



The Botanic Garden of Smith College

Botanic Garden News

Spring 2001

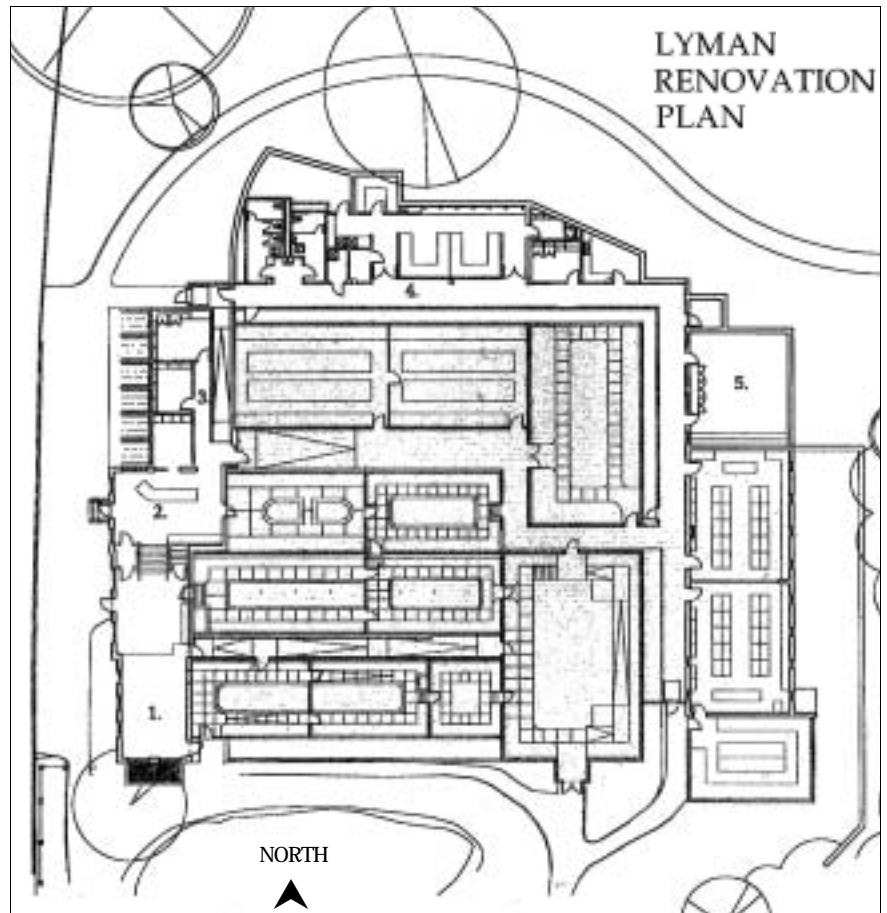
Renovation Update

From the Director, Michael Marcotrigiano

For those of you who are new Friends of the Botanic Garden, welcome. Our numbers continue to grow and so does the opportunity for new initiatives. On behalf of the staff I want to thank all of you for your support. The Botanic Garden of Smith College is a treasure and it is evident that it will remain so if we continue to work together in the future.

In the last newsletter I briefly mentioned the plan for a major renovation and restoration of the Lyman Conservatory. It is time for a review and an update. The main mission behind the project is to restore the glasshouses before they deteriorate to the extent that they might be unsalvageable. During the early evaluation of the project it was determined that other improvements to the building itself could be made, the goal being to make the building more functional for employees and more inviting for visitors. The architectural firm Perry Dean Rogers & Partners of Boston was hired to solve the problem. Many meetings later, and with great creativity, a design emerged that preserved the historic nature of the building and solved the practical issues revolving around staff, visitors, and accessibility. I will do my best to explain the two-dimensional figure we have provided for you at the right. A tentative timetable for the project is on page 2.

The greenhouses themselves will not increase in number or size but will be fully restored. The structural elements have been failing and the utilities have become unreliable. To address the compromised greenhouse structure, a large majority of the structural elements will be replaced. Much of the glass will be replaced with glass (as of yet undetermined type) that is less likely to break. Unsightly control systems will be hidden and lost architectural elements (e.g., the fanlike panel above southern entrance



- 1. Exhibition
- 2. Reception
- 3. Administration
- 4. Planting and Propagation
- 5. New Classroom

PERRY DEAN ROGERS & PARTNERS

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The Botanic Garden of Smith College
Northampton, Massachusetts 01063
413-585-2740
www.smith.edu/garden

Director	Michael Marcotrigiano
Interim Assistant	Madelaine Zadik
Director	Rob Nicholson
Conservatory Manager	William Belden
Gardens Supervisor	Maryjane Beach
Administrative Assistants	Diane Bowman Susan Schaffner
Greenhouse Technicians	Steve Sojkowski John Berryhill
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Botanic Garden News

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Perry Dean Rogers & Partners: Architects

We have been very fortunate to be working with the architecture firm of Perry Dean Rogers & Partners of Boston. They have been involved in the planning and design of buildings in both the public and private sector since 1923. The firm is quite well known for its work with academic and cultural institutions, which over the past 75 years has numbered over 100. Projects have ranged from master plans for universities and small schools to designs for new buildings, or major renovations and additions to existing buildings. They have designed numerous academic science facilities, including additions to the Wellesley College Science Center and a renovation of the Stone Science Center at Boston University. Since the firm's inception and their commission as the architects for the restoration of Colonial Williamsburg, the preservation and restoration of historic structures has been an important aspect of their work.

Peter A. Ringenbach is the Principal-in-Charge of the Preservation and Building Technology practice at Perry Dean Rogers & Partners. He has been responsible for major restoration projects including the exterior restoration of Branford and Saybrook Colleges at Yale University. Bryan Irwin, an Associate at the firm, is the Project Manager. He also serves as an Adjunct Faculty Member at Rhode Island School of Design and has worked on other conservatory projects. He is our featured speaker for the opening of the Bulb Show (see the calendar on page 10). His talk "The Architecture of The Lyman Conservatory: Past, Present, and Future" will trace the development of Smith's glasshouses, some of the very complex issues involved with their restoration, and current directions in glasshouse design. He will also discuss the process all of us went through to develop the proposed design, which he will be unveiling that evening.

For those of you who won't be able to make it to the lecture but will be at Smith for reunion and commencement weekends, we will be leading "Renovation Tours" to keep everyone up-to-date on the project. ☞

Tentative Renovation Timetable — 2001

- February 16** Bid specifications for phase one demolition disseminated
- February 21** Pre-bid site visits for phase one demolition
- February 28** Cost estimate on design and development of the entire project
- March 7** Bids taken on phase one demolition
- March 12** Minor interior demolition can begin in Plant Physiology Lab
- March 19** Begin major building demolition of Plant Physiology Lab and excavation (after the Bulb Show)
- April 2** Bids go out for phase 2 (new construction and greenhouse renovation)
- May 10** Substantial completion of demolition and excavation for north side addition. Further work will wait until after commencement

Projections beyond these dates would be guessing at press time. We are expecting a final completion date no sooner than September 2002 for glasshouse renovations and additions to buildings. The new additions would be completed first to let us move in prior to the renovation of much of the other space. Public access to any of the greenhouses during the construction phase is difficult to predict. Every attempt will be made to leave some of the facility open but it is too early in the process to know which houses will be open and which will be closed. ☞

Plant Highlights—*Actinidia kolomikta*

Michael Marcotrigiano

Beginning with this issue, we will feature landscape plants that we consider to have superior characteristics and worthy of any garden.

The so-called Arctic kiwi is a lovely deciduous vine originating in coniferous forests in northeastern Asia and central and western China. It is closely related to the kiwi fruit found in the fruit aisle of your grocery store. Unlike most of the species in the genus *Actinidia*, Arctic kiwi is quite cold hardy and can survive the winters as far north as Zone 4 (USDA Plant Hardiness Zone Map).

Actinidia kolomikta is a dioecious species (male flowers on one plant, females on another) and has several ornamental traits. The male plants produce an abundance of small fragrant white flowers with yellow stamens in late May or early June. The flowers can be viewed from below but are often hidden by the foliage. However, when in full bloom, large vines can fill the morning and evening air with a delightful sweet fragrance. Since the flowers last only a week or so, the most ornamental feature is the interesting foliage. The leaves, shortly after emerging in the spring, make a color transformation. Some become white on the tips, some become completely white, and others stay completely green. The pattern is quite random on the plant but appears from leaf tip to leaf base on the five-inch simple leaves. Then, as if by magic, some or all of the white areas begin to turn silver to bright pink. The level of color is reported to increase in calcareous soils and is much more vivid on male plants. Color is also better when the plants are provided with adequate sun. If grown under too much shade, the white areas will not turn pink.

There is no other ornamental plant that has a variegation pattern like this. It is showy but not so flashy that it looks brash and out of place. Some describe it as leaves dipped in paint. Although it takes about 3 to 5 years before the plants develop leaves with variegation, it is worth the wait.

The females, reported to be less colorful, bear edible kiwi fruits about one inch long, which contain a very high level of vitamin C. I can think of no other ornamental vine that has both beautiful foliage and edible fruit. If you have room for only one, you should choose the male since it has better leaf color and the female would not produce fruit without a nearby male.

Vines can cling by several means. *Actinidia kolomikta* climbs by rambling over things and twining its young shoots around any reasonably thin support. Unlike *Wisteria*, this kiwi never forms huge crushing stems that rival small trees. A true kiwi, the vine grows rather quickly, but of all the kiwis it is one of the easiest to



tame. Any rampant shoots emerging from the plant can be easily pruned out without harming the plant. It is not a very strong climber and may need some assistance directing it where you want it to go. I use nylon strips (cut from women's hosiery) to attach it to a trellis until it begins to do it on its own. Supple young shoots can be woven in and out of the trellis by hand. These will then

form the foundation for covering an entire section of the wall or trellis. It can climb 20 to 30 feet in all directions but can be maintained in smaller places by pruning it any time of the year.

I have grown this plant for over 10 years and have nothing negative to say about it. It never gets diseased and seems to be off limits to Japanese beetles, at least in my garden. It can attract cats (no one knows why) that will rub on its stems and maul the lower leaves. I've only had this happen once since I planted the vine and the cat did not destroy too many leaves before he left satisfied that he did something powerful.

My choice for this issue's plant is a deliberate one. First, I think this plant is not used as much as it should be and has received little attention in the popular trade. In addition, this is a vine that could potentially adorn the new wall that will be added to the north side of the renovated Lyman Conservatory complex. It will be exciting to watch its progress over the years if it is chosen, knowing that it will grace the building for decades to come. ☞

Below are some web sites that, at press time, contained pictures and/or discussions of this lovely vine:

<http://www.orst.edu/dept/ldplants/acko.htm>

<http://www.online.ee/~calmia/Taimed/Ronitaimed/actinidia.htm>

<http://www.crarae-gardens.org/garden/piccrarae6.htm>

<http://www.bcc.orst.edu/hort228/acko3.htm>

Our Last Sweet Days of Maple Syrup?

A Frightening Look at the Asian Long-horned Beetle

Deborah Shoval
Fall 2000 Horticulture student

A tree grows in Brooklyn...or used to. In the past four years, thousands of New York City's trees have been destroyed—4,300 just last year. In 1996, a concerned Greenpoint, Brooklyn, resident contacted the New York City Parks and Recreation Department about the dying Norway maples in his neighborhood. The culprit was identified as *Anaplophora glabripennis*, the Asian long-horned beetle. For some time it seemed that the beetle was confined to the Brooklyn/Queens side of the East River, but in 1999 Asian long-horns were discovered in a park on Manhattan's Upper East Side, frighteningly close to Central Park.

Pancake lovers and leaf enthusiasts beware: the Asian long-horned beetle has the ability to decimate New England's shade trees, devastate the maple sugar and timber industries, and destroy our fall foliage.

In China *Anaplophora glabripennis* is called the starry sky beetle for its black body with white spots. The beetle is an inch or so long, but its striped antennae may be three times that length. Between summer and fall, mature females chew their way inside of a tree, lay an egg, and move on to lay more. When eggs hatch, larvae gnaw inward, pushing a mixture of sawdust and excrement out of the tunnel behind them. The pests winter deep within the tree's heartwood, usually as pupae. During the summer, adults chew dime-size exit holes from which they emerge for a month, mate on the branch of their own or a nearby tree, and continue the cycle.

Because this pest spends so much time deep inside the tree, the beetle is not as noticeable as its mess. Fresh piles of sawdust near the tree base, dime-sized holes in the branches or trunk, and heavy sap from tree wounds are all indications that the Asian long-horned beetle has moved into your neighborhood.

The wood-boring habits of the larvae make the long-horned beetles elusive pests. The beetles tunnel straight through xylem and phloem, inhibiting nutrient-rich fluids from traveling to the leaves, the energy factories of the tree. Eventually trees weaken and become more prone to secondary insect infestations and



diseases. Upper branches wither. Trees die.

Once discovered, an Asian long-horned beetle's host tree must be uprooted, chopped, and burned. Currently, complete destruction of the tree is the only proven method of extermination. Tree climbers and workers in bucket trucks scour surrounding trees for more beetles. The Environmental Action Coalition proposes cutting down all of the trees of the most vulnerable species, perhaps within a fifteen-mile radius of an infested tree.

We are deforesting our cities due to the ineffectiveness of current extermination tactics. The beetles' few living natural predators and parasites do not seem to have much effect on population growth. Even in China, believed to be its native habitat, the beetle is responsible for the destruction of huge expanses of forest.

The beetle outsmarts our conventional chemical warfare strategies by living most of its life deep inside of a tree, out of the reach of pesticide sprays. However, the Animal and Plant Health Inspection Service (APHIS) of the United States Department of Agriculture (USDA) is currently experimenting in Chicago with an insecticide that is injected into soil or directly into the tree. Inidacloprid interferes with the beetle's nervous system, causing paralysis and eventual death.

Meanwhile, Secretary of Agriculture Dan Glickman called for more inspections and more regulations. In December 1998, the USDA announced that all solid-wood packing material on imports from China must be treated. In response, Chinese officials have accused the United States of using the infestation as leverage in trade relations.

The Asian long-horned beetle serves as just one example of the serious and growing problem of invasive species, second only to land development in the threat to native biota in the United States. Invasive species can be defined as nonnative plants, animals, and other organisms which, once introduced, outcompete native species for available resources, reproduce prolifically, and dominate regions and ecosystems. Free from their native predators, they are nearly impossible to control. Invasives negatively impact entire ecosystems, as native species and those that depend on them for food, shelter, and habitat disappear.

The most severe problems posed by invasive species are ecological and economic. The spread of exotic species represents a serious threat to biodiversity. Nearly one-half of the species listed as threatened or

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Renovation *continued*

(Continued from page 1)

to the Palm House) will be replaced. Controls will be updated so that we can tailor the greenhouse environment to the needs of the plants. Currently, most of the greenhouses are poorly vented and receive inadequate light due to surrounding buildings and trees. Provisions will be made for supplemental grow lighting in areas not open to the public. The most radical change in the floor plan for the greenhouses themselves is the elimination of the Pit House, the low and narrow propagation area running east to west just north of the Succulent House. The "Pit" will become a new ramp providing everyone, including those in wheelchairs, easy access to any of the greenhouses in the southern half of the complex.

New additions to the existing building are being proposed in areas 3, 4, and 5 on the plan shown on the cover. While the College is committed to fully restoring the glasshouses, whether or not all of the proposed new office, classroom, and workspaces become reality depends on the level of donor support for the project and the bid price for the entire package. The best case scenario is that the entire project is realized and the worst case scenario leaves us with renovated glass houses and partially renovated offices and workspace. There are several "add alternate" parts to the project that may or may not be completed, depending on the bid estimates.

A new classroom (5), added north of the existing two classrooms, would be built. It would have a flexible design with loose seating, which we currently do not have, and be suitable for other purposes when classes are not in session. The existing classrooms have a fixed number of seats and permanently placed workbenches and cabinets. In the new classroom, a bank of computer stations would assist our gardeners in maintaining our plant collection records.

All work functions will cease in the basement, which will be used solely for utilities. The end of the dreaded trip up and down the stairs with heavy flats of bulbs and bags of soil is near. A completely new planting and propagation wing (4) would be built underground on the north side of the building, in an area that is now a steep bank of ornamental grasses and the soon to be extinct Plant Physiology Lab. Starting at the front of the building in this new area and working toward the rear, would be new larger restrooms, a large dry storage area, a bulb cooler, a pot washing room, a large propagation and potting bench area, showers and lockers for the greenhouse staff, the conservatory manager's office, a tissue culture research laboratory, and a pesticide storage facility. A glass-covered passage along the new addition provides an unobstructed path to the rear classrooms and provides light for the underground spaces. This wing is designed to separate work functions from the public space, a design feature that is prevalent in the majority of botanical gardens.

A large retaining wall covered with brick is necessary to contain the underground addition on the north side. The wall would curve slightly toward the east where it slowly dissolves into the hillside. The wall offers us the opportunity to showcase an attractive vine (see the article on page 3). The underground design provides a new rooftop area complete with a view of Paradise Pond. The rooftop garden would be a wonderful opportunity to commission a high-profile garden designer to execute a work of landscape art, which we hope someone will be interested in funding. Smith College has many wonderful gardens but none by a famous landscape designer.

Area 3 is a new administration wing that would be added to the front of the building, west of the current hallway to the Physiology Lab. This space would consist of a main office, an office for the assistant director, and the director's office. So long to the days of having the office door accidentally opened in your face. We will miss the smell of one another's lunches and the discussions aimed at deciding who initiated the latest round of head colds. I hope it's not too lonely. The façade of the office wing would be mostly glass with trellises overhead to support delicate vines and shade the offices. By working with the architects we managed to maximize the use of plants on and around the building. Between the administrative area and the work area would be a ramp that passes by the offices and leads to the glass covered passage.

Area 1 is currently the main garden offices separated by a wall from the Head House. The wall would be removed, creating one large open space for exhibitions and visitor groups. It would have a lift and stairs that would lead to area 2, a reception area where volunteers and students could work and offer support to visitors.

I must admit that I eagerly look forward to the final product but the road there will be dusty, noisy, and inconvenient. Nevertheless, it is for the future that we plan and now is the correct time to take on this project. Be patient with us, and before you know it we will be in our revitalized facility. ☞



Small-Flowered Clematis: Species and Kin

Tracey Putnam

Although most gardeners are familiar with large-flowered hybrid clematis, few have much experience with the small-flowered varieties. These species and kin exist in a wonderful multitude of forms and colors, some of which are so unclematis-like as to leave garden sophisticates scratching their heads. Of immense garden value, the small-flowered clematis have many attributes which their blowy cousins lack: the vast majority bloom on new growth, meaning they don't carry vulnerable flower buds through cold winters. Most should be pruned back to strong vegetative buds a foot or so above the ground in early spring. This couldn't be easier, and serves to remove all unsightly old growth annually, allowing supports to be repainted or otherwise maintained and making these clematis ideal for growing through shrubs and small trees. Most are very resistant or immune to clematis wilt, a fungal disease that can devastate a planting. And, of course, there's the main attraction: exotic, incredibly floriferous vines in a rainbow of colors and a floral circus of shape and form. These valuable plants extend the clematis season from April to October.

Earliest of the hardy clematis are the alpinas and macropetalas, flowering from late April (*C. alpina* 'Helsingborg') through early June. Excellent for the small garden, these are compact plants growing from six to eight feet in height with attractive foliage and silky seedheads. Flowers are one to two and a half inches long, nodding, single in alpinas, double in macropetalas. They do best in northern or eastern exposures where they will flower well in part shade. *Clematis alpina* 'Francis Ravis,' with rich, true-blue flowers and white staminodes, is especially ethereal, more so when grown with dark purple-blue 'Helsingborg.' Indigo blue *C. macropetala* 'Maidwell Hall' is a winner, but perhaps the most elegantly beautiful of the macropetalas is 'White Swan,' as graceful as its name, which looks like a huge white columbine. Both alpina and macropetala selections are available in clear pink shades as well as tones of blue,



lavender, and purple, and both occasionally rebloom in the fall.

Clematis columbiana from the western United States is the American equivalent of the European *C. alpina*. This lovely violet-blue, nodding flower has wider sepals (clematis flowers are actually sepals rather than petals) with a translucent quality allowing the darker veins to show through. Hard to find, it is apparently a challenge to grow well. I planted a young specimen out in the President's garden last fall. Vigorous and flowering while in a container, once transplanted to the border it died back. I'm hoping for a spring resurrection!

The month of June brings *Clematis viticella* and its array of wonderful hybrids. This species is a favorite. Covered with small purple nodding flowers, vigorous, disease-resistant, with attractive, tidy foliage, "it flings itself ten to twelve feet in all directions and flowers with abandon" according to Barry Fretwell.

Earliest to bloom is *C. viticella* 'Betty Corning.' The pale lilac nodding flowers turn up at the tips and are lightly fragrant. With lacy foliage to the ground, 'Betty Corning' is ideal for covering the bare "legs" of climbing roses. 'Alba Luxurians' sports white flowers, green-tipped sepals and dark stamens. Barry Fretwell claims it "has the uncanny ability to enrapture almost everyone who sets eyes upon it." In my home garden it is growing in a small tree of *Cornus mas*, and *C. viticella* 'Little Nell' weaves through *Clethra barbinervis*. 'Little Nell' has creamy white flowers edged with lavender and is a prolific bloomer. 'Madame Julia Correvon' has bright wine-red blooms, 'Etoile Violette' blooms rich deep purple, and 'Purpurea Plena Elegans' is an old, very double form of soft reddish-purple with a reverse of silvery pinkish-grey. Viticellas flower from June or July until September.

Another long bloomer is *C. texensis*. The species is rare in commerce and uncommon even in its native southwestern United States. The only truly red clematis species, it has been used to introduce this color to many of the large-flowered hybrids. The flowers resemble a closed bell, with the four fleshy sepals opening out slightly at their tips. Varying in nature from crimson to orange-scarlet, the red color is often continued along the flower stem. All this color is strikingly set off by smooth blue-green foliage growing six to eight feet. *Clematis texensis* 'Duchess of Albany' and 'Gravetye Beauty' (rose pink and ruby red, respectively) have larger, more open flowers. 'Etoile Rose' and its close relative *C. × 'Pagoda'* are shades of silvery pink. The parentage is quite interesting: *C. × 'Pagoda'* is a seedling from *C. texensis* 'Etoile Rose' pollinated by *C. viticella*, bringing together two fantastic species. 'Etoile Rose' is completely swathed in flowers for almost three months, vigorous and healthy.

(Continued on page 7)

Clematis *continued*

(Continued from page 6)

August and September bring the profuse flowers of *Clematis rehderiana* in loose clusters of pale yellow bells, half an inch in diameter with a delicious fragrance of mock orange. This clematis, cut back to two feet and winter-mulched, will cover a good-sized area—the pale yellow color is made for gray stone or old brick walls. *Clematis* × *tritemata* ‘Rubromarginata’ also blooms in late summer to early fall. This hybrid of *C. flammula* and *C. viticella* has large panicles of cruciform dark pink flowers fading to white in the center. Fretwell says it “looks for all the world like a dusky-pink turbulent waterfall as it cascades down a small tree or tumbles over and along a sunny wall.” The flowers smell of hawthorn, and the vine will reach fifteen to twenty feet.

Clematis heracleifolia var. *dauidiana* is another late bloomer. Herbaceous rather than climbing, the three to four foot tall plant does best with some support. The small, terminal lavender flowers are extremely fragrant in most forms. My favorite clematis of the moment, *C.* ‘Mrs. Robert Brydon,’ is a close relative. This hybrid grows ten to twelve feet tall with masses of soft lavender one-inch flowers with puffy stamens. As it has inherited the nature of its herbaceous parent, it lacks the clinging leaf petioles with which many clematis climb. It trains very well up an arbor, however, interwoven through the slats, and is a most effective plant for covering a large tree stump with clouds of misty blue.

Another herbaceous gem is *C. integrifolia*, three feet tall with small nodding indigo blue flowers and attractive seedheads. The pink forms are lovely—Fretwell calls *C. integrifolia* ‘Rosea’ “one of the most beautiful of herbaceous plants.” When *C. integrifolia* was crossed with *C.* × ‘Jackmanii’, a wonderful hybrid known as *C.* × *durandii* resulted. With four deepest blue ribbed sepals the flowers are large, three to four inches across. Semi-herbaceous in nature, it grows six to eight feet tall, perfect for coaxing through a small shrub (*Syringa meyeri* ‘Palibin’ perhaps?).

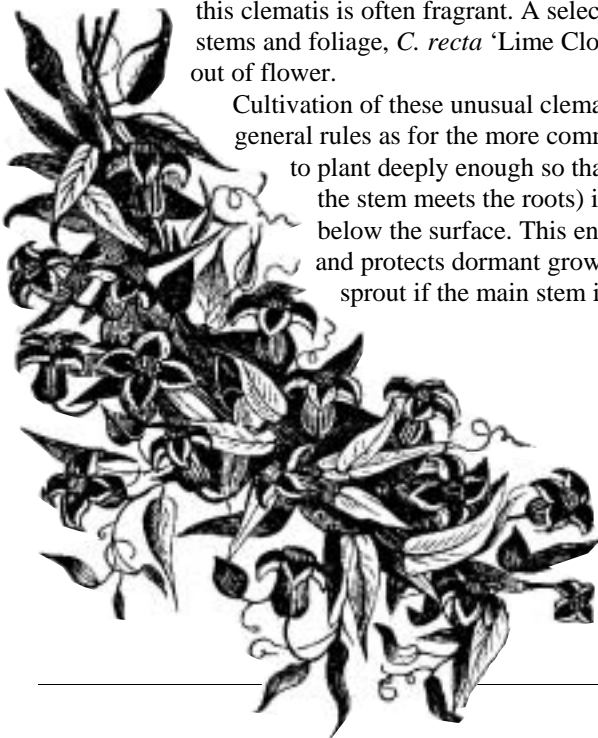
A more familiar herbaceous species, *Clematis recta*, sports clouds of starry white flowers in June. Made for growing among peonies and roses, this clematis is often fragrant. A selection with deep purple stems and foliage, *C. recta* ‘Lime Close,’ is an eyeful in or out of flower.

Cultivation of these unusual clematis follows the same general rules as for the more common types. Make sure to plant deeply enough so that the crown (where the stem meets the roots) is at least four inches below the surface. This encourages stem rooting, and protects dormant growth buds that can sprout if the main stem is damaged. This deep

planting also increases the number of basal shoots sent up each year. Shade the roots with shallow-rooted plants, or flat stones, and remember that all clematis need initial guidance. Left to fend for themselves, they will often languish limply on the ground.

Some wonderful species clematis can be seen here in the Botanic Garden, including *C. koreana*, *C. columbiana*, and *C. siberica* in the Rock Garden. In the Systematics Garden in the Ranunculaceae bed (along the path) you can find *C. heracleifolia* var. *dauidiana*, *C. recta*, *C. integrifolia*, and *C. rehderiana* (just planted and will not be blooming this year). In the perennial border along the fence are *C. viticella*, *C. orientalis*, and an old favorite, the truly taxonomically-challenged *Clematis terniflora* (also known as *C. paniculata*, *C. maximowicziana*, and *C. dioscoreifolia* var. *robusta*!). Small plants of *Clematis fusca* with furry, brown tubular blooms may take a few more years to flower. A collection of viticellas has been planted at the President’s house, as well as some of the large-flowered hybrids.

Once you’ve experienced the incomparable charm and exotic beauty of these underused plants, you’ll soon be building fences and arbors, and planting shrubs and small trees purely for supporting roles! ☞



There’s a wealth of clematis information on the internet. Barry Fretwell’s 1989 book, *Clematis*, is a good reference, as is the classic of the same name by Christopher Lloyd (1989). A more recent publication, *Clematis: The Genus: A Comprehensive Guide for Gardeners, Horticulturists and Botanists* by Christopher Grey-Wilson (2000) is an excellent guide to the species, although the taxonomy is infuriating. Mail-order sources include: Completely Clematis Specialty Nursery, 217 Argilla Rd., Ipswich, MA 01938, www.clematisnursery.com, and Chalk Hill Clematis, P.O. Box 847, Healdsburg, CA 95448, www.chalkhillclematis.com. Heronswood Nursery, 7530 NE 288th St., Kingston, WA 98346, and Forestfarm, 990 Tetherow Rd., Williams, OR 97544, both carry a wide selection of species and small-flowered clematis.

Memories of William I.P. Campbell

In response to the sad news of losing William I. P. Campbell, who died on October 31, 2000, we have had an outpouring from many people he touched during his years at Smith College. To date we have received 27 donations in his memory, totaling \$7,730. We have heard many stories of how he affected and influenced students and staff alike.

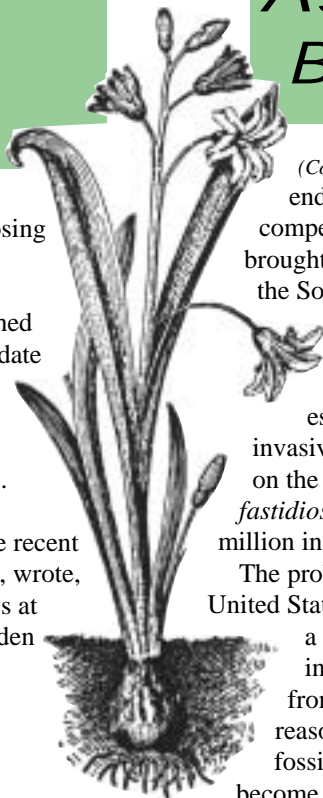
Cornelia Hahn Oberlander '44, a landscape architect who worked on the recent Smith College Landscape Master Plan, wrote, "I remember him so well from my days at Smith. He introduced me to Rock Garden plants and hybridizing of chrysanthemums, and an everlasting appreciation of the College grounds, which I hope we manifested in the Landscape Master Plan."

A student who took Horticulture in 1949–50 stated it was "one of the best and most useful of all—including courses for my Ph.D.," Another alumna recalled taking Horticulture with Mr. Campbell in 1948 with five other students who "all fit neatly into his station wagon for field trips to growers of many plants around the Connecticut Valley (Montgomery Roses, Sims Carnations, UMass for grafting in their orchards, and flower shows—W.I.P.C. always won blue ribbons and large silver bowls especially for cascade chrysanthemums). Woe betide a student who forgot the Latin name for Scotch heather or referred to dirt when she meant soil! A memorable course of everlasting content."

Yet another student remembers, "I was the only botany major in the class of 1951 and worked very closely with him. He was always such an inspiration and a gentleman. My study of botany and horticulture with Mr. Campbell, in particular, has given me enormous joy and peace over the last fifty years."

One donation came with a note that simply said "What a dear man!"

We have scheduled a showing of the video, "A Horticultural History of Smith College," a very interesting slide show put together by Bill Campbell for the centennial of the College in 1975. It will be held on Wednesday, March 28 at 5:00 pm in Seelye 106. We hope you can make it. ☞



Asian Long-horned Beetle *continued*

(Continued from page 4)

endangered under the Endangered Species Act are at risk due to competition from nonnatives. Ironically, some invasive species were brought to the United States intentionally. Kudzu, "the vine that ate the South," was introduced for erosion control. And starlings were actually imported in an effort to bring all of the birds mentioned in Shakespeare's literature to the United States.

The cost of invasive species to the U.S. economy is an estimated \$125 billion per year. An example of an expensive invasive is the glossy-winged sharpshooter, which recently arrived on the West Coast. The insect carries with it the bacterium *Xylella fastidiosa*, which causes a disease that has already cost nearly \$40 million in losses of California grapes.

The problem of invasive species is accelerating. Trade between the United States and China has increased astronomically in recent years, to a current \$70 billion annually in imports. With that has come an increase in the number of insects found in imported materials, from 1% of all interceptions in 1987 to 20% in 1996. The other reason for the growing problem of invasives is global warming. As fossil fuel emissions create climate changes, U.S. ecosystems become more hospitable to species from other habitats.

The U.S. government has had little choice but to take seriously the ecological, aesthetic, and economic implications of the most destructive invasive species. In February 1999, Clinton created the Invasive Species Council, chaired by three politicians (but no ecologist). The primary mission of the Invasive Species Council is to prevent invasive species from entering the United States. In theory, the Council will work with state and local officials, tribes, scientists, universities, environmental groups, farm organizations, shipping interests, and the business community to create a detailed invasive species management plan.

At the risk of being sappy as a freshly chewed beetle exit hole, it is time to recognize the beetle's incalculable damage. The Asian long-horned beetle eats trees, the grandmother of all plants, creators of our apple pies, bearers of the sticky samaras we stuck on our noses, providers of our shady midsummer naps. The Asian long-horned beetle differs from other invasives because it destroys species that we *all* know and love. Everyone can understand that the costs of the beetle are not solely economics or ecology. The costs are intangible. Trees beautify neighborhoods. They give shade on a hot afternoon, muffle noise, house the birds, and cleanse the air. Trees make humans more humane. Perhaps we can take a stroll from the global marketplace, sit under the shade of a remaining maple, and ask ourselves, "What is the true cost of global trade?" ☞

For more information, visit www.invasivespecies.gov.

If you suspect that the beetle may have invaded neighborhood trees, call (301) 734-5255.

For another perspective, see Janet Marinelli, *Stalking the Wild Amaranth: Gardening in the Age of Extinction*, New York: Henry Holt and Company, 1998, pp. 32–33, for a discussion of the argument that attack on invasive species has xenophobic origins.

Capen Garden

Madelaine Zadik

Tucked away on the northeast edge of campus and hidden behind evergreen hedges is Capen Garden, one of the secret garden treasures at Smith. The garden hosts a spectacular display of over 2000 tulips, which will burst forth in pinks and reds this spring.

Bessie Capen, one of the first women to graduate from M.I.T., was hired in 1876 to teach botany as well as chemistry at Smith. She later founded the Capen School, adjacent to the Smith campus. The College acquired the Capen School in 1921, giving the Botanic Garden a new garden space, which was redesigned by Kate Ries Koch. In 1934 Dorcas Brigham and the horticulture class designed and planted an additional area of the garden. Today, Capen Garden is still used by horticulture students as an outdoor laboratory and work space, as well as by those in the know seeking a quiet place of refuge.

The garden is designed as a series of outdoor rooms each with its own character. At the western end you'll find Capen Shop, where much of our equipment is stored and where most of our outdoor gardeners are based. Our new production greenhouse is also located here (sorry, the greenhouse is not

open to the public, although those of you who attended our plant sale last September got a glimpse inside). From here one enters Capen Garden through a 65-foot rustic rose arbor lined with perennial beds. Adjoining the arbor is the Carol Brown Knot Garden (the former site of the Herb Garden), dedicated in 1989 to honor Carol Brown '11, in commemoration of her 100th birthday. Milly Ellis, who took horticulture with Gregory Armstrong in 1983, designed the original garden. Today the intricate pattern of the knot is created with dwarf boxwood and a dwarf barberry, *Berberis* 'Crimson Pygmy.' In the center of the knot stand four rosemary plants pruned as standards and overwintered in the greenhouses.

The rose arbor leads into the next garden space, which contains perennials arranged in borders and island beds and surrounded at the two entrances by *Kalmia latifolia*, mountain laurel.



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Following the center path leads one to the next room, a formal garden with a gazebo honoring Jill Ker Conway, the college's first woman president. The flowerbeds surrounding the gazebo are planted with spring bulbs and summer annuals. Each fall the horticulture class plants the tulip beds, which cover over 1000 square feet. The October 12, 2000 planting day proved to be sunny and warm (in contrast to past years when the class was seen working in raincoats) and, amazingly, the students planted 2200 bulbs in just about two hours. Any mistakes will go undetected until the tulips show their colors. Look for white 'Diana,' pink 'Christmas

Marvel,' and red 'Coeur Cardinal.' The tulip garden is a memorial planting established in 1997 as a tribute to Mary Mattison van Schaik '31, an ardent supporter of the Garden. She was a frequent visitor to the greenhouses and played a significant role in helping to beautify the Smith campus. In 1971 on the retirement of William Campbell, she wrote the text for a wonderful booklet, *The Gardens and Arboretum of Smith College* (now out of print).

Naturalistic plantings mark the last of the garden enclosures directly adjacent to Capen House. Here you will find spring drifts of scillas and Virginia bluebells flourishing in the shade of a large American beech, *Fagus grandifolia*, and handsome mature specimens of *Stewartia* and *Hamamelis*, witch hazel.

If you have somehow missed this lovely garden, be sure to take a stroll over there soon. Regardless of the season, there is always something to enjoy. ☞



Calendar of Events — Spring 2001

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 29** **Nancy Denig**, Landscape Architect, Northampton, MA, and Smith alumna
Common Ground: Bridge Building for Nations, Neighborhoods, and Families
- February 5** **Michel Conan**, Director of Studies in Landscape Architecture, Dumbarton Oaks, Washington, D.C.
Utopian Landscapes, from André Thouin to Thomas Jefferson
- February 12** **John Davis**, Art History Dept., Smith College
Thomas Cole and the Beginnings of Landscape Painting in the U.S.
- February 19** **Patricia McGirr**, Dept. of Landscape Architecture and Regional Planning, UMass.
Putting the Community in Community Design
- February 26** **Jack Ahern**, Chair of Dept. of Landscape Architecture and Regional Planning, UMass.
Landscape Scenarios: Back From the Future
- March 5** **Anne Whiston Spirn**, Dept. of Landscape Architecture and Planning, M.I.T.
The Language of Landscape
- March 12** **Gretchen Schneider**, Architect and Smith alumna, Art Department, Smith College
Making Time Visible
- March 26** **Cornelia Hahn Oberlander**, Landscape Architect, Vancouver, B.C., and Smith alumna
Footprints: A Career in Landscape Architecture
- April 2** **Michael Marcotrigiano**, Biology Dept., Smith College, and Director of the Botanic Garden
Invasive Plants: When Encouraging Diversity Goes Bad
- April 9** **Douglas Patey**, English Dept., Smith College
'Let Nature Never Be Forgotten': the Eighteenth-Century English Landscape Garden
- April 16** **Amy Brown**, Ph.D. candidate in planning and design, M.I.T., and Smith alumna
Nature in the City/the City in Nature
- April 23** **Dean Cardasis**, Dept. of Landscape Architecture and Regional Planning, UMass.
Maverick Impossible: James Rose and the Modern American Garden
- April 30** **John Burk**, Biology Dept., Smith College
The Campus as a Teaching Landscape



Spring Bulb Show

**Friday
March 2**
7:00 pm
Wright Hall
Auditorium

Bulb Show Opening Lecture

The Architecture of the Lyman Conservatory: Past, Present, and Future

Bryan Irwin, Associate at Perry Dean Rogers & Partners, the architecture firm working on the Lyman Conservatory renovation, will trace the development of the Smith College greenhouses, some of the issues involved with their restoration, as well as the process of developing the current design. This will be the first public presentation of the new design. Bryan will discuss current trends in glasshouse design and show slides of other exciting glasshouse projects around the world. The presentation will be followed by a reception and preview of the Bulb Show in the illuminated Lyman Conservatory.

**Saturday
March 3
through
Sunday
March 18**
10:00 am –
4:00 pm
Lyman
Conservatory

Spring Bulb Show

A spectacular array of forced bulbs that ordinarily bloom at different times provide an early glimpse of spring. It is a rare opportunity to see crocus, hyacinths, narcissi, irises, lilies, and tulips all flowering at the same time. The Spring Bulb Show is a long-standing tradition of the Botanic Garden and

March 3–18
9–10:00 am

Members-only hours at the Bulb Show
for Members of the Friends of the Botanic Garden.

**Fridays
March 9 &
March 16**
6–9:00 pm

Special Evening Illumination of the Bulb Show
Open to the general public.

Bill Campbell Video Presentation

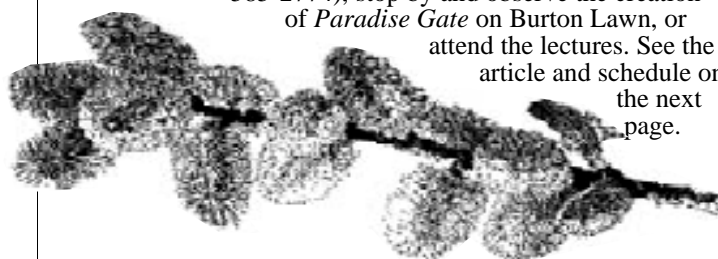
**Wednesday
March 28**
5:00 pm
Seelye 106

A Horticultural History of Smith College, a slide show narrated by Bill Campbell, on the occasion of the Centennial of the College in 1975. (See the article on page 8.)

Patrick Dougherty

April 1–24

We have scheduled a series of events surrounding Patrick Dougherty's residency and installation. Volunteer to help collect saplings (call Ann Mayo at the Museum at 585-2774), stop by and observe the creation of *Paradise Gate* on Burton Lawn, or attend the lectures. See the article and schedule on the next page.



Paradise Gate: An Installation


by Patrick Dougherty

During the month of April the landscape artist and sculptor Patrick T. Dougherty is returning to the Smith College campus after a decade to construct one of his site-specific sculptures of woven saplings and twigs on Burton Lawn. In his 1991–92 exhibition in the Smith College Museum of Art entitled *Portals, Pivots and Perspectives*, he drew visitors into free-form, swirling organic shelters that emulated such primitive habitats as gigantic bird nests or beaver dams. Since then, Dougherty has traveled the world enhancing public and private lands with an ephemeral art form that equally engages architecture and the natural environment.

Based on memories and perceptions from his North Carolina boyhood, Dougherty has fashioned an art that combines the complex crisscrossing patterns of bare tree branches in a winter forest with the makeshift forts and tree houses where he took refuge in the backyard. He discovered early on what he calls “the solace of hidden places.” In recent years, he has related these images to garden follies, the architectural fantasies, often based on classical motifs, that offered shelter in eighteenth-century European landscape gardens. Like those miniaturized structures that created a seductive illusion of reality, Dougherty's towers and castles of interlaced branches also suggest secret enclosures.

Built in view of the college's balloon-shaped Victorian conservatory, Dougherty's architectural folly for Smith will be called *Paradise Gate*, implying its symbolic function as a threshold to the larger landscape of Paradise Pond beyond. The title also evokes the college's own ceremonial gateway, the Greccourt Gates in front of College Hall. These gates are a reconstruction of the decorative gates at the Chateau de Robécourt in Grécourt, France, where a relief unit of Smith College alumnae was stationed during World War I. As a feature in the landscape, *Paradise Gate* will blend with the pastoral aesthetic of Frederick Law Olmsted's 1890s campus plan that was based on the eighteenth-century pleasure gardens he visited in England.

As he takes up residence from place to place, Patrick Dougherty has become somewhat of an itinerant folk hero in the American tradition of Johnny Appleseed and Paul Bunyan. Except for an occasional weekend retreat or a few weeks between commissions at his self-built log cabin in the North Carolina woodlands, the artist is on location first collecting branches and then manipulating them into sculptural forms. The sense of community and verbal exchange that revolves around his work has become an important aspect of his art.

He welcomes co-workers in the collecting and building process. In his search for the preferred materials of willow, maple, elm, and gum with the required flexibility, he scours the surrounding countryside along power lines and ditch banks where maintenance calls for the cutting down of trash trees. Once the wood is assembled and the leaves stripped, Dougherty regards the handling of each branch or twig as it tangles or snags into a locked position in terms of “a line at a time” drawing convention. He uses cross-hatching techniques and raking diagonals to build up volumes similar to those in a drawing, say, by Seurat. Slowly as his sculptures take form, they develop a magical aura that is personalized to the memories and associations of each viewer who inhabits them in the imagination. 

Paula Deitz

Paula Deitz '59 is the editor of the *Hudson Review* and co-founder of the Friends of the Botanic Garden



Natural Selection, Copenhagen Botanical Garden, 1996

Schedule of Events

April 9–22

McConnell Hall Foyer

Reflections on Paradise Gate

A display of student artwork and photos of other installations by Patrick Dougherty.

Tuesday, April 10

7:30 p.m., McConnell Hall Auditorium

Primitive Ways in an Accelerated World

Patrick Dougherty discusses the role and impact of his work in contemporary society. Reception following.

Sunday, April 22, 2001

2–3:30 p.m., McConnell Hall Foyer

Members Reception and Preview

(Watch the mail for your invitation)

A brief presentation on the making of *Paradise Gate* by Patrick Dougherty, who will also lead a tour of the installation at 3 p.m., weather permitting. ~ All ages welcome! ~ Refreshments ~ Rain or shine.

3:30 p.m., McConnell Hall Foyer

Public Opening of *Paradise Gate* with the artist.

All ages welcome! ~ Rain or shine.

Tuesday, April 24

7:30 p.m., McConnell Hall Auditorium

Villas and Gardens, Surprises and Follies in Europe, ca. 1550–1800

John Moore, Associate Professor of Art, Smith College, discusses the garden structures that form the historical precedent to Dougherty's playful installations.

This installation is a collaboration between
The Botanic Garden and
The Smith College Museum of Art.

Botanic Garden News

The Botanic Garden of Smith College
Northampton, MA 01063



Margaret P. Holden 1991

You are invited to join

The Friends of the Botanic Garden of Smith College

ALL MEMBERS RECEIVE:

NEW BENEFIT Members-only hours at the annual Spring Bulb Show

- ◆ 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
- ◆ Invitations to Botanic Garden symposia

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

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|---|---|
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| <input type="checkbox"/> Benefactor \$500 | <input type="checkbox"/> Individual \$25 |
| <input type="checkbox"/> Sustaining \$250 | <input type="checkbox"/> Student \$10 |
| <input type="checkbox"/> Contributing \$100 | |

Name: _____

Class Year (alumnae): _____

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Enclosed is my check to The Friends of the Botanic Garden of Smith College in the amount of \$_____.

All contributions are tax-deductible. Send to: Friends of the Botanic Garden of Smith College, Northampton, MA 01063.