in Korea.

*Aruncus aethusifolius* earns its common name, dwarf goat’s beard, because it rarely attains a height or width of 10–12 inches. When compared to its American moisture-loving relative, it is less fussy and grows well as long as it does not dry out. It has performed well in my somewhat sandy garden soil and on the Smith campus in well-drained soils, preferring partial shade or, if in direct sun, the morning sun. You can see it growing near the Lanning Fountain on the northeast side of Sabin-Reed Hall and it grows nicely along the side of Tyler next to Tyler Annex.

Although there are no cultivated varieties with colorful flowers, its little, white bottlebrush flowers are delicate and refined and its fine-textured, bug-resistant foliage looks good throughout the season. In fact, the foliage is attractive enough to earn it a place in the garden even if it never flowered. One other point worth mentioning is that slugs will not go near it! In the fall, the foliage may turn a burnt orange or bright yellow. When placed in a group it can act as a non-aggressive ground cover which, with occasional weeding, serves this purpose well. Other uses are the front of the perennial border or as an understory below tall-canopied trees. It seems to do well growing alongside *Epimedium* or *Hosta* but, unlike these companions, it adapts to sun well if kept moist.

As with all *Aruncus*, *A. aethusifolius* is dioecious (female flowers on one plant, males on another). The males produce flowers that are a bit showier but all *Aruncus* flowers are delicate not gaudy. I have never seen the sexes sold separately, so if you are inclined to want more of the showier males, you should divide and plant those and neglect saving divisions of the females. My guess is that because this is a seed-produced perennial, half of the marketed plants are female. Both sexes spread slowly, close to the mother plant (similar to daylily or hosta) making it well behaved in the garden.

Goat’s beard flowers attract a variety of pollinators. The resulting tiny seed heads make female plants easily distinguishable from males in the fall. It sometimes self-sows and tiny seedlings with their characteristic foliage appear in the spring. Those can be relocated or potted up for a year before planting out. The plant is not invasive and seedlings are fairly rare. Collecting seed and giving it the royal treatment can quickly increase your population if you choose to use the plant to cover larger areas, although it is available at many perennial nurseries.

Interestingly, a hybrid between the two goat’s beards has been made and its appearance is an “average” of the two. Marketed as *Aruncus × ‘Misty Lace,’* it may become a popular perennial since it is a tougher plant than *Aruncus dioicus* and is more compact and showy. As with all plants new to your garden, start out slow, buying a few, and see how they do where you put them. If you make a mistake, so what? The nice thing about herbaceous perennials is that they can be transplanted years down the road whereas most woody plants are best left untouched once they are established in the landscape.

Tree Removal along Paradise Pond

Under order of the state Department of Conservation and Recreation, Office of Dam Safety, Smith College removed 40 trees along a swath of land between Paradise Pond and the athletic fields. The order called for a plan to improve the condition of the dam, which includes the dike and the spillway. The trees growing along the dike were not part of the Botanic Garden’s collection as they were growing in the uncultivated area, but they were threatening the dike’s structural integrity. In addition to the tree removals, hardening the pond edge and changing the grade are part of the plan to maintain the spillway and dike system that regulates the pond’s water level.
Smith College bustled in the early twentieth century, drawing acclaim and renown while expanding its physical and pedagogical reach. By the banks of Paradise Pond, however, one man worked quietly, seemingly unnoticed in the midst of Smith’s achievements and expansions. As Head Gardener, Adrian Peter Wezel served the Smith community and landscape for six and a half years. Wezel’s history has not benefited from the careful attention granted to Smith’s past, and records of his life and work remain riddled with contradictions and ravaged by time. As Head Gardener, Adrian Peter Wezel served the Smith community and landscape for six and a half years. Wezel’s history has not benefited from the careful attention granted to Smith’s past, and records of his life and work remain riddled with contradictions and ravaged by time. On Smith’s campus, however, Wezel’s presence and talent are evident in ways defying his absence from official histories. The plants to which Wezel dedicated his energies — ranging from rose bushes to herbarium specimens — preserve his memory as well as any archive.

Wezel may have been an unconventional choice as Smith’s Head Gardener. The Botanic Garden was arranged in a decidedly Victorian plan, and its most famous stewards were Scots, Englishmen, or trained at Kew Gardens. By contrast, Adrian Wezel was born in Westzaan, Holland, on December 29, 1886. At age twenty-four, he sailed to America, departing from Rotterdam on April 15, 1911, arriving at Ellis Island, New York, ten days later. Immigration records note the arrival of Adriaan [sic] P. Wezel, at about six feet tall with brown hair and gray eyes. Strangely, his occupation is listed as “carpenter.” Whether gardener or carpenter, Wezel could not have attracted much attention within the crush of arrivals. Without apparent fanfare, Wezel passed through Ellis Island on his way to Hoboken, N.J.

Wezel did not flounder upon arrival: John D. Crimmins, Sr. soon hired him as Head Gardener for his estate in Noroton, Connecticut. During his years in Connecticut, Wezel maintained professional contacts with his fellow horticulturists, even winning first prize for his red roses at the 1918 Spring Flower Show in New York City. He also served as recording secretary for the Stamford Horticultural Society, and in June 1918, gave a talk on carnations.

Wezel appreciated the United States for more than its professional opportunities. Part of his affection for his new country stemmed from his simple delight in the land. His son Adrian

As a double major in English Language and Literature and French Studies, Caroline Winschel ’09 spent her last semester at Smith feeling preemptively nostalgic about its campus and grounds. When planning her final research project for Cornelia Pearsall’s Green Victoria course in the Department of English, she realized that writing about Smith could be the perfect cure.

Caroline still cherishes her time at Smith, but she is now happily installed in Philadelphia, where spring comes earlier and where she works in acquisitions at the University of Pennsylvania Press. She is also pursuing her master’s in English literature at the University of Pennsylvania.

recounts that in 1915, his father “came to San Francisco to see the World’s Fair… He’s always thought it was terribly prophetic that he should have done this as a poor Dutch immigrant. It was one of the greatest experiences of his life.”

This first decade in the United States served to cement Wezel’s affections for and loyalty to his adopted country. On June 5, 1917, as war loomed imminent in Europe, Wezel registered for the draft in Darien, Connecticut. Wezel’s time in the United States Army was brief; he may never have seen combat. Ironically, the war experience was ultimately positive: on September 20, 1918, he was naturalized as an American citizen at Camp Devens near Boston.

In the summer of 1919, after the war was over, Wezel sailed to Holland to visit his family. The visit to Westzaan must have been uninspiring, but the return voyage changed his life. In Wezel’s second trip through Ellis Island, his new status as an American is obvious; the record makes note of his passport and says he is bound for his “home” — Ellis Island’s word — in New York City.

A different section of the manifest details the real impact of Wezel’s second transatlantic voyage.

Christine van der Goot, a young Dutch woman, was also aboard. She intended to spend one year in the United States in order to work as a “clerk” at the General Consulate of Holland in New York. For final destination, Christine gives only the address of the Dutch consulate, suggesting that she had nowhere else to go within this new country.

Of course, Ellis Island records tell only part of the story; Wezel and Christine had become close during the voyage. Their decision to wed was followed by more happy news: Wezel was hired as head gardener at the University of

(Continued on page 9)
Michigan. Wezel remained at Michigan for a decade, during which time Christine gave birth to Adrian Jr. and Norman Henry.

Eventually, however, Wezel began searching for better positions. In this, Christine’s clerical expertise proved useful, and Adrian Jr. explains, “Dad was quite ambitious, and with my mother’s help as a secretary, he wrote letters to every other university in the United States.” Wezel’s campaign paid off: he was offered a position at Smith College.

On November 10, 1930, President William Allan Neilson’s secretary wrote to Wezel “to inform you that you have been appointed to the position of Head Gardener . . . at a salary of $2500 per year with house and garage.” Wezel wasted no time in accepting; he wrote back four days later.

Within two weeks, Wezel and his young family had moved to 64 Kensington Avenue in Northampton. Adrian Jr. explains that Northampton “was a wonderful place to grow up as a boy because of the rich cultural atmosphere at Smith.” His mother, Christine, found equal engagement, becoming involved with the peace movement and serving as head of the local chapter of the Women’s International League for Peace and Freedom. Comfortable in the cultural and political nuances of Smith, Adrian Jr. and Norman grew up while their mother established herself within Northampton society.

Wezel enjoyed similar success in his new position. On December 11, 1931, William Francis Ganong, director of the Botanic Garden and professor of botany, wrote an impassioned plea to Neilson and the Trustees, recommending that Wezel be given an immediate $500 raise. Ganong acknowledged the difficult financial situation of the Depression, urging the raise “although the times and circumstances are not propitious for the consideration of increases.” Ganong felt Wezel was too valuable to be underpaid; another university might poach Wezel from Smith. Ganong explained that within Wezel’s first year, he

has proven a highly competent, efficient, and progressive Head Gardener. ... He cooperates loyally and effectively in the educational work of the department, all the members of which like him; is firm but tactful in dealing with his men; and has personal and social qualities which make him an exceptionally good representative of the College. . . . He seems to come close to the ideal Head Gardener for the College, and I do not know where we could expect to find a better.

Clearly, Wezel flourished despite his lack of a Kew pedigree. His zeal for his work is evident in the material left behind: hundreds of cuttings for the College herbarium, with typed identification cards, and reams of clippings from newspapers and journals in Dutch and English.

Owing to the integration of Smith’s gardening and academic spaces, Wezel enjoyed daily insight into Smith life. In 1934, for example, Neilson’s wife wrote to Wezel about her vegetable garden. The letter is casual, and Mrs. Neilson felt comfortable enough to explain, “I am anxious to have as many sowings of peas as possible as it is a vegetable which Mr. Neilson can eat.” She does not give more details about Neilson’s preference, as if referring to reasons already clear. She further links the intimate details of her family with Wezel’s work by stating that since they will be a “small family next year,” the Neilsons will require “only a few beets.” Mrs. Neilson’s informality underlines Wezel’s privileged knowledge of Smith’s campus and its denizens.

Unfortunately for Wezel, his position lasted only a few years. On October 27, 1936, Wezel was fired per order of the Buildings and Grounds Committee. Neilson’s letter to Wezel does not offer an explanation, instead requesting only that Wezel prepare to leave after April 1, 1937. Wezel believed he had been fired owing to a “run-in with one of the faculty members.” Such a clash is surprising considering Ganong’s assertion that Wezel enjoyed good relations with all members of the botany department, but animosity from the faculty seems a more likely reason than a firing due to incompetence.

Even after Wezel was fired, Smith College still thought well of his talents. On August 10, 1937, Neilson wrote him a letter of recommendation. Neilson skirts the reasons for Wezel’s firing but praises his professionalism, saying, “He has been industrious and honest and he can make things grow.” Bizarrely, however, Neilson recommends that Wezel be hired to interact with plants, not customers or colleagues. Neilson writes that Wezel “suffers somewhat from his foreignness.” Neilson’s characterization of Wezel’s faults is jarring, as by 1937, Wezel had been living and working in the United States for more than twenty-five years.

Eventually, Wezel found a position as head gardener in Beverly, Massachusetts, similar to the work he had done decades earlier in Connecticut. Despite professional disappointments, Wezel did not lose his fervor for the American cause; on April 6, 1942, Wezel registered for the draft. His draft card, when compared to his registration from 1917, reveals a man affected by time. For World War I, Wezel was young and vigorous, unencumbered by time. For World War II, Wezel was middle-aged and graying. He was never drafted.

Shortly after Wezel’s registration, he took another step towards ensuring his status as a fully assimilated citizen: the family changed their last name from Wezel to Wilson. The surname had plagued Wezel. Adrian explains, the name “was a curse in Holland because they always
made of it ‘ezel,’ which means donkey. In this country it became ‘weasel,’ which is even worse.” Indeed, the name was tainted even during Wezel’s peaceful years at Smith. John Burk, professor emeritus in biological sciences, recalls that William I. P. Campbell, who succeeded Wezel, but with a title of College Horticulturist, “always referred to him, not wholly kindly, as ‘weasel’!”

As Wilson, not Wezel, the gardener becomes even harder to trace. His children seem to have flourished; Adrian Jr., after attending Wesleyan University, moved to San Francisco and came to national prominence as a printer and scholar. Eventually, Wilson followed his son’s footsteps: he worked at Wesleyan as a horticulturalist and remained in Middletown, Connecticut until his death on December 7, 1981. His wife, Christina, passed away on February 5, 1985. Almost exactly three years later—on February 3, 1988—son Adrian died of congestive heart failure. His obituary was printed in the *New York Times*.

Immigrant carpenter Adriaan Peter Wezel did not survive in the historical record, but Adrian P. Wilson—gardener, chrysanthemum expert, and citizen—raised a son famous for his scholarship. Back at Smith, some of the younger Wilson’s books on design are easily accessible in the library. Out on the grounds, Wilson the gardener’s plantings are harder to find—but for eight decades, they have survived. Wilson’s memory is spread between two continents, two world wars, several languages, and incomplete archives, but his life’s work remains present and healthy, because he could make things grow.

**Acknowledgments**

C. John Burk, Elsie Damon Simonds Professor Emeritus of Biological Science, very thoughtfully responded to my email when I pestered him for “anything you’ve always wondered about botany at Smith.” He suggested I look into “Mr. Wiesel.”

Elaine Chittenden, manager of living collections at the Smith College Lyman Conservatory, gave me the correct spelling of Wezel’s name and guided me through the Smith College herbarium, including the boxes of over 100 specimens collected by Wezel himself.

Nanci Young at the College Archives fielded my many, many emails and moved many, many heavy boxes so that I could look at 80-year-old Dutch newspaper clippings and read other people’s mail. Hooray for archivists.

**References**

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Neilson, William Allan to Adrian P. Wezel. 27 October 1936. Smith College Archives.

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News in Brief

Riparian Remediation

This summer, Botanic Garden interns will be supporting the College’s efforts to renovate and restore the banks of the Mill River as it passes through Campus. The College is replacing an existing grass playing field with artificial turf at the foot of the Lamont Bridge, which is an area that impacts the riparian strip along the Mill River. Projects proposed in wetland areas or in the buffer zones around them must meet standards to ensure that environmental impacts do not exceed certain levels. In this case, the College’s Order of Conditions from the Department of Environmental Protection (DEP) requires the restoration and monitoring of an equivalent area of riverbank.

The interns will identify and remove invasive plant species from several areas along the riverbank, including the foot of the Lamont Bridge and the neck of Paradise Pond where the Mill River feeds into it. Students will work on a design for replanting the area and, in time, plant native species to restore these areas. Project manager Gary Hartwell is overseeing the work, and faculty from geology, biology, and landscape studies — Robert Newton, Jesse Bellemare, and Reid Bertone-Johnson — will serve as advisors. The goals are to minimize bank erosion and maximize the ecological and aesthetic impact of the remediation.

Over the next three years, Botanic Garden interns will remain involved with the project, to fulfill monitoring and maintenance requirements of the DEP’s order. This project represents a new and welcome collaboration between the Botanic Garden internship program and Smith College Facilities Management.

Teacher Workshop

Each year more than 3,000 elementary and secondary school students visit Smith’s Botanic Garden and Museum of Art. Since many groups come to both sites, we decided to collaborate on a new workshop geared toward area teachers, entitled Connecting the Garden and Museum. The workshop has been very popular. Scheduled for March 26, it immediately filled with 26 registrants and a second session is scheduled for May 7. That session also has a waiting list.

The interdisciplinary workshop is a professional development opportunity for teachers, designed to explore the curricular ties between the two popular K–12 field trip destinations. Education staff from both the Botanic Garden and Museum offer insights into combining the use of observational teaching techniques with the resources of their respective institutions. The daylong workshop includes tours at both locations, group and individual observational activities, teacher resource handouts, and opportunities to brainstorm lesson plan ideas. Using the botanical and art collections as a starting point, the workshop focuses on how to nurture and develop observation skills in students. Teachers receive information on visiting the sites with their classes and have the opportunity to sign up for tours of the Museum and the Botanic Garden for their classes.

Memorial Trees and Benches

There are a variety of memorial giving opportunities at the Botanic Garden, including, trees, benches, internships, and more. In accordance with a new college-wide policy, the minimum donation required for memorial trees (including adopt-a-trees) and benches is increasing to $5,000. We currently have some benches available at Hillyer and at Capen Garden. Information on our policies pertaining to memorial donations and lists of available trees and benches are online:

www.smith.edu/garden/Giving/donations.html

If you are interested in underwriting larger projects, please contact, Michael Marcotrigiano, our director.

Facebook

We are now on Facebook and hope you’ll join us so you can keep up with all the latest news and connect with other garden fans. Use the link on our homepage: smith.edu/garden, or log onto Facebook, search for Smith College Botanic Garden, and click on “Like.” We’re regularly posting photos, news, and information about happenings. Stay connected!

Student Updates

Elise Simons ’09, who was a Botanic Garden summer intern in 2008, is in the Peace Corps, living in rural Zambia. She is serving as an agroforester for the next two years, involved in reforestation, plant propagation, soil analysis, agricultural development, community gardening, and environmental education. She sends us regular reports, describing how she is learning a foreign language and taking daily agroforestry classes that remind her of Smith horticulture classes. “Yesterday we met a farmer who used chili peppers to keep bugs away, which is a trick you taught me so I thought you’d like to know they do it here.” She has been hoeing red-brown Zambian earth, digging beds, planting seeds, and making a compost heap. She reports having a lot of fun despite getting sunburned and bitten by mosquitoes.

Smith students are making their presence felt at The Cloisters, the New York Metropolitan Museum of Art’s medieval collection and garden in Fort Tryon Park. Corey Elihardt ’09, our summer intern in 2007, was the Cloisters horticulture intern in the summer of 2008. Her performance earned her a permanent position as a garden assistant that fall. The Cloisters, eager for additional Smith interns, has hired current student Sally Fisher AC as an intern this summer. Sally thrived in the Horticulture and Economic Botany courses and has cultivated her own medieval garden for several years.
Wilford B. Neptune was a physician with an impressive medical career, however, at the Botanic Garden we knew him as an amazing orchid grower and hybridizer. In 2001, we were extremely lucky to connect with Dr. Neptune when he was looking for a home for his beloved orchids. While we don’t often accept plant donations, his was an exceptional collection and we felt honored. We are sad to report that Dr. Neptune died on April 3, 2010. It is a tremendous loss.

As a member of the Overholt Thoracic Clinic at the New England Deaconess Hospital in Boston, Dr. Neptune practiced thoracic and cardiovascular surgery from 1954 to 1995. He revolutionized open heart surgery with the introduction of new techniques. Over the course of his career, Dr. Neptune was a consultant to twenty-five hospitals in Massachusetts, New Hampshire, and Rhode Island. He was certified by the boards in general and thoracic surgery, and was a member of numerous professional organizations. He was also a member of the clinical staff from Harvard for the training of thoracic surgeons at the Deaconess.

Dr. Neptune began growing orchids in 1972, and they quickly became a passion. In addition to lecturing and publishing about their culture, Dr. Neptune frequently exhibited in orchid and garden shows throughout the Northeast. He received his first official award in 1982 — the Award of Distinction from the American Orchid Society (AOS), and subsequently received 127 awards, including a prestigious Gold Medal for culture from the Royal Horticultural Society, nine AOS Show Trophies, and 117 awards from the AOS for individual plants. Although Neptune grew 155 different genera, his favorite of all orchids was *Dendrobium kingianum*, a species native to Australia, followed by *Dendrobium*, *Lycaste*, and North American Native orchids, including all *Cypripedium*. He had 42 named clones of *Dendrobium kingianum*, and he was especially proud of his results from hybridizing the species. He crossed two of his awarded plants (Award of Merit/AOS): ‘Inferno’ and ‘Jazzy,’ to produce ‘Trident’s Baby.’ This clone received an AOS First Class Certificate, which was the first such award for this species. Dr. Neptune was an honorary member of the Massachusetts Orchid Society (MOS). He received a lifetime achievement award in 2000 from MOS, and a similar award the following year from the Cape and Islands Orchid Society.

Between 2001 and 2008, Dr. Neptune donated his entire orchid collection to the Botanic Garden of Smith College. Rob Nicholson made several trips to and from Dr. Neptune’s Newton home transporting plants. We are grateful for his generous donation, which added tremendously to our orchid collection. Dr. Neptune was especially pleased that his plants would be on display for both students and the general public to enjoy and we were delighted to be able to showcase his collection of botanical wonders.

In the Fall 2001 issue of *Botanic Garden News*, Rob wrote about some of the unusual orchids we received and reported Neptune musing, “Looking back, I cannot imagine a more gratifying hobby than growing orchids. During my professional life, long hours of dedicated responsibility were required, and orchids served as a welcome period of relaxation. In retirement, they have maintained my interest, and offered a substitute for my previous obsession with attention to detail. … I have been privileged to meet people with similar interests, both locally and around the world through the Internet. I cannot envision any other activity that could have afforded me so much pleasure.”

Rob called Dr. Neptune “a caliber of self-taught expert that one rarely encounters in life. … Any visit to Wilford’s greenhouses was a joy, a small, two-room jewel box, always bursting with new blossoms I had never seen before. We always had long discussions about what worked and didn’t work for the various species. … Dr. Neptune’s plants are now a constant reminder to me of a good soul and wise friend.”

Some of Dr. Wilford B. Neptune’s online orchid publications:

**Growing and Flowering Lycastes**

[www.aos.org/AM/Template.cfm?Section=orchids_magazine&CONTENTID=6364&TEMPLATE=/CM/ContentDisplay.cfm](http://www.aos.org/AM/Template.cfm?Section=orchids_magazine&CONTENTID=6364&TEMPLATE=/CM/ContentDisplay.cfm)

**Culture of Dendrobium kingianum**

[www.nhorchids.org/pages_growing/kingianum.htm](http://www.nhorchids.org/pages_growing/kingianum.htm)

**Pot Culture of Cypripediums**

[www.ladysslipper.com/cyppot.htm](http://www.ladysslipper.com/cyppot.htm)
Bordering the Old Town Common of Hawley, Massachusetts, lies a unique preserve. One of the few remaining examples of a New England bog in its natural state, Hawley Bog was designated a National Natural Landmark by the National Park Service in 1974. The Park Service describes it as a “cold northern boreal sphagnum-heath bog occupying an old and shallow glacial lake basin.” One of its unique features is that it shows bog succession from the central open water pond to the surrounding spruce-fir forest (6). The bog occupies an expanse of 4 acres within 40 surrounding acres owned by Five Colleges Inc. (Smith, Amherst, Hampshire, and Mount Holyoke Colleges, and the University of Massachusetts, Amherst). They acquired the property from the Connecticut River Watershed Council in 1978 and use the bog for ecological research and teaching. To ensure additional protection, The Nature Conservancy (TNC) purchased 25 abutting acres in 1993.

In the Northeast, bogs usually develop in wetland areas or kettle hole basins created by ice left behind as the glacier melted at the end of the last Ice Age. Bogs form in these wetland areas when there is acidic water with low oxygen concentration, resulting in limited decomposition of organic matter. In most non-bog habitats, dead plant material is decomposed quickly by organisms requiring oxygen for their metabolism (aerobic). In bog wetlands, dead plant material accumulates underwater where conditions are anaerobic and degradation happens much more slowly. The acidic anaerobic environment combined with tannins released from decomposing plants create ideal conditions for preserving organic material for hundreds or thousands of years. Thus, in acidic wetlands that become bogs, organic matter builds up, eventually filling the original wetland basin with peat. Plants and associated communities often form a distinctive floating mat of vegetation over the surface of the wetland, slowly covering the original pool or pond. In some parts of the world peat is harvested for industrial use as a fuel and as a soil amendment (“peat moss”). Bogs occupy 3–7% of Earth’s land area yet account for one-third of global soil-bound carbon (1).

Hawley Bog, described by TNC as a globally rare natural community (7), is at an elevation of 1,800 feet, well above the basin of glacial Lake Hitchcock (which extended through the Connecticut River valley from Middletown, Connecticut, to Lyme, New Hampshire), making its climate similar to northern New England and Canadian bogs: wet and cool. Peat accumulation over several thousand years has reached a depth of 30 feet.

(Continued on page 14)
fly, and by mosquito larvae. The larvae of the flesh-eating rotifers (microscopic multicellular animals) live in the pitcher. The bacteria are eaten by slime mites, midge larva, and bacteria, live in the pitcher. The bacteria are broken down by a community of organisms, evolved into much broader research, with significant implications for conservation and management issues. It points to pitcher plants as indicators of climate change (1). Other researchers are evaluating the consequences of climate change on bogs and how those variations then affect climate. As the cool, wet conditions that maintain large quantities of organic matter shift, bog habitats diminish and the resulting release of soil-bound carbon in bogs could further impact global warming.

Even if you are not conducting research or pondering climate change, the bog is a fascinating and beautiful place to visit, and it is open to the public. The Nature Conservancy administers the Hawley Bog property. Since the greatest threat to the bog habitat is overuse and walking on the fragile bog mat, TNC and volunteers installed a boardwalk to keep people off the mat and minimize damage. TNC and the Fields Reserve Committee of Five Colleges developed a protocol for conducting research on the bog and also approve any studies. The Botanic Garden has permission to collect seed from Hawley Bog annually for our Index Seminum (international seed exchange — see box at left). TNC staff and volunteers monitor and control invasive species such as the grass Phragmites australis and watch for boundary encroachment by abutting property owners and beavers. They also monitor and conduct a census of rare species and natural communities in the bog (7).

When visiting, it is extremely important to stay on the boardwalk. Groups of 10 or more must get permission to visit the bog from TNC (413-584-2532). MassAudubon offers guided educational walks through the bog twice a year. The path to the bog passes through property owned by the town of Hawley. Across the street from the entrance lives Ray Gotta, previous owner of the land now owned by Five Colleges Inc. His wife Phyllis Gotta, an avid lover of nature, became a frequentner of the bog for over 50 years, graciously allowed us to publish her aerial photo of the bog. The preservation of Hawley Bog is an example of how collaboration between colleges, private citizens, and non-profits can maintain a unique ecosystem benefits visitors, students, researchers, and most importantly its diverse fauna and flora.

References
A variety of classes have been using the Botanic Garden in innovative and exciting new ways. We are always happy when the Botanic Garden connects to various courses of study at Smith.

**Academic Connections**

**Madelaine Zadik**

As part of the Botanic Garden’s Curricular Enhancement Program, students in this dance composition class taught by Susan Waltner studied plant movement. Our director, Michael Marcotrigiano, lectured them on the biology of common plant movements, categorizing them as follows:

- **Rapid movement**, such as sensitive plant leaves (*Mimosa pudica*), Venus flytraps (*Dionaea muscipula*), or impatiens seed shooting (*Impatiens capensis*).
- **General growth responses**, such as flowers opening or seeds germinating.
- **Tropisms**, such as thigmotropism — differential growth because of touch, or gravitropism — growth affected by gravity, or phototropism — growth toward light.
- **Circadian rhythm**, such as day/night leaf movement.
- **Environmental perturbation**, such as trees swaying in the wind, tumbleweed rolling in the wind, or wind-based seed dispersal, e.g., dandelions, milkweed, or maples.

He also showed numerous videos that illustrated these movements. The students used these movements as the basis for and as inspiration in developing a site-specific choreography for Capen Garden. Public performances were scheduled for April, and video footage will be online.

**Dance 209 & 309, Site-specific Dance Composition**

Also part of the Curricular Enhancement Program, this course taught by Judith Wopereis uses a variety of techniques in the fields of microbiology and molecular biology and exposes students to the beauty and diversity of microorganisms. Students learn methods for collecting, culturing, identifying, analyzing, and photographing microbes. The rich and diverse microbial life associated with different plants and environmental gradients in the Lyman Conservatory offers many opportunities. For example, students collected microorganisms from environments associated with plants, such as the traps of pitcher plants, the “tanks” of bromeliads, and the surfaces of roots or leaves.

**Biological Sciences 120, Horticulture: Landscape Plants and Issues**

Last fall, horticulture students kept notebooks for recording information about the plants they were studying, often with drawings or pressed leaves and flowers. Dianna Kim ’12 created the beautiful page below in her field guide.
You are invited to join

The Friends of the Botanic Garden of Smith College

ALL MEMBERS RECEIVE:

♦ A complimentary copy of Celebrating a Century: The Botanic Garden of Smith College, by C. John Burk
♦ Botanic Garden News, our newsletter and calendar of events, twice a year
♦ Admission to members-only hours at the Spring Bulb Show — 9:00 am to 10:00 am daily during the show
♦ Free admission and discounts at 200+ gardens around the country
♦ 10% discount on Botanic Garden merchandise
♦ Free audio tours of the Lyman Conservatory
♦ Invitations to show previews and receptions

Contributors and above receive: A screensaver with images of the Botanic Garden and our collections

☐ YES, I WANT TO BECOME A FRIEND OF THE BOTANIC GARDEN OF SMITH COLLEGE!

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