To the best of our knowledge the first Chrysanthemum Show at Smith College was held in 1907. The mum varieties displayed at the annual shows are the result of the cross-pollination of plants by students in the Horticulture class. Students use mums that are already in the collection to create new varieties. The students’ seedlings are grown for a year to blooming size and then displayed at the show the following year. A ballot system allows the public to vote for their favorite mums, and one to three are kept in the collection for the future. This tradition sounds nice but has created a big problem for the collection and is threatening the future of the Mum Show.

When interviewing for the job of Director, I was able to tour greenhouse areas from which the public is normally excluded. In one greenhouse the mum collection sat, waiting to be induced to bloom for the coming fall. At first glance, I noticed some telltale signs of serious diseases on many plants: small, weak stems, discolored leaves, twisted leaves, and other more subtle signs. When I questioned the greenhouse staff, they mentioned that it had become increasingly difficult to get the mums to grow vigorously and flower prolifically and that the plants were becoming more susceptible to fungi and secondary diseases.

I decided to utilize an agricultural diagnostics company, Agdia, and their sophisticated technology, to determine if our mum plants were infected with viruses. To make a long story short, the test results indicated that the mums were very ill. All but one showed at least one debilitating virus. These viruses enter the plants via insect vectors, which fly plant to plant spreading infection. The infection is also spread by hand pinching the stems (done to induce branching) and by vegetative propagation (to create more plants). Eradicating existing viruses and reversing the effects of disease are difficult, requiring cell culture and heat treatment. Estimates we received for “cleaning up” the entire collection were in the range of $10,000. Even if we wanted to go to that expense, the plants would become reinfected unless all insect vectors were eliminated. This is virtually impossible in a public greenhouse since complete insect control involves the heavy use of toxic chemicals, and we do not want our visitors to be exposed to unnecessary pesticide residue. So, what do we do?

The Chrysanthemum Show: Preserving History in the Face of Disease

Michael Marcotrigiano

Most public display gardens now buy new mum cuttings each year from companies that specialize in the sale of indexed cuttings (those tested to be disease free). This ensures vigorous, free-flowering plants. The simple but painful answer to our mum dilemma is to destroy the infected plants and use healthy plants for each show. Yet, we want to preserve the history of the collection and also maintain the learning component of the cross-pollination exercises in class. To do so, we have initiated a “new tradition.”

With the assistance of Erika Nelson ’03, a Smith undergraduate (see “The Mum Sleuth” on page 4), we searched the archives for history, information, and student profiles of all those alumnae whose mums were being maintained in our collection. Flower portraits are being matched with photos of the students who bred the mums. Erika unearthed many student yearbook photos as well as Mum Show photos. A photographic and digital album suitable for exhibition display and for our web page will feature photographs of each winning mum and her creator. The album will be featured in the new Exhibition Gallery at Lyman Plant House during each Mum Show. It will build yearly and continue indefinitely. Mum (Continued on page 4)
Staffing News

New Manager of Education and Outreach: Madelaine Zadik

The Botanic Garden is pleased to announce that Madelaine Zadik has accepted the new position of Manager of Education and Outreach beginning February 1, 2002. Madelaine began her association with the Botanic Garden in 1994 when she became a volunteer, leading tours through the Conservatory, while she still owned and operated a bookstore in Northampton. Over the last several years Madelaine has served the Botanic Garden in a variety of capacities: interim curator, horticulture lecturer, education coordinator, and interim assistant director. Previous to Smith she was the Director of Education for the Massachusetts Horticultural Society, and for many years worked for the Veterans Administration in Indiana and New Jersey as a Horticultural Therapist. Madelaine has a B.S. in Floriculture and Ornamental Horticulture and an M.S. in Public Horticulture Administration. We are very excited that Madelaine is now part of the permanent staff of the Botanic Garden.

Search Begun for Collections Manager

We are now conducting a search for a Collections Manager for the Botanic Garden. Responsibilities revolve around the living collections of the Lyman Conservatory and campus arboretum, as well as the herbarium. Duties relate to administering the collections policy, and overseeing plant documentation, labeling, inventory, and mapping. The anticipated start date for this position is August 1, 2002. A full job description is available on-line on Smith’s Human Resource pages. Go to: http://www.smith.edu/hr/careers/staff.html

Drawing of the bromeliad Tillandsia cyanea in the Stove House of the Lyman Conservatory by Aprille Soons Palmer ’05 for Introduction to Drawing, Fall 2001
The student that stands out the most is Lisa Baird ’76. She went on to perform microscopic analyses of the nitrogen-fixing nodules on the roots of nitrogen-fixing plants. Currently, she is the chair of the Biology Department at the University of San Diego. She also serves on the Friends of the Botanic Garden Advisory Committee and has worked promoting the Kew Internship Program.

Of all of your research projects in plant biology at Smith, which one do you feel had the biggest impact on the field?

I think it would be using the method of tissue printing to study a developmental system. [When the surface of a freshly cut plant is placed on a charged membrane, biochemicals bind to it. This technique yields detailed information about cell identification and the location of molecules within cells.] I used it to study specific aspects of leaf abscission [the dropping of leaves from a plant].

Which areas of the Botanic Garden did you find the most enjoyable to visit?

I love the overall campus arboretum, but the loss of so many trees over the years to buildings, parking lots, transformers, and the like has been painful to watch. I enjoy the woodland or wildflower garden and the systematics beds. In the Conservatory, I like the greenhouses that have plants arranged in a biogeographic format. The Palm House is always a great place to visit on a cold winter day.

What recent changes or developments in plant studies at Smith have occurred that make you feel confident about the future of plants at Smith?

The emergence of the Friends of the Botanic Garden is one of the best things to have happened at Smith. It gives me confidence that support will continue. Then, there is the...
photographs will be sent to the College Archives and scanned digitally for a permanent record. The breeding experiments will continue, thus the educational experience remains the same. As in the past, the students’ seedlings will be grown out and a public vote will pick the winner. However, instead of making the mums part of the collection, the mum and student will be photographed to continue the “photo album” and the mum will be given to the breeder should she choose to keep it.

This solution is a practical answer to a situation that has resulted in the perpetuation of a diseased collection and the continual degradation of show quality. We will have permanent records, but they will no longer be living records. In the past, there has been no visual connection between and mum and its breeder. With the new system, we can put a face on a name and a face on a mum. Long live the Mum Hall of Fame!

There are many additional benefits to the new system. When the Mum Show is over we do not need to maintain large numbers of stock plants throughout the year. The space can be better used for student research projects and the permanent botanical collection. Eliminating year-round culture of the high maintenance mums will free up staff time for other projects. In addition, some of the viruses carried by the mums have the potential to jump hosts and could threaten valuable species in the general collection. By reducing the risk of cross-species transfer of disease we are protecting the collection at large. With purchased indexed cuttings, the show will have more variety and the mums will be vigorous, proven types. We are in contact with mum suppliers that can assist us in the selection and culture of new mum varieties.

This change in policy was a difficult one to make. Great care was taken to consider what is best for the future of the Mum Show and the health of the plants in the Lyman Conservatory. The future should bring Mum Shows with healthy plants and exciting new flower varieties.

The Greenhouse Committee, representing the Department of Biological Sciences, has agreed that the current plan is the prudent thing to do. We have received full support from the Friends of the Botanic Garden Advisory Committee for our decision to change the policy. We hope that everyone will understand the need for this change. We wish to ensure that everyone will enjoy Mum Shows for years to come, and hope you will take the opportunity to look at our student/mum photo album. Let us know if you recognize any of the faces from Smith’s past.

On an unusually warm day in early October I walked into the temporary offices of the Botanic Garden on Green Street to begin a new work-study job. Madelaine Zadik handed me a list of names. My mission was to uncover the maternity of 180 chrysanthemums that were in the Botanic Garden collection. For the past century Smith College students have been breeding chrysanthemums, as part of their course work for the Horticulture class.

Everyone at the Botanic Garden thought the research would be quick and simple, but it turned out to be quite a complicated problem requiring a month and a half of complex detective work on my part. I spent hours pouring over the wonderful resources in the College Archives. I was amazed at the magnitude of the Chrysanthemum Show files in the Archives. I delved into boxes full of articles and pictures. Some of the photography was so lovely, it was hard to pick and choose material for our future exhibits about our historic mums. The mums will be featured in our displays in the new exhibition area in the renovated Lyman Plant House as well as on the Botanic Garden Web site. I hadn’t realized how popular the Mum Show is in the valley. It has been featured in the Daily Hampshire Gazette, The Springfield Republican, The Springfield Union News, and several Northampton newsletters.

The Botanic Garden staff had assumed that all the mums were named for the students who had hybridized them. As it turned out, however, less than a third of the students named their chrysanthemums after themselves, or after a recognizable relative. So to fill in the holes, I had to read through the articles to glean any additional information about the names of flowers. Additionally, many of the student’s names were not unique among Smith alums, which posed an additional problem. For example, six Mary Booths have attended Smith College at some point in the last century. I had no way of finding out on my own which one took the Horticulture class, since those files are restricted from students. I made the acquaintance of Aimee Brown, the Archives Specialist, and Adam Kolek in the Registrar’s Office. These two, along with student workers in the Registrar’s Office, assisted me greatly by looking up eighty students and telling me whether they had been enrolled in the Horticulture course. This is more difficult than it sounds since the class had several different course numbers and titles over the years. I couldn’t have finished the project without the help of Aimee and Adam; they definitely went above and beyond the call of duty.

Slowly, an accurate but short list of known students with corresponding chrysanthemums emerged, intermingled with orphan chrysanthemums. Regardless of whether or not we knew the student hybridizer, all the plants had to be accounted for, so I spent time with greenhouse technician Steve Sojkowski, making sure that every mum was on my list. The display is still to be put together and designed. We hired a photographer to take pictures of all the mums with a name label when they flowered this past fall. [Although we did not have a Mum Show this year due to the renovations, we did bring the collection into bloom to allow us to photograph all the flowers.] Those photos will be matched with a picture of the student if possible. We hope to have our mum display be one of the first in the new Exhibition Gallery.
In 1938 and 1939, Harvard student Richard Evans Schultes arrived in the southern Mexican state of Oaxaca to collect data for his doctoral dissertation. Spending many days astride a burro he traveled from village to village collecting plants and information from the native peoples about how they used plants in both everyday life and for their most profound worship. The result, Economic Aspects of the Flora of Northeastern Oaxaca, Mexico, was a 500 page compendium of the plants utilized for food, fiber, dyes, medicine, and worship by the various indigenous tribes of the region known as the Chinantla. Hundreds of plants are treated and the reference, never published, has received regular visits at Harvard over the years by botanists wishing to work in this floristically diverse area. Schultes himself went on to a long and remarkable career at Harvard, teaching botany and economic botany, while remaining a champion for the conservation of plants and the indigenous cultures who utilize them.

In 1995 Smith student Xochitl Munn ’95 visited with the Emeritus Professor and spent the afternoon discussing the flora of Mexico and usage of plants by the native peoples. Xochitl’s relatives lived in Huatla De Jimenez, a town in the Mazatec Mountains. As it was a town where Schultes had spent many wonderful days, the two got along swimmingly. It is significant that these two plant lovers met, as Ms. Munn is now embarked on an ambitious project, probably the most significant botanical collecting effort in this region since Schultes’ efforts of 60 years ago.

After her graduation from Smith College, Ms. Munn continued her education in botany studying at the University of Texas under the economic botanist Dr. Beryl Simpson. For her master’s thesis she chose to do an inventory of the flora of the Mazatec Mountains, an incredibly rich area for plant life in northeastern Oaxaca. I arranged for myself, my son Charlie, and my colleague Dr. Melvin Shemluck to join her in her explorations. We traveled to Mexico last summer for a short bout of fieldwork. Joining us was an old friend and expert field botanist Raul Rivera of CIDIIR, a biological research institute in Oaxaca. To reach the mountain takes a day’s drive from the beautiful colonial city of Oaxaca. Traveling north one first mounts a ridge of mountains and then dives downward, switchback after switchback to the Valley of Tehuacan, a desert region where corn cultivation was first thought to have originated 6000 to 8000 years ago. The Mazatec Mountains stand across the arid valley, rising up as a purple-green wall from the desert floor.

We arrived in the evening, had a meal in the restaurant of Xochitl’s aunt (a legendary stop among botanists), and capped off our first day with a stroll out of town. Shafts of light from the setting sun pierced across the deep valley through the evening haze, backlighting ridges and trees, and Charlie astutely commented, “It looks like a Frederic Church painting.” Little wonder then that Huatla is a town known for its nature-based spirituality. That night the rain clouds glued themselves to the mountains and unloaded an all-night torrent. The area is said to be one of the wettest in Mexico with 15 feet of rain per annum, and we wondered whether we would have to swim to plants we collected. But in the five days we were to assist Xochitl we found hundreds of species and filled our plant presses to bursting.

The next morning we covered ourselves in rain gear and set out. One of our prime targets was the black lisianthius, Lisianthus nigrescens (see Botanic Garden News Spring 1999), a plant last collected in this area by Richard Schultes in 1939. Melvin and I wished to continue our studies of the pigment chemistry and pollination biology of this species. If we found it here, that would negate the need for an 8 hour trip on horrendous roads to the only other stand of which we knew. Even Raul had begged off from that possible bone-shaking ride.

We started collecting on the mountainside next to the Petlapa River, a churning rapid, chocolate-colored from the previous night’s rain. We followed the river’s edge through an abandoned coffee plantation and delighted in discovering orchids, bromeliads and ferns hanging from trunks and low tree branches. Species of interest were collected and flattened in a plant press and would later join the thousands of herbarium specimens drying on heaters in Xochitl’s house. One highlight was an epiphytic fern, Vittaria sp., with downward arching threadlike leaves. We continued for 6 kilometers along a road that snaked along the river valley, and spotted a rock outcrop in full sun, a likely habitat for the black lisianthius. Within a few minutes we found it, a small patch occurring along a 100 foot stretch of road, and after collecting samples for chemical studies, we began the waiting game for pollinators. We had suspected a moth, butterfly, or hummingbird due to the flower’s shape, and for hours we were frustrated by four different butterflies flitting about, but not

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alighting upon, the blackened bloom. As the sun broke apart the cloud cover we were treated to some warmth and collected some of the flora that surrounded the lisianthus. A beautiful orchid, *Sobralia macrantha* was pressed and a rare cycad, *Ceratozamia robusta*, was noted. All of us shared in discovering plant species that we had never seen before, sampling from a cornucopia of species that seemed to mock mankind’s feeble attempts to assemble plants in gardens.

While this work may seem like puttering around in the forest picking flowers to some, it is part of a crucial race to inventory the world’s flora before we lose a good portion of it. It also supplies policy makers with data as to where the greatest biodiversity is and where development should be curtailed or avoided. The cloud forest habitat of Mexico is one of the most life-rich forest assemblages in that nation. Recent studies estimate that 1 to 2% of Mexico’s land area is defined as cloud forest while 12% of the nation’s 30,000 species of plants are to be found there, making it an ecosystem of extremely high diversity. Often these species are endemics and exist in no other habitat in Mexico or sometimes on no other mountain on the planet.

The next morning we drove to lower altitudes, with spectacular views across mountain valleys as we headed toward the Atlantic coast. The heat increased as rapidly as our descent as we shifted from the montane cloud forest habitat to the lowland tropics that clothe the base of the mountains. Along the way we spotted a huge patch of the black lisianthus and while we collected samples were finally rewarded in capturing by hand, the pollinator, a species of bee! We are now trying to key out this species, remarkable for its ability to perceive a black flower, an extreme rarity among natural species. We proceeded to the edge of the Rio Uluapan, with its powdery blue rapids, where we again found a multitude of intriguing plant species. A beautiful large red-flowered lobster claw, *Heliconia bihai*, presented itself like some abstract sculpture misplaced in the jungle. A palm, *Astrocaryum mexicanum*, was covered in sharp black spines that made collecting a specimen a nightmare, but a thorough floristic review has to take all comers. Gesneriads, ferns, peperomias, and philodendrons all became samples bound for six different herbaria.

Scientists have recently proposed The All-Species Inventory, an attempt to catalog all life on the planet within 25 years. Harvard’s E.O. Wilson said of the massive and possibly impossible project, “A full global biodiversity map is the foundation of the encyclopedia of life on which all of biology will be assembled.” It will take people like Xochitl, with hard-won skills in plant taxonomy and botanical fieldwork, to hike the difficult miles through the forests of the world to accomplish such a grand scheme. It is ironic that while billions are poured into extra-terrestrial research, biologists such as Xochitl, who work on terra firma, have to peck and claw for funds and can barely cover their costs.

Our final day of collecting was an ascent of Cerro Pelon, Bald Mountain, so-named for its lack of trees at the peak due to wind and cold. We parked in the saddle of two mountains, got coffee at the local truck stop, and set off up the trail. The lower flanks of the mountain were a dry oak forest, but as we ascended, the air cooled, humidity increased and we began to again penetrate the lower edge of the cloudforest. Fabulous orchids began to appear, jewels of color bouncing in the tree branches, an illogical extravagance in such a remote and secluded place. It felt almost criminal to collect and press these miracles of the plant world, but such specimens allow botanists to determine taxonomic placements and species range. For hours we walked upward, until we reached a windswept and cold stratum of the mountain. Genera native to our Massachusetts home began to appear: *Salix* (willow), *Clethra* (pepperbush), *Vaccinium* (blueberry), and *Ilex* (holly). The moss-clad trees gave way to a solid mass of ericaceous shrubs such as *Arctostaphylos*, *Vaccinium*, and *Arbutus*, reduced in scale from the cold and wind. At the rounded summit of 2750 meters we were rewarded with spectacular views of the valleys below.

As the winds swirled around us, shuddering the carpet of shrubs, we gathered and paused to have a moment of silence for Dr. Richard Schultes, who had passed on the month before. It was easy to imagine his spirit residing in the plant paradise known as Oaxaca, and I expect it would please him that botanists like Xochitl still comb its mountains for botanical treasures.
Life After Smith

A
fter two years of house hunting, my husband and I found just the right place—a classic New England farmhouse, with a large barn, fields and forest, and only 15 minutes from downtown Northampton. Soon after signing the sales contract, we started to explore the property in earnest. It was on one of our early forays that we decided to inspect the huge stump in the upper field. We assumed it was the remains of a giant sugar maple, but as we got close, we realized this was something quite different. Through the dried stems of goldenrod and grasses, the enormous trunk—20 feet around and 15 feet tall—rose not from the earth, but from a concrete slab!

What we had thought was part of our property’s heritage—a connection between us and centuries of change—hadn’t grown here at all, but had been put here by a previous owner. Right away we began plotting to get rid of it. My husband suggested using a chain saw, but with the trunk’s daunting size, we ultimately decided to plant the vine called trumpet creeper (Campsis radicans) around its base. Within a few seasons, the ugly trunk would be camouflaged with green leaves and orange flowers. And, we figured, it couldn't last forever.

But by mid-summer of that first year our low opinion of the trunk began to change. For one thing, our cats loved it, and as they climbed its stubby limbs, we began to notice life on its giant bleached torso. There were mudwasp nests in a nook on the south side, lichens on the shaded north side, and down near the bottom, a large cluster of Dryad’s saddle mushrooms. We watched bluebirds and phoebes use it as a perch to swoop for insects, and near the base a large crack created a safe hiding place for a pair of garter snakes. The trunk was not only a story of someone’s folly, it had stories of its own to tell.

Our appreciation of the trunk grew even more when we learned about its history. This was not just any old tree. After sprouting in Northampton in the 1760s, it had grown for more than two centuries to become the largest American elm (Ulmus americana) in New England and the second largest in the United States. Our trunk was part of the giant admired by generations of Smith students. It had stood on the lawn below the College President’s House and was known as the President’s Elm.

In the summer of 1986, the President’s Elm, after surviving years of repeated attacks by Dutch elm disease, was diagnosed with the disease in its main trunk. Already half of its crown had been lost to the disease. If the elm’s life were to be extended at all, much of its still graceful crown would have to be terribly disfigured with more pruning. Rather than ruin its arching beauty, then College President Mary Maples Dunn reluctantly gave the order to cut it down. It was a difficult decision, and area newspapers ran articles about its demise. Its end came on a raw January day in 1987.

The culprit, Dutch elm disease, had reached eastern North America more than fifty years earlier, arriving first in Ohio by way of some elm veneer from Europe. Within six years of its detection, the disease had affected nearly 11,000 square miles. More than four million elms were cut and burned in a massive effort to control it, drastically altering the landscape of America’s cities. For more than two centuries, the American elm, with its arching silhouette and wonderful shade, had been the Northeast’s most popular street tree. Nearly every New England city (including Northampton) had an Elm Street. But, by the 1980s, nearly 40 million elms were dead, and the disease extended across the United States.
Dutch Elm Disease

Dutch elm disease, which most seriously affects the American elm (*Ulmus americana*), was first discovered in Ohio in 1930. It is a vascular wilt disease caused by a fungus and is spread by bark beetles, both the native elm bark beetle and European beetles (accidentally imported in the early 1900s). The beetles bore into the bark of infected trees and emerge with fungal spores attached to their bodies, spreading the disease to healthy trees. Once inside the tree, the spores begin to grow and the fungus spreads through the vascular system. Among the first signs of infection are wilting and yellowing leaves.

Although the exact origin of the fungus is unknown, it most likely evolved in Asia, where it exists with no apparent ill effect on the native trees. The same cannot be said of Europe where it made its debut in 1914 in the Netherlands (hence the name Dutch elm disease). Within a few years, elms throughout much of Europe began to decline and die. From Europe it was introduced to North America.

The loss of elms to Dutch elm disease has had an enormous impact on the Smith campus, as it has had on landscapes across America. Smith lost over 30 mature trees, including two ‘Liberty’ elms that did not succumb to Dutch elm disease but were unable to hold up to the heavy snows of the storm of 1997. We are maintaining 19 of the 21 remaining elms on campus through a program of regular fungicide injections. The two elms not receiving injections (one near Sage Hall and one near John M. Greene Hall) have never shown any signs of the disease.

Life After Smith

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onto a flatbed truck and taken to a stump dump a few miles from campus. To get there, the flatbed headed down Elm Street to Route 5, and then passed, among other things, the local Burger King. Inside, eating a meal with his daughter, sat David Sprague, the former owner of our property. “As soon as I saw the stump go by, I thought what a great piece of sculpture. I’d been following the story in the local paper and knew immediately it was the Smith College elm.” After tracking down the stump’s location, Sprague got even more excited about it. “It was beautiful. I called the College to make sure it would be okay for me to retrieve the trunk, and after I assured them that I wouldn’t carve a nude or anything that would embarrass the college, they said it would be okay.”

A few months later, Sprague and a friend dug a large square hole in the rocky soil of his Westhampton property. A neighbor poured the cement foundation, and in the spirit of Yankee ingenuity, they threw in an old bedspring to hold the cement together. The same flatbed truck that hauled the tree away from Smith was hired again, this time to retrieve it from the stump dump. With explicit instructions from Sprague to be gentle, 70-year old Harold Willard used a forty foot crane to place the trunk on the cement. “All the neighbors thought I was crazy,” says Sprague, laughing. “And Willard had to keep holding back his laugh. But I just liked it. I just like the shape. And I like the history.”

We like its history, too. We also like its biology. We like the metallic-green solitary bees that nest in it, the three species of mushrooms that sprout from its rotted sections, and the lichens that blush green and gray after a rain. We like the honey-colored ants that live below a fallen plait of trunk and smell like Lemon Pledge. The bald-faced hornets and paper wasps that chew its outer skeleton for wood paste to build their nests. And the field mouse that skitters up its sides and stores seeds in its crevices.

Last summer, not long after my husband and I tore out the trumpet creeper that had begun to obscure the trunk, I sat watching the activity around it. Yellow jackets buzzed in and out of a hollow, a field cricket called near the shed skin of one of our resident garter snakes, and down near the base, a cabbage white butterfly curved her abdomen and laid a dozen eggs on the round fruits of field peppergrass.

Like David Sprague, we just like the stump. We like its shape, its colors, its history, and we like all the life that is nurtured by this former champion. Late in August 2001, during a strong windstorm, the stump, for the second and last time, came crashing to the ground.
News in Brief

Adopt-a-Planter Program

The Botanic Garden is continuing the successful Adopt-a-Planter program begun last year. Weatherproof cast stone planters are used as architectural accents to the buildings on campus, and the blossoms and foliage add color for the summer months. Last year two large planters were installed. One (pictured here), on the steps of College Hall was filled with geraniums, marigolds, vinca, and dracaena. The other at Hatfield Hall contained tropical plants divided from the Lyman Conservatory. Since the planters looked so spectacular, we have decided to add two new ones this year.

Planters are awarded on a competitive basis, based on the location of the building in relation to other plantings, the potential numbers of viewers in the location chosen, and the commitment of employees in the building to care for the plants. The Botanic Garden purchases, designs, and plants the planters, and the building sponsors are responsible for the watering and care of the plants. Time-release fertilizer and mulch are used to reduce maintenance. Since the care of the plants is from mid-May until the first hard frost, the buildings chosen are limited to those that are staffed year-round.

We wish to thank the inhabitants of Hatfield Hall and College Hall for the great care they took of their adopted planters. We had many comments as to how nice it was to have additional flowers in prominent places.

Kew Interns Selected

Two Smith students, Ilana Moir ’03 and Lesley Weaver ’04, have been selected for the summer internship program at the Jodrell Laboratory at the Royal Botanic Gardens at Kew in London. They will be working on projects in conservation genetics, continuing the work done by previous Smith interns.

Ilana Moir has been a work-study student at the Botanic Garden working both in the Lyman Conservatory and in the campus arboretum. Before heading off to Kew, she will spend the semester in Queensland, Australia at the Center for Rainforest Studies, studying reforestation, preservation, and rainforest ecology. After Smith she hopes to do research and fieldwork in plant ecology and environmental protection.

Lesley Weaver entered Smith as a STRIDE scholar, working as a research assistant in the Department of Biological Sciences. She is the copresident of the Bad Seeds, the student-run horticulture club on campus. Next fall Lesley plans on studying in Senegal and she hopes to eventually pursue graduate studies in botany.

New Library Books

The Botanic Garden is fortunate to have endowed funds, the Mina K. Curtiss ’18 Fund and the Margaret Dorward Smock ’27 Fund, that are specifically for the purchase of books. The following list is a sampling of some of the new horticultural, botanical, and landscape studies titles available to students through the Smith College Libraries.

Last year Alex Chitty ’01, the Cary MacRae McDaniel ’69 intern at the Botanic Garden, worked on a project to research and design a self-guided tour of some of the notable trees on the Smith College campus. Part of what has made the campus the scenic landscape that it is, are its distinguished trees. We have many unusual species, several specimens that are champions— noted as the largest in New England, some that are known to have been here at the time that Olmsted designed the campus (1893), a species that can no longer be found growing in the wild (Benjamin Franklin tree, Franklinia alatamaha), and a red oak (Quercus rubra) that was growing here at the time of the signing of the United States Constitution!

Alex did an excellent job of researching the botanical and historical lore of over 40 of the college’s most distinguished trees and writing much of the text for the brochure, in addition she sketched and painted many of the trees (see the illustrations on this page), scanned images of our collection, and designed a layout for the publication.

In speaking about the internship Alex said, “I was so influenced by what I learned at the Botanic Garden that I often found ways to relate it to what I was learning in my curriculum classes. Throughout the development of the project, I completed jobs that I was not previously aware I could perform or even enjoyed doing. The staff fully supported my attempts at becoming an efficient and accurate researcher, a concise yet entertaining writer, a well-organized planner of time, and a graphic designer…I believe it is vital to keep as many students as possible involved in the activities of the Botanic Garden. It is too great an educational environment to pass up.”

The publication is now getting its final touches before going to press. It will include a map to help everyone find their way around campus to these amazing trees. We hope this guide will be out this summer. Look for it on your next visit.

Carolyn Wetzel was recently hired to fill the position you are vacating.

Carolyn is a very exciting and dynamic speaker. It will be nice to see a female plant physiologist on campus. Her research in photobiology [the study of light effects on cellular and developmental processes] is on the cutting edge. She is a great addition to the Department.

You spent many long days at Smith College. What will you do to fill your time in retirement?

I thought you’d ask that. I have tons of reading to catch up on. Then there is my golf game, developing my new property, hiking, etc.

Before signing off here I want to thank you for treating me to lunch and tell you that Smith has been a great employer. I feel extremely fortunate to have spent so many years here.

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Landscape Studies initiative that will bring other disciplines to the Botanic Garden.

 Besides dinner and wine, what role do plants play in your personal life?

I am an avid vegetable gardener. Of course, the influence of ornamentals at Smith has rubbed off and I also enjoy growing flowering plants and shade trees. Maple syrup making is one of my favorite things. Perhaps as a plant physiologist the sap flow and its biology makes it especially interesting.

What is your favorite tree? Favorite tree on campus? Why?

I have no one favorite species. Two that come to mind are Acer saccharum [sugar maple] and Nyssa sylvatica [tupelo or black gum]. Most of my favorite trees on campus are now gone. I loved the President’s elm [Ulmus americana, see article on page 7] and the large female ginkgo near Sabin-Reed [Ginkgo biloba]. The ginkgo has such interesting biology and history. It was nice having that female nearby. I’d say of the existing trees, the dove tree [Davidia involucrata] near College Hall and the shagbark hickory [Carya ovata] near Tyler are very special trees.

Phil Reid Interview

(Continued from page 3)

Horsechestnut (Aesculus hippocastanum)

Self-guided Tree Tour

L

By Alex Chitty ’01
In the past issues of *Botanic Garden News* I have concentrated on winter hardy woody plants. In the dead of winter my mind wanders to the indoor plant world, and in this issue I want to espouse the virtues of one of my favorite interior plants, *Ruscus hypoglossum*. This is an unusual plant that is unusually easy to grow. It remains very difficult to find in the trade—for reasons I’ll never understand.

The genus *Ruscus* is in the Liliaceae and has only six known species. They are all characterized as evergreen perennial herbs. The most curious aspect of this genus is its vegetative morphology. Rather than having broad leaves it has flattened leaflike stems, called cladodes or cladophylls. The true leaves are minute and reduced to small scales positioned on the center of the cladophyll’s surface. It is in the axil of this minute leaf where the small flower arises annually, making it appear to come from the center of a leaf, arousing amazement and curiosity in my house guests. The cladophylls are persistent and can flower year after year from the same node. The species is dioecious (separate male and female plants) and pollination is most likely accomplished by flying insects. If you are fortunate enough to get a male and female, hand pollination can yield some very nice red berries sitting atop each cladophyll. Unfortunately, my *R. hypoglossum* is a male looking for a female. But alas, none are to be found.

*Ruscus hypoglossum* is a relatively hardy plant and can be grown in a semishaded garden from Zone 7b to Zone 10. If you have the opportunity to grow this plant outdoors please do so. It tolerates dry shade, unlike so many plants. If you have seen this plant before, it was most likely as a cut stem in a vase or dried in a floral arrangement. Florists like it because the green stems last very long off the plant, and I have often seen it accompanied by a carnation or rose in a small vase on a restaurant table. It and its relatives are dried and dyed for use in dried arrangements. I strongly believe it should have a more permanent use in the house or garden. It never drops leaves, doesn’t grow too fast, doesn’t need full sun, can skip a few waterings without harm, is not insect-prone, and is easy to dust or wash clean. It can take animal and child abuse more than most other foliage plants. It grows in ordinary potting soil. Can you ask for anything more?

Since the plant will not root from cuttings you must divide the clump much as you would divide a daylily or a hosta. It is not the fastest growing plant, so don’t plan on dividing it more than once a year. I obtained my division from Robert Baker, a professor at the University of Maryland who taught me almost everything I know about woody plant materials. It was my constant inquiries about this curious plant that finally got me a division. Dr. Baker met an untimely death shortly after giving me that division and now I feel obligated to keep this plant alive and give divisions to my best friends and relatives. Even those with brown thumbs report to me that it is doing fine. Knowing it is spreading among friends is a comforting thought.

I am currently trying out a new *Ruscus* addition, a self-fruited clone of a related species, *Ruscus aculeatus*, the butcher’s broom (named so because historically butchers used the branches tied to a stick to sweep the ground after they finished their work). It is a much smaller plant with very sharp cladodes (nasty to the touch) and a painfully slow growth rate. This species is exceptionally drought tolerant. Mine is doing well so far as a houseplant and I will soon see what the fruit looks like.

The only commercial source that I can find for *R. hypoglossum* is Glasshouse Works. Their online catalog is at www.glasshouseworks.com/ For a nice photograph of the pretty red fruit of *Ruscus aculeatus* go to http://www.plantdelights.com/Catalog/Current/Detail/04751.html

To see a botanical illustration of all the plant parts of *Ruscus aculeatus* use this link: http://biodiversity.uno.edu/delta/angio/images/rusca856.gif

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Do you want a division of the Director’s plant? See page 12.
Do you want a division of the Director’s Ruscus plant? (See page 11)

This spring Michael Marcotrigiano will take one division of his one and only *Ruscus hypoglossum*, and we will offer that division to the Friend of the Botanic Garden who, by silent auction, bids the highest. The proceeds will be used for educational displays in the new Exhibition Gallery. Bids will be opened at noon on May 1st and the division sent to the winner shortly thereafter. Sorry, we cannot ship live plants to locations outside the USA. Send your bid in a sealed envelope to:

The Silent Auction – Ruscus
The Botanic Garden of Smith College
Northampton, MA 01063

Garden Gifts Order Form

You can see pictures of all these items on our web site:

http://www.smith.edu/garden/giftorderform.html

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Address:________________________________________
City/State:___________________________Zip:________
Email:______________________________________

Send to: The Botanic Garden of Smith College,
Renovation Update
Michael Marcotrigiano

Construction and renovation march forward, side by side. Concrete for the new underground wing on the north side of the complex is poured, and the big hole is filled. At present, it looks like a cross between a complex maze and a military bunker. Soon, however, rooms will appear inside and we hope by the end of this summer to inhabit them. The waterproofing phase has begun, so that the rooftop garden does not water the inhabitants in the rooms below. The administrative wing has had its foundation poured and it will soon rise up. The Exhibition Gallery is looking very promising. It is now one big open space and the contractors are beginning to install the utilities. We are dreaming of the events that can be held here since there has never been a gathering place that is so “public friendly.”

The biggest problems with a renovation project are often the unexpected things. When I renovated my own old house, an 1830s Greek revival, I ran into all kinds of surprises. There were pipes where we didn’t expect them, beams on weird angles, and many modifications that were done without much thought to their future. The update of Lyman Plant House reminds me of the difficulties with such renovations and why they are so problematic when compared to new construction. The addition of air conditioning, a new boiler, and new ventilation systems has made it most difficult to hide the ugly vents, dials, and meters that are necessary. Lots of complaining, some ingenuity and creative plantings should solve these problems. Hats off to the general contractor who has been most cooperative and who has the experience to solve so many of the little “big” problems that have popped up.

The renovation of two of the greenhouses is near complete and soon restoration will begin on four more. Again, restoration is fraught with uncertainties. Until the structure is disassembled, we never know which metal beam is too rotten to repair, or which ones need to be recast, or which pipes are too old. Piece by piece it will all fall into place. Our plant collection remains healthy, happy, and secure even though it is moved from place to place as needed.

In the meantime, we march forward, planning for the future. Most of the greenhouses remain open as we rotate from one to the next on the repair schedule. Your patience and support are appreciated during the restoration. We are working harder to give you a world-class botanic garden.

New Exhibition Space
Madelaine Zadik

As we can now see a new, single-level floor for the Exhibition Gallery, we are starting to imagine the space filled with all types of awe-inspiring displays. In keeping with the mission of the Botanic Garden, this new public exhibition area and seminar space in the Lyman Plant House will primarily function as an arena for education, providing the Botanic Garden new opportunities for educational programs and displays. Funds for this Exhibition Gallery were given in memory of Eleanor Bradford Church ’32 by her family.

We are filled with enthusiasm about the possibilities for this new area. It will be the first time that the Botanic Garden has a space where we can truly welcome the public, rather than having them feel that they have intruded on a workspace. We expect that future events that will take place in the new space will include seminars and lectures on topics related to botany or horticulture, meetings of local plant clubs, receptions for visiting speakers, and mini-conferences on current topics in botany and horticulture. Exhibitions will include displays of living plants, exhibits on topics related to botanical or horticultural science, displays of botanical art, and interdisciplinary exhibits devised in collaboration with various departments on campus. We hope to have our first display in the new Exhibition Gallery before year’s end.
Calendar of Events — Spring 2002

Issues in Landscape Studies
Lectures of Landscape Studies 100
Mondays 2:40 - 4:00 pm, Wright Hall Auditorium
All lectures are open to the Friends of the Botanic Garden

January 28 Nina James-Fowler, Lecturer in Art History, Smith College
Introduction: What Isn’t Landscape Studies?

February 4 Anna Sloan, Mellon Fellow in Art History, Smith College
Interpreting Islamic Paradise: Myths of the Taj Mahal and New Interpretations of Its Garden Context

February 11 Dean Flower, Professor of English, Smith College
Thoreau, Mary Oliver, and the Poetics of Landscape

February 18 Nicholas Dines, Professor of Landscape Architecture and Regional Planning, UMass
Landscape Architecture and the Design of Personal Space: The Problems Associated with Attempting to Design Six Billion Healing Gardens

February 25 Andrew Guswa, Assistant Professor of Engineering, Smith College
Watering the Garden: Hydrology, Water Resources, and Landscape

March 4 Joseph Volpe, Professor of Landscape Architecture, UMass
Landscape: Works on Land / Works on Mind

March 11 Julius Fabos, Professor Emeritus of Landscape Planning, UMass
The State of Landscape Architecture, Worldwide

March 25 Christopher Krueger, Department of Music and Dance, UMass; and Concert Flutist
Aural Oases—Musical Representation of Nature

April 1 Len Hopper, Head of Landscape Architecture, NYC Housing Authority; President of ASLA
Landscape Architecture — Safety, Security, and Other Matters of the Heart and Mind

April 8 Michael Marcotrigiano, Professor of Biology and Director of the Botanic Garden, Smith College
Shaping Plants that Shape the Landscape

April 15 Donna Landry, Professor of English, Wayne State University
Ruined Cottages: A Legacy of the Picturesque?

April 22 Anne Filson (Smith ’91) and Kate Orff, Designers, Office for Metropolitan Architecture
The Illinois Institute of Technology Masterplan and new Student Center in Chicago, the Seattle Public Library, and Downsview Park in Toronto

April 29 Shavaun Towers (Smith ’71), Principal in Towers/Golde
The Landscape Architect as Best Supporting Actress: Collaboration, Stewardship, and Institutional Mission

Please note that due to the Lyman Conservatory renovations there will be no spring Bulb Show this year.
The Botanic Garden recently received its first gift in our new Adopt-a-Tree program. The program is set up to support the continued care of existing (non-memorialized) trees on campus, while offering the opportunity to honor or memorialize. Donations made to the Botanic Garden through this program support the maintenance requirements of the tree—pruning, cabling, disease control, etc.

This first tree to be adopted is a star magnolia, Magnolia stellata ‘Waterlily,’ near the southeast corner of Chapin House. It was adopted by Lee and Leona Krompart, in memory of Lucia Krompart ’81. Beth Sheppard ’81 wrote the Botanic Garden on behalf of the family to inquire about the possibilities for memorializing her classmate. She recalled a special time they had shared, “I remembered a wonderful moment with my friend. As students we were both very involved with activities in Helen Hills Hills Chapel, and one year we came back from the Easter sunrise service to discover that the … tree in front of Chapin House (where we both lived for four years) had bloomed overnight. It was a magical moment for us, and we discussed it many times over the years (perhaps because—coming from Maine and Michigan—we weren’t used to such an ‘early’ spring!) Is there any possibility that this particular tree—which I happily noted at my 20th reunion last year was still in place—could be ‘adopted?’ It would be a wonderful connection for my classmate’s friends and family.”

Many people have requested the planting of new memorial trees in the past year, and we have been discouraging this since there have been no planting sites available. Now that the new fence has been installed on Green Street we have the opportunity to plant seven new memorial street trees on the Sage Hall end of Green Street. Next fall an additional four planting sites will become available near the Davis Center on the drive leading to Capen Garden. Trees are available on a first come first served basis.

Memorial Benches

We currently have three opportunities available for memorializing benches. One bench is in front of Burton Hall, facing the large lawn and the Mary Maples Dunn Hillside Garden. The other two are needed to replace existing benches on the lawn below the President’s Residence. They offer a beautiful view facing Paradise Pond. The donation level for memorial benches includes the upkeep of the bench. This may involve periodic cleaning and plaque replacement.

Membership News

Last year the Friends of the Botanic Garden joined together with the Friends of the Museum of Art and the Friends of the Libraries in a solicitation of Smith alumnae. As a result, membership in the Friends of the Botanic Garden gained over 350 new members, topping 1000, the highest level ever. It has been very gratifying to see such an outpouring of support for the Botanic Garden.

For more information and policies regarding the Adopt-a-Tree program and memorial trees, as well as memorial bench options, please visit our web site at http://www.smith.edu/garden/Giving/donations.html. If you do not have access to the internet, just let us know and we will send you a copy by mail.
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 and a calendar of events, twice a year
- Invitations to plant show preview parties and receptions
- Members-only hours at the annual Spring Bulb Show
- Invitations to Botanic Garden symposia and trips

You may join the Friends of the Botanic Garden by mail, or you may join on-line at http://www.smith.edu/friends