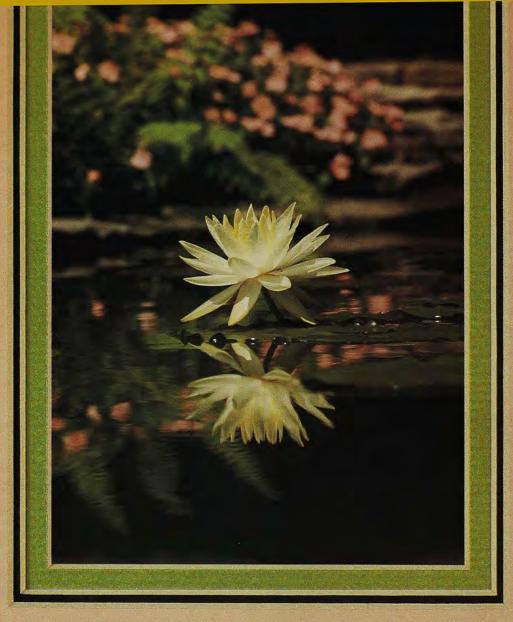
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VOLUME 68 NUMBER 2

Contents



One of the many cultivars recommended by the American Daffodil Society, 'Actaea' sports a large, white perianth and a sweet fragrance. Beginning on page 18, four plant societies report on awardwinning cultivars, new introductions, and old classics for you to try in your own garden. Photo by Pamela Harper.

President's Dage: Spring Events	2
President's Page: Spring Events by Carolyn Marsh Lindsay	4
The Design Page: Special Spaces by Ann Reilly	4
Horticulture and History: Liberty Hyde Bailey by Frederick McGourty	8
Native Americans: Bog Beauties by Thomas J. Murn	10
The Other Side of the Cascades by Ruby Weinberg	14
Proven Performers – Plant Societies Name the Best	
Rhododendrons by Harold E. Greer	19
Daffodils by Leslie Anderson	21
Irises by Audrey Machulak	23
Daylilies by Ainie Busse	26
Trials of a Zone 5 Gardener with a Zone 10 Dream by Peter Loewer	29
Pronunciation Guide	32
Book Reviews	34
Sources	37
Classifieds	40
Letters	44

On the Cover: Majestic conifers, colorful wildflowers, and craggy rocks create spectacular scenes at the Ohme Gardens in Washington. Set on an eastern foothill of the Cascades, this lush, green garden was once a barren, rocky bluff. Turn to page 14 and discover how the Ohme family completed this difficult but beautiful transformation. Photo courtesy of Ohme Gardens.

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Spring Events

pring is a precious time in itself, but to visit Colonial Williamsburg in the spring is truly one of life's treasured experiences. The Annual Spring Gardening Symposium, April 9-12, offers this opportunity. For more than twenty-five years, the American Horticultural Society and Colonial Williamsburg have co-sponsored this meeting, which occupies a special place in American horticulture for all of us who love to garden.

Everyone is welcome! It makes no difference if your whole lifetime has been spent in horticulture, if you only plant a few daffodils, or just like to smell the roses! We've been planning since last May to make sure that this program is horticulturally sound and interesting to all gardeners. Special opportunities include coffee with the speakers and staff of Colonial Williamsburg, an afternoon in the gardens with staff gardeners present to answer questions, plus a trip to the Norfolk Botanical Garden. And, there is a perfectly beautiful golf course for non-horticultural spouses.

Decca Frackleton, an enthusiastic member since 1956, had been asking us why we have never planned an event in her town—historic Fredericksburg, Virginia. So we called her up and asked her to plan a post-symposium garden tour. Her first list of things to see was so long that we would have had to stay a month to see it all! But she has narrowed it down to an exciting three days, ending in the Washington area with a luncheon at River Farm—your River Farm, home of the American Horticultural Society. The Fredericksburg tour dates are April 13-15, 1989.

An Additional Opportunity

A two-day symposium, "Fletcher Steele, Gardenmaker," will be held April 29 and 30 in Rochester, New York, and will be sponsored by the American Horticultural Society, the Memorial Art Gallery of Rochester, and the Allyn's Creek Garden Club of Rochester.

Steele is considered one of the most prominent and original landscape architects of the first half of this century—the link between Beaux Arts formalism and modern landscape design. You recently read about his work in the October issue of *American Horticulturist*.

The symposium is the first ever to focus exclusively on Fletcher Steele—his design work, his stylistic development, and his broad theoretical contributions to the profession of landscape architecture. Morning lectures and a panel discussion on Saturday and Sunday, April 29 and 30, will be followed by tours of several Rochester gardens designed by Steele, including the town garden of Charlotte Whitney Allen and the country estate of Nancy Turner.

Symposium participants will be invited to a private opening of the exhibition, "The Gardens of Fletcher Steele," at Memorial Art Gallery Saturday. The prepublication edition of the new Steele biography by Robin Karson, *Fletcher Steele: An Account of the Gardenmaker's Life* (Sagapress in collaboration with Henry N. Abrams), will be available to who all attend.

Look for the ads inside this publication to see the detailed list of speakers and events, then write for further information or call the American Horticultural Society at 1-800-777-7931. Each symposium has limited capacity, so act now to join us for these fabulous 1989 spring events.

These symposia are part of the American Horticultural Society's efforts to bring the finest gardening experiences to our membership. See you there!

Caroly march hindsay



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THE DESIGN PAGE

Special Spaces

First ven though one might consider the entire landscape of a home as "special," there is often one piece of the landscape that is a favorite. It might be a spot where a problem was pleasingly solved, or a place with a private garden. These special spaces in a landscape can be anywhere—front, back or tucked away into a corner.

Entryways are always special. They welcome visitors, setting the tone for the house and the rest of the garden, but many that you see can be improved. One Maryland house, for instance, sat on top of a hill; the lawn extended to the foundation planting in a very traditional manner, and there was nothing special about it. A landscaper did several things to correct this. First, he brought in extra soil to build a level area immediately in front of the house. A wide walkway was added across the front from the driveway to the door, and additional plants were added on the outside of the walkway. The result was a gracious entryway that, although simple, provided seasonal color and softened the front of the house.

The walkway that led across the front continued around the side to the back yard garden and pool, giving a sense of important continuity. The addition of a lowgrowing hedge of yew on the outside of the walkway, enhanced with spring bulbs and summer annuals, made all the difference in the world.

Make the entryway to your house an inviting one. Curved walkways work well with many architectural styles and are successfully softened with low-growing plants; dooryard garden plantings do not need to be symmetrical except in the most formal settings.

Outdoor living areas are also special spaces. It is here that family and friends gather to relax, play or enjoy a meal. Great care should be taken in creating such an environment; privacy is of primary consideration. Where these areas are in view of the street or neighbors, living fences of evergreens create a more natural feeling than wooden fences.

An outdoor living area can be designed



Proper landscaping can welcome visitors, set a mood, create the illusion of distance or offer a private baven.

to be either an extension of the home or a place separate from it that stands on its own. That choice is up to you, and proper landscaping will help you to enhance that choice. There are instances where the homeowner might want the outdoor living area to be apart from the house, yet space is so tight that this appears to be impossible. Here, proper landscaping can achieve the effect of distance and separation. Create a foil between the house and the patio, deck or pool by planting plants large enough to hide the area. Pathways should lead around the planting so that the entrance into this area is a surprise. It is the unexpected that makes it special.

A landscaper in Maryland made effective use of the space in a very small back yard by raising the deck several steps off the ground. Isolating the deck in this way tells you it is a special place and also adds height to an otherwise flat and uninteresting piece of property. The design was further enhanced by planter boxes built right into the deck, which create a feeling of belonging to the rest of the garden while still defining the deck's special use.

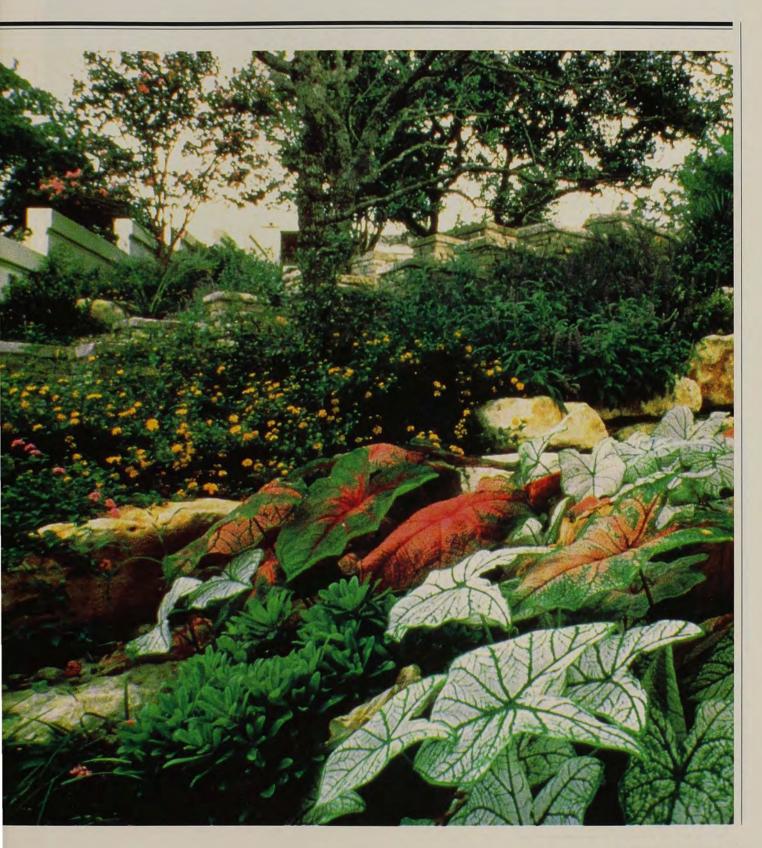
In Atlanta, Georgia, a landscaper was commended for placing a deck away from the house in the midst of a setting of tall trees. Even though a straight line is the shortest distance between two points, it is often not the most effective landscape tool, so the steps turn several times between the house and the deck, creating a walk-inthe-woods feeling.

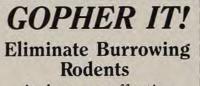
Enclosing an outdoor living area with an overhead trellis is another way to make it look special while also creating needed shade. This technique can be used whether the patio or deck is attached to the house or off by itself. Attaching the latticework to the house shows that the patio or deck is an extension of the home, while removing it from the house lets you know it is a special place to go.

There is probably no one technique more effective in creating a special place than the use of water. If water does not exist on the property, it is easy to build a waterfall and pond. The sound of running water is very relaxing, very cooling, very special. The waterfall gives height to the garden, separating one area from another, or it can add interest to an otherwise bland corner. A small footbridge can be used as a decorative or a functional feature. This is an excellent place to grow ferns to impart a natural, woodland atmosphere.

The proper use of garden benches announces a special place. Set them where the garden can be viewed best; use them as a focal point. In a Georgia garden, a

ABOVE: A pool surrounded by boulders and small plants results in a soothing, serene garden effect. RIGHT: Steps flanked with ground covers and colorful caladiums enhance a change of grade.





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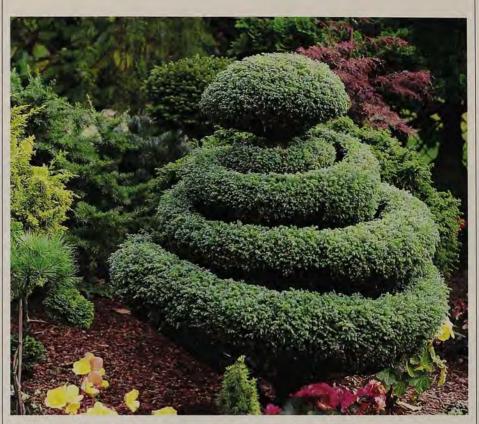
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THE DESIGN PAGE



Trained evergreens and topiary create unique statements in the landscape.

bench under a vine-covered canopy not only offers a shady place to sit, but stands out as a very special part of the garden. In a small New York City back yard, an arbor leads into the garden, but this particular arbor is different — it is very wide and within it are two built-in benches.

Small areas should not be thought of as problem areas, but rather as areas to be made special. Think of them as quiet gardens in which to rest or read, with garden benches of an appropriate style. Use touches of color in plantings, limiting choices to white, blue, and violet to make the area seem larger and to give it a soothing feeling.

Small areas between the house and the property line are often overlooked as a place in the garden that can be special. Use the narrowness of these to your advantage by creating the feeling that they are leading to something more special beyond. Select an attractive paving material and line both sides of the pathway with colorful, lowgrowing plants. Tall plants would not be appropriate in most cases as they would need constant attention to keep them clipped and out of the way of passersby.

Changes of grade on the property can be made special by the use of steps and walls. In Illinois, a landscaper placed a series of steps and platforms from the driveway to the house instead of using steps only. Planters were built into the platforms to add color and interest. The steps and platforms took several turns, which made the area even more appealing.

Steps should be designed as a part of the landscape and not treated merely as a functional necessity. If edged with vertical pieces of wood, Belgian block, or plants, they become an integral part of the entire garden design. Walls can be topped with graceful, cascading plants to soften their lines. If the material from which the wall is made matches either the paving or the house, it will tie the garden together even more effectively.

In Georgia, a small back yard, virtually unusable because of a steep slope, became a very special place by contouring and constructing a retaining wall. The lower level was paved in brick to match the wall and a hot tub was installed. The upper level could be used for seating and dining.

A change in grade is also ideal for a rock garden. The problem often encountered in designing rock gardens is that the result can look contrived rather than natural. But take a lesson from nature: plants in natural rock gardens grow where the rocks protect them from the elements or serve as a structure on which to grow. Tuck some plants in at the base of the rocks; allow others, such as cotoneaster, to cascade over the rocks for a natural look.

Garden sculpture and statuary are eyecatching; the smallest garden can use a statue, sundial or piece of stonework as an important focal point. Be sure it is in proportion to the size of the garden and of a color that enhances the planting rather than becoming a distraction.

An unusual plant can be used in the landscape to create a special effect. This can be a plant with a unique growth habit, such as the monkey-puzzle tree, or a plant that has been pruned into an unusual shape. You can train the latter yourself. For an instant effect, purchase one of the many now available at nurseries. Be restrained in this type of planting, though; where one is special, an entire garden of them can be too busy.

Ornamental grasses are becoming popular as landscape plants, and a small section of the garden can be devoted to them, or they can be integrated into the garden along with other plants. Ornamental grasses are attractive near natural or man-made pools and other water features.

The use of island beds is effective, especially on large properties. They are a device to make the garden feel more intimate while not completely blocking the view beyond. They can also be used to separate active and passive use areas of the garden. Because they are free-standing, they must be designed to be attractive from all sides. Such a bed would also be an ideal spot for a magnificent specimen plant. Following the same idea is the peninsula bed, which hides the rear entrance of the house from the lawn but still leaves it accessible.

Whether you are designing a new landscape or looking for ways to renovate your existing one, use your imagination and creativity, and adopt the examples of professionals. The result—garden spaces that stand out from the crowd.

-Ann Reilly

Ann Reilly is a free-lance writer and photographer.

The sites described in the article were chosen for national recognition through the National Landscape Association's (NLA) annual Residential Landscape Award Program. For the past eighteen years, the NLA, headquartered in Washington, D.C., has been honoring outstanding residential landscape projects designed and executed by professionals.



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Liberty Hyde Bailey

A merica has had its share of outstanding horticulturists, especially in the formative years of the nineteenth and early twentieth centuries, but many illustrious names have faded with time—the Princes, Wilders, Parsons, Sargents, Ellwangers, and Barrys, remembered mainly by those who haunt the antiquarian bookstores in search of old treasures. Gardeners don't pay any more attention to the past than a twelve-yearold of the 1980s does to Pogo. Gardening is anticipation, and one's bent is usually forward.

However, the name of one man keeps recurring-Liberty Hyde Bailey, who lived from 1858 to 1954. Not Bailey (except to his colleagues), nor L.H. Bailey, for to the gardening public he was Liberty Hyde Bailey-much as baseball fans of his day remember the commissioner for that sport was named Kenesaw Mountain Landis. As a greenhorn editor at Brooklyn Botanic Garden, my first secretary was Constance Elson, who had in earlier years typed her share of letters to L.H.B. for BBG horticulturist Montague Free and director George Avery. When I asked if she had actually met Bailey, she sweetly smiled, "Oh, you mean 'Old Free Skin'? Of course." Veteran secretaries and iconoclastic students don't let reverence pass by lightly.

Bailey illuminated the American garden scene as have few men. Author of more than sixty-seven books, and editor-in-chief of the massive and still useful Cyclopedia of American Horticulture (four volumes, 1900-1902, revised later in separate sixand three-volume editions), Bailey combined the best qualities of botanist and horticulturist at a time when plant scholars often had deep contempt for the practical benefits of botanical science. Bailey's horticultural-botanical work will undoubtedly be his lasting testimonial, and it is appropriate that successors carry on his work at the Hortorium bearing his name at Cornell University in Ithaca, New York. Hortorium is a word coined by Bailey to refer to a herbarium that includes plants of garden as well as of natural origin.

Less well known are the solid contri-



"My garden is small in the midst of a city, yet I bave grown as many as eight bundred different things in it in a single year."

Liberty Hyde Bailey

butions Bailey (who had been reared on a farm in southern Michigan) made to improve the lot of rural America at the turn of this century. It started when, after a short apprenticeship sorting herbarium specimens for Asa Gray at Harvard University, he returned in 1885 to Michigan Agricultural College, to serve as professor of horticulture and landscape design. Gray had misgivings about Bailey pursuing a horticultural rather than a scientific career, and botanist John Merle Coulter summed up the feeling of the profession: "You will never be heard from again."

As professor of horticulture (1889) and later as dean of the College of Agriculture at Cornell (1903-1913), Bailey was a pioneer and chief spokesman in the extension service program, a uniquely American institution too often taken for granted in our materially comfortable times. Since farmers often could not go to college, Bailey, in effect, brought college to them through a multitude of public information bulletins issued by his office. In addition, Bailey wrote a number of highly readable, lucid books on such directly useful subjects as vegetable and apple growing, grape culture, and pruning-all aimed toward the small rural landowner. It might be pointed out here that Bailey's other encyclopedia, Cyclopedia of American Agriculture (four volumes, 1917) was a standard reference work in many country households.

Bailey was a superb organizer and with the aid of foresight and several desks, was able to manage a host of difficult projects at one time, even serving for awhile as editor of *Country Life in America*, the country's first broad-paged, mass market gardening magazine.

The Cyclopedia of American Horticulture had over 400 contributors, all experts in their respective fields, and it represents the pinnacle horticultural work of this century. Bailey as editor would not take "no" for an answer. For example, the authority whom he wanted to do a piece on the insectivorous plant genus Nepenthes initially declined the invitation. Bailey made up a false galley proof with deliberate errors about this plant group and sent it to the expert for comments. Bailey then took his comments and formed them as the entry.

Despite his many administrative tasks, Bailey was a familiar figure in the Grange halls of New York and other states. His men sometimes journeyed in pairs to nearby farms to personally answer inquiries that had come by letter. While one worked the startled farmer's plow, so that the farmer might not lose precious work time, the other would straighten out the farmer's particular problem. Bailey himself often turned up to help farmers who were seeking information. In the early days of extension education, farmers frequently distrusted plant scientists, and Bailey, by such acts, helped break down this barrier to rural progress.

The stories about Bailey are legion, for he had a long, active life and a flair for center stage, albeit with many people on the stage. As a professor he would frequently enter a classroom talking and finish up his lecture walking out the door. Often he would lecture standing sideways to the class and looking out a window, then startle a student by calling on him by name to answer a question. The drama extended to the hospital room. In 1950, George Avery, who served two times as president of the Botanical Society of America, visited Bailey several times in Beekman Hospital in New York. Bailey was convalescing from a broken thighbone caused by being hustled through a revolving door. He was then 91, and irritated because his upcoming plant-hunting trip to Africa had to be canceled. With eyes closed, he would talk at length about some past event, such as being nearly mugged in Seoul, Korea, or almost drowned by a tidal wave in Trinidad while he was looking for new palms. Then with one eye he would peek to see whether Avery was still listening. Though he lived a few more years, Bailey never recovered fully from the accident with the door.

People who accomplish a great deal are usually very disciplined. In his later years Bailey would recount that in fact he had developed a life plan from early on. It was divided into three parts: the first twentyfive years were to be devoted to training, the second twenty-five to service, and the final twenty-five to pleasurable pursuits. He didn't count on the twenty-year bonus, but it was fruitfully spent studying particularly difficult plant groups, including the palms, brambles, and even the *Carex* genus.

Bailey put in long, exhausting hours when he was deep into a project, then he would collapse, sometimes for days at a time. On one occasion, lying in bed, he was asked by his young daughter Sally what ailed him. In good Latin he snappishly answered, "Delirium tremens." Shortly thereafter the doorbell rang, and a man asked to see Bailey. Sally told him that he couldn't because her father was upstairs in bed with delirium tremens. As it turned out, Ethel Zoe Bailey (Bailey's other daughter) told me, the caller was the president of Cornell University—and Bailey's boss—Jacob Gould Schurman.

Would you like more information on Bailey? You will probably have to get the book from an antiquarian book dealer because it is out of print, but Philip Dorf's *Liberty Hyde Bailey: An Informal Biography* (Cornell University Press, Ithaca, New York, 1956) is very enjoyable reading.

-Frederick McGourty

Frederick McGourty is co-owner of Hillside Gardens in Norfolk, Connecticut, and has written frequently for *American Horticulturist*.

Honoring Service and Spirit

n 1958, the Council of the American Horticultural Society voted to name its highest annual award in honor of Liberty Hyde Bailey, whose contributions to American gardening exemplify its aim of promoting excellence in horticulture, and who served as keynote speaker at the first American Horticultural Congress in 1946.

Bailey's long, productive life spanned the last half of



the nineteenth century and the first half of the twentieth—he worked another thirty-six years after his "retirement" at age fifty-five. His contributions bridged the gaps between the science of botany and the practical aims of horticulture, and between the university classroom and the isolated small farmer struggling to succeed with his crops. Thus the recipient of the Liberty Hyde Bailey Medal must exhibit not only achievement, but also service and a pioneering spirit.

At its Annual Meeting July 26-29, the Society will once again honor Liberty Hyde Bailey in a special observance at which some of those who have measured up to this high standard will offer their thoughts on Bailey's life and the state of the art and science to which he was devoted. The past award winners will speak on Saturday morning, July 29. At a banquet Saturday evening, the tradition will be carried on with the presentation of the thirtieth Liberty Hyde Bailey Medal. NATIVE AMERICANS





Plants are adventurers: they grow where they can. Weeds grow fastest and farthest, making their homes in railroad yards, croplands, lawns—anywhere they can grab a foothold. Native plants require more "settled" conditions. Woodland plants love shade and moisture, and prairie plants need full sun and rich soil. Wetland plants are even more particular; they require wet footing and are able to cope only with certain kinds of nutrients.

Of the types of wetlands, bogs are perhaps the most specialized in their demands. Unlike their cousins in sedge meadows, tidal flats, and cattail marshes, bog plants live only in acidic lowlands—places where nitrogen is as scarce as a warm day in winter.

Acidic lowlands in the United States are generally confined to the North and East. Plants that grow in these lowlands can sometimes be found as far south as Georgia, where cold and wet conditions occur



Thomas J. Murn

in the mountain zones. In general, bogs will not be found south of a line that runs from Chicago to Philadelphia. Close relatives of the bog plants are found in the arctic tundra; our southern bogs are only miniature examples of the vast bog areas of the North.

Bog vegetation has evolved a unique system of survival strategies to deal with cold, acidic, nutrient-poor conditions. Roots of bog trees, shrubs, and plants generally grow horizontally, to take advantage of the small aerobic zone of the ubiquitous sphagnum moss hummocks. The plants make do with limited amounts of nitrogen and calcium, or supplement their diet, as do the insectivorous pitcher plants, bladderworts, and sundews.

A trip into a bog reveals both the hardships and the beauties of these common but little-understood landscape plants. While mosquitoes buzz and boots sink in the hollows between hummocks, a fascinating floral display greets the May visitor. Members of Ericaceae or the heath family are the first to bloom, often while the mat of sphagnum moss under them is still frozen.

Members of Ericaceae are well-known in other parts of the world; the Scottish heather belongs to Ericaceae. The cran-



Al Bussewitz: PHOTO/NATS

LEFT, ABOVE: Calla lily. LEFT, BELOW: Pink lady's-slipper. ABOVE: Steeplebush.

berry—one of a handful of fruits native to the North American continent—is another family member. Many plants in the heath family are well adapted to life in a bog, and in spring the fragrant blossoms of the leatherleaf vie for attention with the intense pinks of bog laurel and dainty displays of bog rosemary (Andromeda glaucophylla).

Sprinkled in between these plants are ground layer plants such as the native calla lily (*Calla palustris*), several types of ladyslipper orchids, and the bogbean gentian (*Menyanthes trifoliata*). A few grasses and sedges also manage to thrive in the difficult conditions; most notable among these are the pincushion tufts of cottongrass (*Eriophorum spissum*). In the harsh environment of a bog, the fanciful puffs of the white inflorescence of cottongrass is an enchanting contrast. The visitor to such places in the spring returns tired, but has viewed plants seen only by determined naturalists.

Bog plants would thus seem to be poor candidates for home gardening. Creating a cold, acidic, lumpy wetland in a back yard might challenge the most exacting of designers. But there are ways to fulfill the needs of these discriminating plants, and there are incentives to try. Bog plants will present some of the most aesthetic and unusual displays of frond and flower found anywhere.

I had worked for years with bog vegetation, and was constantly surprised by the beauty and hardiness of the plant life. The plants obviously would not survive translocation to any conditions different from their own, even if I could justify digging in any natural area, which I could not. However, the digging of a water channel in a bog that I had frequently visited provided the opportunity I needed to obtain some plants; the excavated wet peat spread out beside the channel sprouted pioneering bog plants. These plants would apparently sprout from seeds or bits of roots when conditions were right.

I had also become interested in phenology over the years and along with my wife had kept careful records of flowering Wilt-Pruf is the proven way to reduce moisture loss and drying out when plants are under water stress.



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NATIVE AMERICANS

dates in the woodlands and prairies around our house in southern Wisconsin. I longed to possess some of the strange and beautiful bog plants. Perhaps, after all, bog conditions *could* be duplicated successfully. I determined to try.

I dug a deep hole in our side yard and lined it with a double layer of heavy plastic tarp. Light-to-moderate shade conditions made this area of the yard seem the most appropriate for a wetland. I used lannonstone, which is used extensively for landscaping in Wisconsin, around the edge of the hole to hold down the tarp and provide a separation layer to set it off from the lawn and flower beds.

Wet peat and roots from the sprouted plants on the peat-dredge berm would need to be put in next. No aerobic exercise, I believe, could match the exertion of digging and hauling bushel baskets of wet peat on a warm and sunny spring day; peat can absorb up to 800 percent of its dry weight in water content.

The next trick would be to duplicate the hummock-hollow conditions with which the bog plants are comfortable. I built up some hummocks with peat moss, and covered them with some live sphagnum moss. The rootstock went in next: a few of the hardier members of Ericaceae, some cottongrass, sedges, and cranberry runners.

I watered, and waited. A pH meter would have been useful but, had the pH started to creep towards 7 (bog chemistry normally tilts pH to points under 4), would I have added vinegar? diluted battery acid? pine needles? Actually, sphagnum moss has the ability to generate its own acidity, and the tap water and rainwater entering the bog garden didn't seem to affect the plants. Most grew willingly, and the steeplebush grew best of all. This plant (Spiraea tomentosa) is a relative of the common flowering bushes of the same genus. Steeplebush flowers in panicles of small flowers at the end of the stems and in a color somewhere between pink and purple.

Bogs are a type of wetland, and wetlands everywhere continue to be threatened by filling, dredging, and other destructive activities. In many places, remnant bogs are the last stands, literally, for many peculiar plants. Digging in such areas would not be appropriate; yet there is much to learn from bog flora, not the least of which, considering the sour rains that scientists tell us are descending from the skies, would be their ability to deal with high soil and water acidity. Fortunately, several nurseries are beginning to experiment with the germination and propagation of these choosy but beautiful plants. The owner of one, JoAnn Gillespie, is leading a project to propagate pitcher plants. She says that "when we first set out, we found virtually no information that could help us. We had to plant almost everything from scratch." Undeterred, the nursery is collecting botanical expertise for the specific purpose of introducing as many people as possible to the wonders of bog plants, both in pool-gardens and in specialized pots.

Other nurseries offer "bog plants," though some plants thus designated would be more comfortable in a deep marsh or alkaline sedge meadow than in a true northern bog. Gillespie's experiences confirm my own suspicions-bog plants will do well under appropriate growing conditions. There are advantages in using peat as a substrate; it is best to think of peat as a "sponge," which neither takes up nor gives off water unless squeezed. My sideyard bog garden has survived droughts that were due as much to the soggy characteristics of the peat as to my sporadic watering. But there were other dangers. I had purchased some properly labeled ladyslipper orchid plants from a commercial supplier. The orchids seemed to prosper in their native peat during the first growing season, yet disappeared by the second season. The cause was not a variation in some microclimate condition; the roots were eaten by voles.

I look forward to stepping out my door this spring and seeing the small white blossoms of the leatherleaf, although there is nothing like a long trudge through the wetlands in the cold to find them where they like to grow.

I hope in future years to add marsh ferns (Dryopteris spp.), spike rushes, bluejoints, and grasses (Glyceria spp.), and be amply rewarded by their textures and shades of green. And I will remember the fact that there was no need for me to haul bushels of wet peat dredge when I could have gone to the nearest garden center for large containers of dried and immeasurably lighter peat moss for a decent substrate. There is no rule that a bog garden has to thoroughly exhaust before it can abundantly reward. —Thomas J. Murn

Thomas J. Murn is an author and environmental advocate who lives in Belleville, Wisconsin.

43rd Williamsburg GARDEN SYMPOSIUM

April 9-12, 1989

C olonial Williamsburg Foundation and the American Horticultural Society invite you to come to Williamsburg amid the glory of spring for America's oldest and most prestigious annual gathering of garden enthusiasts.

Fourteen authorities from around the United States will discuss the theme, Winter Dreams; Spring Delights, through practical and entertaining presentations, tours, exhibits, and clinics. The rhododendron will be the featured flower, Cincinnati the honored city, with a special program on its horticultural accomplishments. An optional tour will be offered to see the azaleas at the Norfolk Botanical Gardens.

Topping it all off will be an optional three-day post-Symposium trip, April 13-15, to private and public gardens on Virginia's Northern Neck arranged for the Symposium by the American Horticultural Society.

Speakers in order of appearance are:

Marlene Holwadel, Cincinnati, Ohio, Park Commission, "Cincinnati's Gardens: People Make the Difference"

Allen Lacy, Linwood, New Jersey, garden writer, "A Gardener's Winter Dream"



M. Kent Brinkley, Colonial Williamsburg landscape architect, and Marley Brown III, Colonial Williamsburg director of archaeological research, "Lessons from Colonial Williamsburg Gardens: Recreating the Shields Tavern Gardens" Polly Pierce, trustee

and past president of the New England Wildflower Society, "Great American Gardens: Garden in the Woods"

David Leach, Madison, Ohio, plant hybridizer, "Tomorrow's Rhododendrons"

J.C. Raulston, director of the North Carolina

(please print) Williamsburg Garden Symposium Symposium Registrar Box C Williamsburg, VA 23187 Name ______ Address: ______ City: _____State ____Zip ____ State Arboretum in Raleigh, "Gardens for the Forgotten Season"

Harold H. Cooke, Runnemede, New Jersey, flower arranger and florist, "Flower Arranging in the American Style"

Don Shadow, Winchester, Tennessee, nurseryman, "New and Unusual Plants for the Spring Garden"

Cherie Kluesing, Boston, Massachusetts, landscape architect, "The Changing Image of Sculpture in the Garden"

Russell Morash, creator and executive producer of the weekly PBS television program, Victory Garden, on the fascinating story of Victory Garden and its impact on American gardeners.

Other specialists are Henry Marc Cathey, of the U.S. National Arboretum, Carolyn Marsh Lindsay and Frank L. Robinson of the American Horticultural Society, lecturer and writer Frederick McGourty, and the Colonial Williamsburg Horticultural staff.

Think Spring! Come to Williamsburg for the lovely blossoms and an opportunity to gather helpful hints about all four seasons. For a registration folder, please mail this coupon, or call 1-804-220-7255.

Sponsored by The Colonial Williamsburg Foundation in conjunction with the American Horticultural Society.

THE OTHER SIDE OF THE CASCADES

By Ruby Weinberg

The gardens of the Pacific Northwest are renowned for the profusion and diversity of both their native and ornamental plants; a temperate climate and abundant rainfall make this possible. On our first trip to the area, my husband and I planned a visit to the celebrated alpine gardens of Ruth, Carol, and Gordon Ohme near the town of Wenatchee in central Washington. As it is located only 138 miles east of Seattle, I assumed that we would find ourselves within that lush climate.

Before visiting the gardens, however, we planned to join a white water rafting expedition on one of the many rugged tributaries of the Columbia River. While arranging this by telephone from New Jersey, I inquired about a "rain check" should the weather that day prove inclement. Imagine my surprise at the reply: "No fear of rain. We get only nine inches of precip per year." The study of a topographical map revealed that after traveling east through the Cascade Mountains, one leaves behind the Pacific climate and enters Washington State's

The Ohme family turned an arid, rocky bluff into an alpine wonderland.

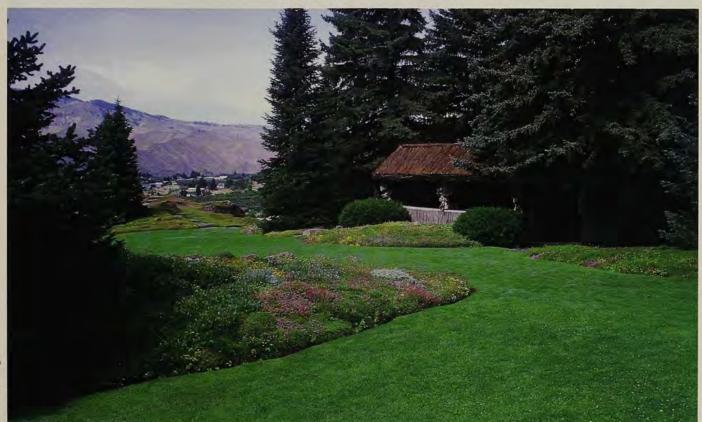
plateau of desert and scrubland. The Japanese current that tempers the coastal weather and the Pacific Ocean clouds that bathe the Far West are blocked from reaching the other side of the Cascades.

Further climatic data indicated that temperatures vary between winter lows of 0° to summer highs of 90° F. The growing season, only 180 days long, is far from a perfect garden paradise. A brochure from Ohme describes its site on an eastern foothill of the Cascades, but the gardens were actually created on a barren, desolate, sagebrush-strewn, rocky bluff.

Leaving the coast on a route called "The Cascades Loop," the traveler on its southern fork enters the heart of the mountains at Stevens Pass. From the car, every inch of the slopes seems green with conifers, but beyond the pass, the eastern slopes begin to change. They roll gently and thin to open forest. On this side of the Cascades, colonies of fast growing, moisturedemanding Douglas fir are replaced by shorter ponderosa pine. The latter is a conifer that will endure less moisture.

Leaving the high mountains, orchard country suddenly appears. Almost everywhere, plains and terraced hillsides are neatly planted with evenly spaced fruit trees. The rushing Skykomish River that follows the roadway is a clue to this abundance. Washington's waterways, especially the mighty Columbia River and its tributaries. crisscross a good part of the state. Agricultural bounty, as well as ornamental gardening on the eastern side of the Cascades, is the direct result of this prodigious water supply. In 1937, the first full-scale federal dam, Bonneville, provided farmers with usable river water. Under irrigation, the soils proved to be fertile, and coupled with plentiful sunshine, became productive. Spouting sprinkler heads along the route testify to the heavy use of this water.

LEFT: Like an impressionist painting, wildflowers add daubs of color amidst rocky bluffs and stately conifers. BELOW: A bend in the green lawn leads to a rustic shelter of red cedar bark.



Only seven miles north of Wenatchee is Rocky Reach, one of the many dams along the Columbia and other rivers. (Grand Coulee is the largest of these dams.) The lakes created by the dams provide hydroelectric power and irrigation for millions of acres. Giant pumps lift impounded lake water and start it flowing into countless miles of irrigation canals.

Ohme Gardens, as we discovered, would not exist without these irrigation canals and its own pump with a 130-foot lift. The gardens are now fitted with 150 sprinkler heads, used mostly at night, to distribute more than 100,000 gallons of water over its nine acres of alpine plantings. After being harnessed, the rivers could—and did—turn a desert into an oasis.

Upon entering the gardens on the top of the hill three miles north of Wenatchee, imagination allows one to visualize the setting as first seen fifty-seven years ago by Herman Ohme, father of the present owners. It was a treeless wasteland then, covered with basaltic outcrops. As a young man, Herman had migrated to the state of Washington from the flatlands of Illinois. As he worked on the plateaus learning the skills of an orchardist, he marveled at the majesty of the distant, snow-capped Cascade Mountains. On occasional weekend jaunts, he climbed the forested trails and enjoyed the spectacular scenery close at hand. Below, irrigation projects were beginning to quench the parched land to the east, and Herman was encouraged to buy forty acres of orchard land.

On an autumn day in 1929, Herman and his bride Ruth stood upon this highest point of their acreage with its breathtaking view. Why not, he mused, enhance the craggy bluff by creating an attractive rock garden?

It was a transformation of enormous magnitude. Herman and Ruth spent all their spare time first clearing away the weedy sagebrush, then plotting a circuitous course of steps and pathways in and around the boulder. These trails were outlined with small, bulky rocks, and from other areas the Ohmes brought in flat sedimentary rock that was carefully split into slabs with a sledge hammer, then fitted and cemented into place. They had only a mule and drag sled to help them carry their heavy loads up and down the hillsides.

Eventually the Ohmes drove out to the

high mountains to dig up an assortment of conifer seedlings to transplant onto their own foothill. With no truck available, they transported small quantities at a time in the back seat of their car. With a setup of hoses and sprinkler heads in place, the lifegiving water combined with the amazingly fertile soil to produce good growth. The evergreens became quickly established. Each small area was not completed until the slopes and ridges around them were planted with ground covers to prevent erosion and to beautify the whole. These mats spread profusely with such excellent drainage, and the orginal plants were then divided to convert new terrain into green and flowering knolls and basins.

This is no plantsman's garden;

simple flowers grow with abandon.

The Ohmes were fortunate in raising two sons who grew up participating in this venture. The younger son, Gordon, shared his family's passion and soon proved to be an agile worker. The expansion and maintenance of the gardens became an everincreasing responsibility. When he finished his schooling, Gordon worked full time on the project. In 1939 it was decided to gradually relinquish the orchards to tenant farmers and to open Ohme Gardens to the public.

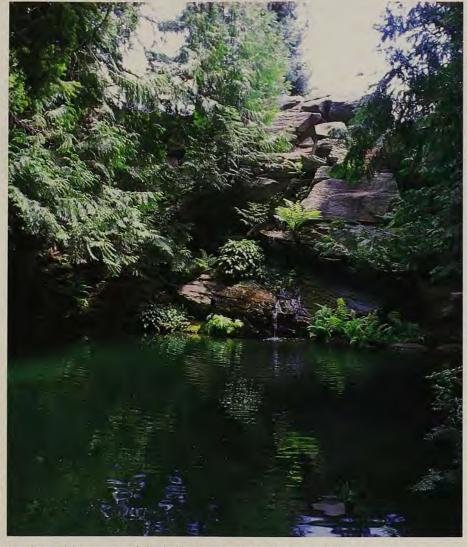
The basic garden construction was completed during Herman's first twenty years, but the work of creation continued until only recently. The garden area now encompasses nine acres. During this time, the Ohmes moved hundreds of tons of rock, planted over 1,000 conifers, introduced many kinds of ground covers, and dug endless ditches for concealing irrigation pipeline.

After forty-two years of heavy toil, Herman Ohme died, and Gordon took his place as head gardener. Herman's widow Ruth continues her interest in the gardens with Gordon and his wife Carol sharing the workload. It has always been a family affair with little outside help. As youngsters, the third generation—Gordon and Carol's sons—assisted their parents, but the young men have now moved on to other occupations.

From the garden gate, the visitor peers out at a lush plain of Kentucky bluegrass backed by a rocky mound where brilliant yellow violas gleam in the sunshine. Behind this mound are conifers, some tall and dense, others low and narrow. Across the lawn scamper Golden Mantel squirrelsfurry, striped animals much like chipmunks. The squirrels delight in human companionship and, with little chirping sounds, will feed from the outstretched hand. But it is the seed from the conifer cones that brings them to this garden. They store it in cheek pouches, eating some, and carrying the rest away to shallow burrows. Stellar blue jays and other birds enliven the scene. According to Gordon, deer come to browse and an occasional coyote slithers along the ridges—all unwelcome guests because of the damage they do to plants.

he paved rock path leads on to other levels where jade green lawns are surrounded by boulder formations and beds of creeping, sprawling ground covers. Here and there, an individual specimen adds a splash of color; more often, two or three kinds mingle in competition. This is no plantsman's garden of highly cultivated perennials or even rare alpine species. Rather, the Ohmes prefer simple flowers that grow with abandon. The effect is like an impressionist painting-daubs of color are more important than studied detail. It is all so natural that the viewer can scarcely envision man working here mowing lawns, irrigating, fertilizing, raking, and pruning.

The most vibrant color begins in mid-April when rose-colored moss pinks (Phlox subulata) and cloud-white candytufts (Iberis spp.) appear after the snow melts. Patches of basket-of-gold (Aurinia saxatilis) are pockets of yellow against the dark rocks; purple-blue carpet bugles (Ajuga reptans) come into bloom along with white flowered dryads (Dryas octopetala). The latter completes its cycle in a mass of fluffy seed pods. As the month ends, great sweeps of blue periwinkles (Vinca minor) carpet the hills. In some places dusty-miller (Artemisia stellerana) adds its white, feltlike foliage. In early May, the thymes begin to flowerthere are eight to ten different kinds. As the months progress, they are joined by thrift (Armeria maritima) and maiden pinks (Dianthus deltoides). At the time of our June visit, gold moss sedum (Sedum acre) mingled with purple thymes (Thymus spp.), a striking color combination.



Conifers and ferns surround this hidden pool and create a mountain glen atmosphere.

These seasonal displays are followed in early July and August by a great show of *Sedum spurium* 'Dragon's Blood'. Its crimson flowers are brilliant against succulent burgundy foliage. Often, there is a repeat scattering of blooms from earlier plants in the autumn, and many of the deep green mats take on tones of copper and bronze.

Clambering along the stone pathway, visitors wind along the contours, stepping gingerly like mountain goats. In places, they climb up steep and narrow rock staircases. Some of the plants nearby look like slippery moss, but they are actually sagina, a low-growing, mosslike evergreen. From almost everywhere, the valley below is visible. The cliff-side paths come precariously close to the edge. This is surely not a place to wander in the dark!

The bluff looks over the high Cascades to the west and the Columbia River snaking through the entire Wenatchee Valley in the east. At this location, the shores of the river had earlier been a meeting ground for the Wenatchee-Salish Indians, and it was here that they had a yearly rendezvous with tribes from the opposite side of the Cascades, trading their baskets, salmon, and foodstuffs for western goods.

On the hill itself, sober conifers hold sway amid mighty boulders. Straight and tall, the conifers dot the scene like green candles on a cake. For the horticulturist, some genera are not difficult to identify, especially with binoculars. Exact species are another matter and require more study. The firs are stiff and narrow with cones on the upper side of horizontal branches. In the gardens are three types: the red silver or western balsam fir (*Abies amabilis*) from the eastern foothills; the alpine fir (*A. lasiocarpa*) of the western Cascades; and the grand fir (*A. grandis*). The latter is the tallest, growing to 300 feet on the Pacific Coast. Gordon Ohme feels that all the true mountain species are slower growing in his garden than they would be in nature.

Spruce adds blue-green to the backdrop. Engelmann (*Picea engelmannii*) and sitka (*P. sitchensis*) are here. Spruces are fatter than firs and they hold their cones beneath drooping branches.

And then there are the hemlocks, both the western and mountain species: *Tsuga heterophylla* and *T. mertensiana*. The former can grow to an enormous height.

Douglas fir (*Pseudotsuga menziesii*) is a little more difficult to identify because its outline and its oval-shaped cones resemble a spruce. However, its bark is reddish and deeply fissured.

Last, but not least, is the western red cedar (*Thuja plicata*) with flat sprays of scale-like leaves. Logging trucks in the area carry primarily pine and Douglas fir, but if the cut ends appear reddish brown, the species is more likely the red cedar.

In the early days, Gordon Ohme had transplanted many ponderosa pines (*Pinus ponderosa*) to his garden. They have now been removed because their needle drop created an eyesore in the ground covers and had to be raked away.

Throughout the hillside, tables, benches, seats, and even a wishing well have been fashioned out of rock. Some of the benches were fitted snugly between boulders. One trail leads to a beautifully designed shelter house; it is open on one side with rock pillars on the other. The exposed part of the roof, as well as some of the siding, looks very much like thatch, but is actually the stringy, fibrous bark of the red cedar. This bark had been a favorite material of the Indians, who peeled strips twenty to thirty feet long and then cut and used them for making sturdy baskets and fishing line.

Several beautiful pools are among the garden's outstanding features; Ruth and Herman Ohme had been enraptured by placid mountain lakes. They designed their own simulated alpine pools and carved them *Continued on page 36*

PROVEN PERFORMERS

Plant Societies Name the Best

or its past six February issues, *American Horticulturist* has spotlighted new introductions from the nation's leading nurseries. But this year, we wanted to do something different, because we know that in the world of gardening, the new is frequently not as desirable as the tried and true. And who would know better, we thought, which plants are both dependable and delightful than our sister horticultural societies?

There are some 260 such societies, each of them dedicated to encouraging and educating the public in the use of one particular group of plants, and promoting the development of ever more hardy and/or beautiful cultivars. The American Horticultural Society has a long history of affiliation with these specialized groups. In coming months, we hope to begin renewing and strengthening those bonds, and doing more to bring their efforts to the attention of our own members.

To help us launch this initiative, we approached four societies – the American Daffodil Society, American Hemerocallis Society, American Iris Society, and American Rhododendron Society – that are among the largest of these groups and that promote widely used plants for the garden.

The societies differ greatly in the way they honor the giants among their genera: for example, the American Daffodil Society sponsors many regional shows so that in a given year hundreds of cultivars may win top awards, while the American Rhododendron Society has an award that it has bestowed only five times in thirty years. Nevertheless, all of them did their best to fill our tall order: Give us a list of the cultivars that are the most attractive and dependable throughout the country.

We hope these articles will increase gardeners' awareness of these organizations and the resources they offer; heighten interest in the history, potential uses, and culture of some of these plants; and encourage readers to explore the incredible array of hybrids that is continually being expanded, partly as a result of the dedication and enthusiasm of these fellow member societies.

RHODODENDRONS

By Harold E. Greer American Rhododendron Society

he name "rhododendron" brings to the mind of most gardeners a large-growing, often lavender-pink flowering plant. While many rhododendrons fit this description, there are countless others.

The genus *Rhododendron* contains 800 to 1,000 species, including the plants that are commonly called azaleas, that are native primarily to the Northern Hemisphere. We can make an imaginary trip around the world to see them in the wild.

Starting in the Atlantic provinces of Canada and continuing southward down the east coast of North America and west to Texas, there are a number of naturallygrowing rhododendron species. One species native in this area is *R. catawbiense*, parent of many of the first hybrids, which itself was hybridized in the early to mid-1800s.

Rhododendron occidentale grows in the high mountains of Southern California, then appears again in the wild 800 miles further north along the coast in California and southern Oregon. Two more species grow in California, Oregon, Washington, and British Columbia. Moving westward from there, we find other species occurring along the Pacific rim from Alaska to Siberia, Japan, and Korea. Continuing on west to China, we reach the Himalayas, the heartland of the genus *Rhododendron*, where hundreds of rhododendron species occur.

As we go through India, we find the important species, *R. arboreum*, a treelike rhododendron that is responsible for many of our garden hydrids. Finally we go west into Europe, where five species occur, including *R. ponticum*, the source of most of our purple hybrids. Though no species are native to Great Britain, *R. ponticum* has naturalized there and is considered a noxious pest.

While one dwarf species, *R. lapponicum*, grows in the countries around the North Pole, the only area where rhodo-dendrons cross the equator into the Southern Hemisphere is Indonesia and New Guinea. There is also one species native in northern Australia.

Most of these southern species belong to section Vireya, whose members are very different from other rhododendrons. They tolerate little or no frost and many are epiphytes, meaning they do not grow in the ground but on tree limbs or other plants. A number are vinelike in their growth habit.



Their flowers are often very brightly colored with many striking oranges and yellows. While a few of these plants were in cultivation in the late 1800s, most have been introduced only recently. In the future, a new race of showy house plants may come from this group.

Out of all these species and the some 10,000 hybrids, including azaleas, how can we find a few outstanding plants of especially high quality? Let us look at the five plants that have received the coveted Superior Plant Award (SPA) from the American Rhododendron Society.

In the nearly thirty years this award has been offered, it has been awarded only five times. To receive an SPA, a plant first must be nominated and judged worthy to be on the Eligibility List. In a succeeding year, it must be awarded a Conditional Award. Then in another succeeding year, it must be successful in winning an Award of Excellence. Only then can it be nominated as an SPA candidate. It also must be in commercial production and be judged exceptional in at least three different gardens.

More than ten years went by before an SPA was awarded. Then in 1971 it was awarded to two plants, 'Lem's Cameo' and 'Trude Webster'.

• 'Lem's Cameo' was produced by the late Halfdan Lem in Seattle, Washington, and was not registered until 1975, after his death. The plant grows about five feet tall in ten years. Its foliage is shiny mahogany-bronze when new, and turns a medium to deep green. The rounded leaves are about six inches long.

It is considered a mid-season bloomer, generally flowering in early to mid-May. The flower is superb in every way with its large, frilled, perfectly rounded trusses of satiny apricot, cream, and pink, spotted red in the throat. This is not the fastest growing rhododendron, but once established in a partly shaded location, it will without fail produce a magnificent display of truly beautiful flowers. It does best in a climate like that of the Pacific Northwest and is hardy to about 5° F.

• 'Trude Webster', the second of the two plants awarded an SPA in 1971, was one that I produced in Eugene, Oregon, and registered in 1961 when I was sixteen years old. In mid-season this large-growing plant displays gigantic, perfectly formed trusses of clear, pristine, sugar pinksometimes nearly a foot tall-that are accented by a collar of large, luscious green leaves. It grows to about five feet in ten years and is a vigorous, easy plant that is an attribute to the garden even when not in flower because of its lightly polished, smooth green leaves that are up to ten inches long. It is hardy to about minus 10° F, giving it a larger range than 'Lem's Cameo' in which it can grow.

It was another twelve years before another SPA was awarded. This time it was awarded to 'Party Pink', a hybrid registered in 1973 by Dr. David G. Leach of Madison, Ohio, a well-known hybridizer of hardy plants.

• 'Party Pink' is a vigorous, upright, well-branched plant that is very cold-hardy, to as low as minus 20° F, making it usable in a large area of the country. The lovely flowers open as purplish-pink with a lighter center, accented with a strong yellow flare on the upper petal. The foliage is deep fir green with a slight glossy appearance. The rounded leaves, which are six inches long, cover the plant well with foliage. In ten years the plant will be about five feet tall and a sight to behold in the garden. Rather hard to propagate, it is now being tissuecultured, which will make it more widely available.

Two years later, in 1985, Superior Plant Awards were given to 'Patty Bee' and 'Ginny Gee', both registered by the noted Northwest hybridizer Warren Berg.

• 'Patty Bee' was registered in 1978. It is a dwarf rhododendron in the lepidote group, whose members have scales on the underside of their leaves to help them regulate their water supply. Because of its growth habit and heavy flowering, it looks much like the yet non-existent but longsought yellow evergreen azalea. The flowers are a clear yellow and appear in great profusion, covering the plant to the point that the foliage may be almost invisible. It flowers in early mid-season, meaning April

Four Rules for Raising Rhododendrons



n's Cameo' Harold E. Greer

Rhododendrons require four things: acid soil, a constant supply of moisture, good drainage, and protection from summer heat. Therefore, you should select an area of partial shade, and you may need to create a raised bed if your soil is either alkaline or soggy. Otherwise, in poorly drained soil, you will need to plant the rhododendron nearly on the surface. Mulch will help keep the roots cool in summer and protect them from sudden soil changes in winter. Mound the mulch so that water runs toward the plant; newly planted rhododendrons frequently fail because the root ball fails to get wet even though the surrounding area has been watered. If you are sure the root ball is getting wet, there is no danger in overhead watering: many commercial growers use overhead sprinklers to grow plants in full sun that otherwise would burn them badly in hot weather. (Overhead watering may damage flowers when the plant is in bloom, and in wet, hot areas you may have more trouble with disease if your plant never dries out during the day.)

Recent research indicates that the best fertilization formula is 10-6-4 applied sometime in the March-April period and again in June or July. The timing will vary depending on where you live and is not crucial. But avoid high-phosphate formulas; the rhododendron bud can use only a limited amount, and unlike nitrogen, phosphate and potash build up in the soil. Most problems with rhododendrons can be prevented by providing good drainage, circulation, and sanitation, and choosing cultivars appropriate to your area. in many areas. The leaves are about one inch long and densely cover the plant in forest green. It will grow to about eighteen inches tall in ten years. It is quite easy to grow and is hardy to minus 10° F, so that it is suitable to many gardens throughout the country.

• 'Ginny Gee', registered by Warren Berg in 1979, is like 'Patty Bee', a dwarf from the lepidote group. It may be one of the finest dwarf hybrids ever raised. It is vigorous and easy to grow, succeeding in many areas where similar rhododendrons often fail. The leaves on the plant are a deep matte green with reddish stems. In winter the leaves turn a rich bronze, adding color to the winter garden.

When 'Ginny Gee' flowers in early midseason, it first appears with pink buds then opens to white flowers kissed with pink touches, giving the plant a delightful twotoned appearance. It flowers so heavily that not a leaf can be seen, and it does this dependably every year. A very exceptional plant that grows to about two feet in ten years, it is hardy to at least minus 10° F.

These award-winning rhododendrons are outstanding and any one of them can make your rhododendron garden a joy.

Because of the rigorous process for choosing an SPA winner, there are many other highly desirable rhododendrons that have never attained that honor, and which are in some cases hardier or more widely available.

Some good choices for the West Coast, on the basis of their being generally suntolerant but not particularly cold-hardy, would include:

• 'Jean Marie de Montague', a prolific bloomer with bright red flowers and thick, heavy, emerald-green foliage. It blooms young and will tolerate sun or shade.

• 'Annah Kruschke', which bears lavender-purple blooms. Vigorous and hardy, it is more heat-tolerant than most, but is also hardy to minus 15° F.

• 'Anna Rose Whitney'. Both the flowers, which are deep rose-pink and funnelshaped, and the plant itself are very large. The growth habit is vigorous and upright with dense foliage and olive green leaves up to eight inches long.

• 'Gomer Waterer' has lavender buds that open to pure white and heavy, deep green foliage. It is extremely sun-tolerant and cold-tolerant to minus 15° F.

• 'Unique' has a dense, rounded shape and smooth, oblong-leaves. The pink buds become cream-colored flowers that on older plants completely cover the leaves.

Particularly cold-hardy rhododendrons that should be adaptable to the East Coast and Midwest (but are usable in warmer climates as well) include:

• 'Scintillation'. Good both for its glossy green foliage and light bluish-pink flowers, it is hardy to minus 15° F and is widely adaptable and widely used.

• 'P.J.M.'. Its small, rounded leaves are green in the summer and mahogany in winter; the flowers are bright lavenderpink. Hardy to minus 25° F, it will grow to four feet in ten years.

• 'Ramapo'. Very small-leaved and lowgrowing with blue-green foliage and orchid-lavender flowers, this two-foot dwarf is suitable for a low border or rock garden, but will grow taller in shade. It is hardy to minus 25° F.

• 'Nova Zembla' is widely grown because of its hardiness, to minus 25° F. It has glossy leaves and bright red flowers.

• *R. yakushimanum* is a hardy species, to minus 25° F, whose forms include 'Mist Maiden', which has flat leaves and flowers that turn from apple-blossom pink to white; and 'Yaku Angel', which has twisted or

cupped leaves and the whitest blossoms of any rhododendron. The underside of *yakushimanum* leaves are thick with a woolly brown indumentum, which helps the plant control its water supply.

Harold E. Greer is the president of the American Rhododendron Society and has authored or co-authored two books on rhododendrons. More information can be obtained by writing to Paula Cash, Executive Secretary, The American Rhododendron Society, 4885 S. W. Sunrise Lane, Tigard, OR 97224.

DAFFODILS





he climate in the United States is so varied you would think there would be somewhere that daffodils would not flourish. The climate does affect the time of bloom, the culture, and the quality of the end result. The bulb needs a period of rest; cold weather improves its blooming ability. For instance, Southern Mississippi, where I live, is not ideal. Nevertheless, bulbs will grow, and if dug out each year and stored, will produce satisfactory blooms.

The hardiest daffodils are no doubt the old varieties, probably brought from England to the United States by the first settlers, which will survive in rather wild habitats. But there are very few true species, while there are about 20,000 cultivars to choose from. All daffodils, whether species or hybrids, are of the genus *Narcissus*, and fall into one of twelve divisions depending on such characteristics as the length and shape of the flower's corona or cup, the number of flowers per stem, and the oc-

currence of double flowers. Within each division, daffodils are further characterized by the colors of their coronas and surrounding halo of petals, or perianth. For instance, a white-yellow has a white perianth and yellow corona, while a yellow-white has a yellow perianth and white corona.

 Division 1 daffodils are the trumpets. which have coronas as long or longer than the surrounding petals, and one flower to a stem. In this division, most people are familiar with the ninety-year-old yellowyellow 'King Alfred'. But when you see 'Golden Vale', 'Kingscourt', or 'Midas Touch', you realize that this combination can be even more beautiful. All three are favorites in gardens and shows. 'Kingscourt' is a fifty-year-old hybrid, while 'Midas Touch' was first produced only twelve years ago. Those with white perianths and white trumpets have had their greatest improvements in the Irish growers' fields. 'Cantatrice', an old standby, is a beautiful flower. Newer ones would be 'Silent Valley', 'White Star', and 'Rhine Wine', the latter hybridized by American Bill Pannill, a very successful amateur breeder.

Among the white-yellows, 'Newcastle' is a great favorite, and available more readily than most. Of the newer introductions, I would suggest 'Pop's Legacy' and 'Elegant Lady', which are both American-raised. The reverse bicolors—yellow perianth, white cup—would be headed by 'Honeybird' and 'Gin and Lime', both good growers in all areas.

Pink trumpets are gradually increasing, and two of those are 'Rima' and 'Park Lane'.

• Division 2 encompasses the largecupped daffodils, on which the corona is not as long as the perianth, but more than one-third as long. This is the most prolific division, with some of the most beautiful blooms in ten or more color combinations. Among the yellow-yellows, 'Golden Aura' is an almost-every-bloom-perfect cultivar; 'Golden Joy' and 'Symphonette' are also on the list of favorites.

White-pink cultivars are increasing, and one of the leaders in production is Grant Mitsch Novelty Daffodils. 'Accent' is an old favorite and still at the top of the list is 'Dailmanach', a first-class show flower and a good garden grower. 'Fragrant Rose' is just that: a lovely flower with a scent more reminiscent of a rose than of the other scented daffodils.

The favorite in the American Daffodil Society popularity poll last year was the whiteyellow 'Festivity'; 'Classic' and 'Pure Joy' are two others you may want to try. The white-whites in this division seem to win Best in Show more often than any other subdivision, and there are so many excellent cultivars it is difficult to pick only a few. However, you could not go wrong with 'Wedding Bell', an older cultivar, or 'Canisp', 'Gull', 'Ashmore', or 'Homestead'.

Among the yellow-reds, probably as colorful a flower as you will find in the garden, there is a great choice: 'Resplendent', 'Loch Hope', 'Falstaff', 'Surtsey', 'Sportsman', and 'Loch Lundie'. The yellow-orange combination is also brilliantly colored, with 'Chemawa', 'Dumrunie', and 'Golden Amber' likely choices. Orange-red offers one of the smaller selections, although their number is growing; 'Rio Rouge', 'Ambergate', and 'Limbo' are all pleasing and good growers.

The white-reds are headed by 'Decoy' and 'Rubh Mor'; 'Orange Lodge' and 'Peaceful' are good white-oranges. Outstanding among the yellow-whites are 'Daydream', 'Pastorale', and 'Chelan'. Of growing interest are the yellow-pinks, with 'Kelanne' and 'Pastel Gem' two favorites.

 Division 3 comprises the short-cupped daffodils, in which the length of the corona is less than one-third that of the perianth, and this division offers much the same color combinations as Division 2. Favorites around the country that also grow well include the yellow-reds, 'Achduart', 'Maverick', and 'Timandaw'. Among the white and orange, a much smaller class, I have only 'Dr. Hugh', a good grower and a good show flower. (While the average grower may not be concerned about whether a cultivar is good for show, those that fall into that category are nevertheless the most attractive and most enjoyable flowers to grow whether or not they ever sit on a showbench.)

Among the white-yellow small cups, 'Aircastle' is a world favorite, while 'Our

Spring Favorites Take Fall Planning



Daffodils should be planted in the fall after the soil has begun to cool off so that they can begin to grow roots before the soil freezes. If this is not possible, they can be stored in a cool, dry, well-ventilated place and planted as early as possible in spring, although they will be somewhat smaller the first year. All daffodils thrive in full sunlight, but shade may help reds or pinks retain deeper coloring.

Like most plants, daffodils need welldrained soil. They should be planted at a depth about three times the height of the bulb. Plant larger bulbs six to eight inches apart, smaller ones four to six inches apart, and the smallest two to three inches apart. To achieve a natural effect, avoid planting them in rows. Avoid putting fertilizer in the hole during planting; fertilize with a formula high in potash during the winter after the roots have begun growing. Daffodils don't need to be fertilized in spring. Water is most important to them in the fall when roots are being established, during the active top growth in spring, and when flowers fade and the bulbs start storing food for the next year's bloom. For the plant to be able to manufacture this food, the daffodil's leaves need to grow for six to eight weeks after the blooms are gone. The leaves should not be tied in bunches as this cuts down on the air and sunlight they receive. They can be removed when they begin to turn yellow if you find them unsightly. Bulbs should be dug and divided every two to four years. They will separate easily when they are ready; never force them apart.

Tempie' and 'Lollipop' are growing in popularity. 'Merlin', which has a white perianth and a yellow cup edged with red, is probably the best-known in Division 3. It is an incredibly consistent cultivar that has won several awards from the Royal Horticultural Society.

Yellow-yellows that come to mind are 'Ferndown', 'Golden Pond', and 'Irish Coffee', all of them free-flowering and very hardy. The white-white group would be led by 'Cool Crystal', 'Trona', and 'Achnasheen'. The white-reds will make a great color splash in the garden: choose 'Cul Beag', 'Cairn Toul', or 'Cherry Bounce'. An Australian-raised flower, 'Dimity', is a very prolific orange-red, with color that is sun-proof here.

Many of the Division 3 cups have several colors, and one of the best is 'Purbeck', which is white with a yellow and orange cup. 'Dell Chapel' and 'Fairmile' have white perianths with orange-tinged cups. 'Gossamer', with a nice pink rim, is one of the few in this division to display that color.

• Division 4 is that of the double daf-

fodils, which usually lack a defined corona, and include multiple- and singleheaded blooms. Among those with multiple flowers, the best are 'Yellow Cheerfulness' and 'White Cheerfulness'. In colder climates the white-white 'Erlicheer' is sometimes damaged by a late freeze, but is distinctively fragrant and well worth the effort if you succeed in getting it to bloom. 'Bridal Crown' will grow anywhere in the country.

The single-bloom doubles offer nearly as wide a range of color as Division 2. Favorites are yellow-red 'Tahiti', whitered 'Gay Challenger', and white-white 'Sweet Music'. Lovely white-pinks that are increasing in popularity are 'Apricot Sundae' and 'Pink Pageant'.

Doubles grow well under most conditions, but are the most likely of the daffodils to suffer bud blast due to lack of moisture. In warm areas that lack weekly rains, it is a good idea to water the growing buds daily.

•Division 5 members, the triandrus daffodils, are marked by having more than one flower per stem; delicate necks that allow the flower head to droop; narrow, silky perianth segments that are sharply reflexed from the corona; and a corona that is slightly narrowed at the mouth.

Some of the best are the white-white 'Arish Mell' and 'Mission Bells'. The yellow-yellow 'Harmony Bells' and 'Liberty Bells' are older varieties but great growers and excellent flowers. The white-yellow 'Tuesday's Child' is one of the best of this class. White-pink 'Akepa', first bred only in 1979, remains rather expensive but a most delightful little flower.

• Division 6, the cyclamineus daffodils, are distinguished by having a short neck that holds the flower so that the stigma points downward, sharply reflexed perianth segments, and a narrow cylindrical corona. There is usually only one flower per stem.

Cyclamineus is a favorite of mine and it's hard not to want to list every flower, so I will force myself to be brief. You can't beat 'Jetfire' for yellow-red, 'Foundling' for white-pink, 'Dove Wings' for whiteyellow, or 'Shimmer' for yellow-orange. 'Jenny' is an excellent white-white, although it does not do well for me.

• Division 7 daffodils are the jonquilla, which are usually multiple-headed and very fragrant, have perianth segments that are smooth and starlike, and last for a long time both in the garden and in cut arrangements. One you should enjoy is 'Buffawn', which has a very distinctive scent. Two good yellow-yellows are 'Trevithian' and 'Circuit'; 'Bunting' and 'Triller' are colorful yellow-oranges.

Very different selections would be 'Bell Song' or 'Pink Angel', both pink-cupped and both lovely. The white-white 'Curlew' and the yellow-whites 'High Note' and 'Mocking Bird' are good garden and show flowers. (Grant Mitsch has long named his daffodils for birds, and maybe that is one good reason I am entranced with his hybrids.)

• Division 8 is the tazettas, another scented division with multiple-headed flowers—from two or three to ten or fifteen flowers per stem—but different from Division 7 in that perianth segments are often crinkled and somewhat twisted. These are excellent garden flowers.

The white-yellow 'Geranium' was the leader within Division 8 in our popularity poll and is one of the best known. Others you should try are the yellow-oranges 'Golden Dawn' and 'Hoopoe'; the yellowred 'Motmot'; the white-white 'Silver Chimes' and 'Highfield Beauty', which has a white perianth with a green eye-zone and orange mid-zone and rim.

The tazettas are some of the more tender cultivars and may not survive really cold climates without a little extra care and shelter.

• Division 9, the poeticus daffodils, have a glistening white perianth with points or 'pips' at the tips and a distinctive fragrance. The short, flat corona is traditionally yellow edged with red, but there are new variations, some with pink in the cup. It is a late-blooming variety that will prolong the daffodil season for you. I suggest 'Angel Eyes', 'Cantabile', 'Webster', and 'Actaea'.

• Division 10 embraces species and natural forms, and *Narcissus jonquilla* in all its variations is the leading example. It is one of those we Southerners find at abandoned house sites or flowering in the middle of a pasture or along the road. Everyone should have some in his or her garden.

• Division 11, the split-corona daffo-

dils, are very showy flowers that are sometimes called orchid-flowering or collarette in commercial catalogs. Great for cut flowers or show, they are frowned on by some judges but are nevertheless conversation pieces everywhere they are seen. 'Lemon Beauty' and 'Cassata' are among the favorites. A new one on the market is 'Tripartite', a triple-headed split corona that the adventurous might like to try.

• Division 12 includes miscellaneous daffodils that do not fall into any other class. There are very few cultivars, and of those, the yellow-yellow 'Dovekie' is the only one I have tried.

I have not yet mentioned miniatures, which are bred for daintiness and have flowers usually under two inches and stems of ten inches or less. They grow well and have a habit of growing on you. You may want to begin by reading Elizabeth Lawrence's *The Little Bulbs*. Some good ones you should have no trouble finding include 'Tete-A-Tete', 'Minnow', 'Hawera', 'April Tears', and 'Little Beauty'; you may have to hunt awhile for 'Humming Bird', 'Xit', 'Bobbysoxer', 'Pequenita', 'Paula Cottell', 'Small Talk', and 'Snipe'. This should give you a good start and hook you completely.

Many of the flowers I have mentioned cannot be bought from your local market. But if you like daffodils, you should spread your wings! Write for catalogs from hybridizers and start a collection of daffodils that will bring you more and more pleasure each year.

Leslie Anderson is the executive director of the American Daffodil Society. Additional information about the society can be obtained by writing The American Daffodil Society, Route 3, 2302 Byhalia Road, Hernando, MS 38632.

IRISES

ris connoisseurs may be inclined to pamper each individual plant, never losing enthusiasm because they hope eventually to be rewarded with abundant, show-stopping blooms on robust foliage. Zealous perennial gardeners, on the other hand, are looking for a large variety of plants they know will perform well, with each plant contributing unfailingly to the effect they desire to create in their landscape. They must rely on the tried-andtrue varieties that have proven themselves in various climates.

The American Iris Society comes to the

rescue of those in either situation twice each year: once when society judges vote the Dykes Medal winner, and again, in what probably offers an even truer picture of the best choices, the Symposium Ballot, through which the approximately 7,500 society members from all across the country and in different parts of the world vote for their favorite tall bearded iris.

Irises are described by noting the color of their standards—the petals that are upright; their falls—those that hang down; and in the case of bearded irises, the hue of the fuzzy stripe or beard that runs down By Audrey Machulak American Iris Society

the midsection of the fall.

Some irises remain favorites year-in and year-out: the fact that 'Amethyst Flame', an iris that was introduced in 1958, still appears among the top 100 varieties seems to assure its good performance.

But many gardeners want a modern iris to occupy a special place in their landscape. For them, 'Beverly Sills' is a good choice. The Dykes Medal winner in 1985, 'Beverly Sills' has been number one on the Symposium Ballot for three consecutive years. It is an extremely fast grower and early bloomer with broad, coral-pink standards and lacy-edged falls, and is a descendant of 'Vanity', number two on the 1988 Symposium Ballot. 'Vanity' is more tailored and truer pink in color. It averages two stems per rhizome, each bearing at least eight buds.

If light blue is your favorite color, the third place 'Victoria Falls' may win your heart. The ruffled, light-to-medium blue flowers have a white spot on the center of each fall and a white beard. In the East, West and South, the flower reblooms again in autumn.

Every garden should contain at least one clump of 'Stepping Out'. Though introduced in 1964, it shows no sign of going out of fashion; it occupied third place on the Symposium Ballot in 1986 and 1987 and was still a strong fourth in 1988. 'Stepping Out' is a plicata, meaning that it has veining and dotting of a color darker than its background. In this case, the combination is violet and white, and the large flowers are enhanced with ruffling and a glossy sheen.

If you like to impress with big flowers, 'Titan's Glory' is for you. The flowers of this marvelous iris are six inches tall and five inches across. Double-socketed bracts and three to four branches with at least eight buds ensure a long bloom season in all climates. 'Titan's Glory' is one of the best irises of its shading—a silken, bishop's purple—introduced in years. It was the 1988 Dykes Medal winner.

While a primary purpose for growing flowers is for the beauty displayed right there in the garden, an excellent variety for those who enjoy the competition of flower shows is 'The Song of Norway', which can open three blooms at once. Its flaring, heavy flowers are a glacial ice-blue, and should help many an exhibitor win a blue ribbon.

Grandma's wedding gown was made of pure white cotton with lots of ruffles and yards of exquisite lace, and 'Laced Cotton' is the equivalent among irises with its pure white, daintily ruffled and very lacy petals. It has received international recognition for its exceptionally good branching.

'Mary Frances' received the Dykes Medal in 1979 and is still among the ten most popular irises. This distinctive blue-orchid self—meaning that its petals and sepals are the same color—has gently closed standards; wide, flaring, lighter centered falls; and a white beard touched with yellow. The luminous aura of deep blue-purples has contributed to the popularity of 'Mystique', whose upright standards of light blue flow to a deep purple flush at the midrib. The wide, flaring falls are dramatically marked by bluish beards. It is no mystery that this flower received the Dykes Medal in 1980.

Since its introduction in 1972, 'Going My Way' has been a favorite among irisarians. The standards and falls of this plicata are white with a precise purple rim, and its good substance and ruffling add charm to its fresh, clean-cut appearance.

These tall bearded irises are probably the most popular, but there are other classes grown by iris lovers everywhere. Because of their dependability, the following irises have won top awards in each of their respective classes:

• Border bearded irises are shorter than the tall bearded, with proportionately smaller flowers. A leader in this class is 'Brown Lasso', whose standards are a deep butterscotch. The horizontal, flared falls are light violet with a sharp edging of medium brown, and the full beard is yellow. 'Pink Bubbles' is an exquisite shade of light pink and the flowers are beautifully formed.



If soft colors are to your liking, try 'Marmalade Skies'. This slightly ruffled flower is apricot-orange with a pink tinge on its standards and an orange beard. A striking combination of colors that will call out "Hey! Look at me!" is found in 'Whoop 'em Up'. The standards are brilliant golden yellow; on the reverse side of the maroon falls is a golden yellow that extends to the top and forms an all-around edge that sets off the vellow beard.

 Intermediate irises bloom earlier than the tall bearded irises and are favored for cutting because of their size. One that will not fail to perform excellently is 'Az Ap'. This is a terrific grower with domed standards and flaring falls of cobalt blue. Something a little more showy can be found in 'Rare Edition', a striking mulberry-purple plicata with good substance and abundant blooms each year.

Color the standards cream, color the falls a rich amber, add a gold beard, and you will have the vigorous grower 'Honey Glazed'. And even if you despise cats, you will be enamored by 'Hellcat'. Its standards are a pale blue-lavender with a dark flush at the midrib. The falls are wide, ruffled, and velvety dark blue-lavender accented by a dark blue-lavender beard.

• Miniature tall bearded irises are made distinctive by their slender, wiry, flexuous stalks. Sure to be a favorite is 'Carolyn Rose', a dainty, rose-pink plicata with a yellow beard. 'Chickee', a showy, bright, ruffled, yellow flower with good form and substance is a worthwhile addition to every iris collection. Or your heart may be won by 'Consumation' whose pretty white flower has a deep blue spot on the falls. Equally showy is 'Aachen Elf', which has yellow standards and lavender falls.

 Standard dwarf bearded irises are easy to grow, good increasers, and inexpensive. Their color range equals that of the tall bearded class. Start with 'Michael Paul', a ten-inch plant covered with very ruffled, very dark purple flowers. Add 'Cotton Blossom' as a contrast. It is a superb, twelveinch, ruffled, warm white self with a white beard. Include 'Rain Dance', which combines bluebird blue on both standards and beard with great shape and form. Top off the collection with 'Dixie Pixie'. Oysterwhite with bright green hafts-the lower part of the petal-its beard is pale lavender-blue, its standards are round, and its falls are crisp and flaring.

 Miniature dwarfs are the smallest and earliest blooming of all bearded irises. Unaffected by fickle spring weather, they offer bounteous bloom on compact plants and are excellent as border or rock garden specimens. 'Zipper', the most popular, is

Dry Feet, Weeding Keep Bearded **Irises Happy**



Ron Mullin

In general, irises will thrive without too much TLC. An ideal location for the bearded irises is a sunny, well-drained spot. Irises want at least six hours of sunshine a day and resent standing in water at any time. (Do not confuse the culture for the bearded iris with that of the beardless, notably the Siberian and Louisiana irises, which will thrive in wet conditions.) Hobby gardeners may find it necessary to raise bearded iris beds slightly above the level of their garden paths. They should plant the rhizomes slightly below the surface of the ground with the roots well spread out, and firm the soil tightly around each rhizome. Irises are generally planted from fourteen inches to two feet apart, but for an immediate clump effect, rhizomes can be planted about eight inches apart in groups of three or more of one variety.

Irises respond to fertilization. Always incorporate generous amounts of compost in the preparation of a new iris bed. Apply a well-balanced fertilizer as a top dressing on established plantings in early spring and very late fall. Do not cultivate too deeply, as the iris's feeding roots are very near the surface of the soil. Keep your iris bed weed-free; this is the best precaution for iris problems.

a five-and-a-half-inch plant with dainty flowers, yellow standards, smooth butteryellow falls, and a medium blue beard. 'Libation', another popular little beauty, has standards of wine red, falls of a deeper wine red with a darker spot, and a yellow beard.

'Garnet Elf' is a dark red self with lush, velvet falls and dark violet beard. On the lighter side, 'Alpine Lake' has standards of white with a slight blue tinge and falls of light blue with a pale blue beard. If you desire one last look at irises before the winter sets in, add 'Ditto' to your collection. Fitting its name, this iris reblooms as far north as Indiana. The standards are white. A dark red-maroon edged with white and a touch of green on the haft color the falls. The white beard is tipped with a flash of blue.

In fairness to many beautiful flowers, some mention must be made of the beardless irises. In the aril and arilbred category-the arils have a coated seed and arilbreds are a cross between arils and eupogons whose seeds are uncoated-recent award winners have included 'Tabriz' and 'Humohr', while 'Pro News' and 'Green Eyed Lady' were in the runners-up circle.

Last year, 'Pink Haze' was the top Siberian iris and 'Chilled Wine' and 'Ann Dasch' were close seconds. Though 'Easter Tide' won the top award for the Louisiana irises, it had a close race with 'C'est Magnifique', 'Acadian Miss', and 'Black Gamecock'. Among the Spuria irises, 'Destination' and 'Cinnamon Stick' were neck and neck, but 'Janice Chesnick' emerged as winner. The Japanese iris award went to 'Freckled Geisha', with 'Blueberry Rimmed' in second place and 'Japanese Sandman' in third. 'Big Money' and 'California Mystique' were the favorite Pacificas in 1988.

There are thousands of irises, some of them well-known favorites, many others lovely but unheralded. The All-America Selections award winners and the popularity polls should serve as guides, and it should be reassuring to know that a particular iris will grow and perform well. But gardening is for the adventurous, and ultimately, your iris garden should be a reflection of you.

Audrey Machulak is a homemaker, gardener, student, hybridizer of standard dwarf irises, and twenty-one-year member of the American Iris Society who lives in Muskego, Wisconsin. More information about the American Iris Society can be obtained by writing the AIS Membership Secretary, 6518 Beachy Ave., Wichita, KS 67206.

DAYLILIES



he beautiful and versatile daylily offers immense satisfaction to the gardener. Daylilies come in a rainbow of colors, have a long season of bloom, and can be grown in all parts of the country. They are virtually pest-free, heat- and drought-resistant, adaptable to most soils, and grow in either sun or partial shade.

Daylilies are classified as having three types of foliage habit: dormant, semi-evergreen, and evergreen. Dormant daylilies lose their leaves completely after frost and grow best in the northern states. They do not do well in hot climates. Evergreen daylilies are generally more tender, retain their foliage throughout the year, and do best in the South and far West. They experience their greatest difficulties in the middle states, which have alternate freezing and thawing. Most of the semi-evergreen daylilies generally perform well throughout the country, including the coldest climates of the North and the warmest parts of the deep South. Their foliage dies back part way, and after a brief rest during the coldest months, begins to grow again.

The botanical name for daylilies is *Hemerocallis*, which combines the Greek words for "day" and "beauty" to imply beauty for a day. But while individual blooms are open only for a day, a single plant produces successive flowers for a number of days during the blooming season. Planting a range of cultivars results in long periods of bloom during the late spring, through the summer, and into early fall. 'Stella de Oro', winner of the American Hemerocallis Society's Stout Medal in 1985, is at this point unique among daylilies in blooming from May until frost.

Among daylily species, which occur naturally, the early-blooming *H. lilioaspho*-

By Ainie Busse American Hemerocallis Society

delus—more commonly known as *H. flava* or lemon lily—is still sought after by gardeners because of its strong lemony fragrance. But the modern hybrids have come a long way from the species brought to the United States from Europe, and bear little resemblance to *H. lilioasphodelus* or the common orange "roadside" daylily, *H. fulva*.

Today's daylilies come in several color patterns and those with an interesting evezone-a band of color where both petals and sepals meet the flower's throat-are becoming increasingly popular. There are also a number of different flower forms, ranging from the circular and flat to the double to a narrow spider shape. Flower sizes range from under three inches in diameter to as wide as nine inches. Until recent years all daylilies, like most plants, were diploid in their genetic make-up, with two identical sets of chromosomes. Doubling of the chromosomes through the use of a chemical agent made from the autumn crocus, Colchicum autumnale, has produced tetraploids. Their blooms are larger and more intensely colored, their flower stalks are sturdier, and both flower and foliage have more substance. This means that their tissue structure is thicker and as a result, they are better able to withstand the elements.

Gardeners who want to begin growing daylilies or add new ones to their collections may want to consider some of those that have received one of the seven cultivar awards voted annually by garden judges of the American Hemerocallis Society. Here is a list of recent winners, with each cultivar described according to its hybridizer, height, type of bloom, and foliage habit. (Because these daylilies are chosen from all parts of the United States, gardeners should be careful to determine whether or not the winning cultivars are hardy for their part of the country.)

• The Stout Medal is the society's highest cultivar award. 'Stella de Oro' (Jablonski, eleven inches, early midseason to late, dormant), the 1985 Stout Medal winner, is a charming two-to-three inch gold miniature and the only reliably continuous reblooming daylily that has been produced to now. Its blooming habit has led to its extensive use as a border plant.

Most of the other recent Stout Medal winners have had blooms in the six-toseven-inch range. The bloom of the 1986 winner, 'Janet Gayle' (Guidry, twenty-six inches, early midseason, evergreen) is a lovely pink-cream blend. Lucille Guidry won the Stout Medal again in 1987 with 'Becky Lynn' (twenty-four inches, early midseason, semi-evergreen), a stunning rose blend. The 1988 winner, 'Martha Adams' (W. Spalding, nineteen inches, early midseason, evergreen), has a gorgeous pink flower.

Some older Stout medal winners have become classics that are still enjoying widespread popularity. These include 'Mary Todd' (Fay, twenty-six inches, early, dormant), a ruffled yellow tetraploid; 'Winning Ways' (Wild, thirty-two inches, early midseason, dormant), which is a greenish yellow with a small green throat; 'Ruffled Apricot' (S. Baker, twenty-eight inches, early midseason, dormant), a fragrant, apricot tetraploid with lavender-pink midribs; and 'Ed Murray' (Grovatt, thirty inches, late midseason, dormant), a four-inch blackred. The latter also won the Annie T. Giles Award in 1976, and the Lenington AllAmerican Award in 1983.

 The Donn Fischer Memorial Cup goes to the outstanding hybrid among miniature daylilies, which are those with blooms three inches or less in diameter. The 1985 winner was 'Pardon Me' (Apps, eighteen inches, midseason, dormant), an abundantly flowering bright red miniature. The 1986 winner was 'Little Zinger' (Lankart, sixteen inches, early midseason, semi-evergreen), another red charmer. In 1987 the award went to 'Siloam Tee Tiny' (Henry, twenty inches, midseason, dormant), an exquisite orchid flower with a purple eye. The 1988 winner was 'Yellow Lollipop' (Crochet, eleven inches, early midseason, dormant), a miniature that grows quickly into a clump with myriad yellow blooms.

• The Annie T. Giles Award goes to the outstanding cultivar among smallflowered daylilies, which are those with blooms between three and four and a half inches across. Winner of the 1985 award was 'Siloam Virginia Henson' (Henry,

Daylilies Are Low Care, Not No Care



Daylilies have been called the lazy person's plant, but they do require some degree of care. For instance, while they tolerate a wide range of soils, organic matter should be added to sandy soils and those that are heavy clay. Most bloom best in full sun, at least six hours a day. Many red and purple cultivars benefit from partial shade in the hottest part of the day. In the South, daylilies do well under the dappled shade of pines, but planting them near broad-leafed trees will rob them of nutrients.

Daylilies can be transplanted anytime

from spring through fall, even while in bloom. However, in the North, spring is the best planting time, while early spring or very late fall is best in the deep South. Before planting, a soak in a ten percent fertilizer solution will help make the roots turgid, but do not use a chemical fertilizer in the planting hole. Many gardeners recommend spreading the roots teepee fashion over a mound of dirt; breeders who raise large numbers of daylilies say this is unnecessary. In either case, the crown should be no more than an inch below the soil level. Davlilies should be placed one to two feet apart, depending on the eventual size of the plant, and should receive an inch of water each week.

Established plants can be given a watersoluble, low-nitrogen fertilizer in spring. Too much nitrogen can result in yellow foliage, inferior blooms, and in reds and purples, a slick appearance and eventual wilting. Apply fertilizer several inches away from the crown so it is not dampened. Eventually, diminished quality and smaller blooms will signal a need for division, although this can take several years if soil is loose and friable. After blooms are gone, cut back the foliage to about eight inches and separate the clump into single, double or triple fans, depending on how soon you are willing to divide them again.

eighteen inches, early midseason, dormant), a superb four-inch pink bloom with a ruby red eye. The 1986 winner was 'Chorus Line' (Kirchhoff, twenty inches, early, evergreen), a breathtaking three-to-fourinch pink with a rose halo. The 1987 award went to 'Pandora's Box' (Talbott, twentytwo inches, early midseason, evergreen), an eye-catching cream with a purple eye. Because this daylily multiplies quickly, it has been used successfully as a border plant. The latest award, for 1988, went to 'Siloam Jim Cooper' (Henry, twenty-seven inches, early midseason, dormant), a brilliant red with a deeper eye.

• The James E. Marsh Award goes to an outstanding lavender or purple daylily. The 1988 winner was 'Hamlet' (Talbott, eighteen inches, early midseason, dormant), a four-inch purple with a blue-purple halo.

• The Ida Munson Award goes to the best double-flowered variety. In 1988, this award went to 'Siloam Double Classic' (Henry, sixteen inches, early midseason, dormant), a five-to-six-inch bright pink self—meaning that its petals and sepals are the same color.

• The Ernest Plouf Consistently Very Fragrant Award, which goes to a reliably fragrant dormant daylily, was won in 1988 by 'Chorus Line', winner of the Annie T. Giles Award in 1986.

• The Lenington All-American Award goes to the cultivar that performs outstandingly in all parts of the country. To be eligible, cultivars must have been introduced for ten years. This award is voted by the American Hemerocallis Society Board of Directors. The winner in 1988 was 'Lullaby Baby' (Spalding, nineteen inches, early midseason, semi-evergreen), a three-to-four-inch light pink with a green throat. This cultivar is not always reliably hardy in some far-northern states.

The American Hemerocallis Society had registered more than 29,000 hybrids through 1987. The newer introductions are relatively expensive. Gardeners wishing to know which cultivars grow best in their area should contact the regional vicepresident of the American Hemerocallis Society in their state and follow the recommendations of members of the local chapter nearest their home.

Ainie Busse, a professional garden writer, is a member of the American Hemerocallis Society Board of Directors and its publications chairman. Information about membership in the American Hemerocallis Society and a brochure listing daylily sources are available from the society's executive secretary, Elly Launius, 1454 Rebel Dr., Jackson, MS 39211.



Jean Jenkins

Trials of a Zone 5 Gardener with a Zone 10 Dream

his is one of those cases in which the imagination is baffled by the facts," said Winston Churchill upon hearing that Rudolf Hess had parachuted into Scotland back in 1941. The remark has special meaning

to me as it perfectly describes the continual fight I have between the gardens of my fancy and the realities that I must confront.

First, reality. Land I have. Our house sits surrounded by thirty acres of fields and woods, one tenth of a mile from the main road. The driveway is lined on either side by sixty-year-old white pines (*Pinus strobus*), and the only care they require is picking up windswept branches and occasionally cutting down the wild brush that appears between the trunks each year as though by spontaneous generation.

When real estate is mentioned most salespeople would tell you that there are three things to consider: location, location, and location. When it comes to gardens, my cry is climate, wild animals, and climate.

Wild animals are a problem for us. We have at various times of the year: rabbits (they chew); woodchucks (they chew); deer (they chew and generally pillage and destroy); skunks (they dig up the lawn looking for grubs); voles (they tunnel for grubs); moles (they tunnel for love); and a host of other pests, including a month of biting, black flies in mid-spring. In addition, we have a cycle of gypsy moth caterpillars that peak every decade or so, plus a full-scale attack of Japanese beetles that fly in with blatant ferocity every July. And there are slugs. If you could hear me hiss the word you would immediately perceive my dislike for this creature.

But a fence is out. I have no desire to live in a garden that resembles a prison, with the animals enjoying unlimited freedom on their side. I'd happily opt for a ha-ha, but that seems a bit impractical (and prohibitively expensive) on rock encrusted ground.

I have a great deal of grass to cut. I tell myself that this lawn serves as a frame to set off the garden's glorious canvas, but in reality, it's to give me a clean line of sight on the various varmints that leave the woods to chew among the flowers.

Then there is climate. Our house sits 1,300 feet up on the side of a minor Catskill hill in southwestern New York State. That means frost first appears on a clear night in September and has been known to return in early June. We have snow some years and ice in the others. Temperatures have been known to plummet to minus 30° F every few Februaries (usually accom-

panied with thirty-mile winds). And although the maps have us marked in USDA Zone 5a, two years out of five the weather is more like that of 4b.

Over the years I've become enamored of a number of plants, but I can never quite remember just how I was smitten. Like a crush you have when young and high-stepping, a combination of charms are in evidence, and the flower haunts your mind. I've never had a hope of owning some of these plants because of the climate, while others have survived in the garden only for a year or two, then simply gave up the ghost.

Once on a trip to Florida I saw a Christmas palm (Veitchia merrillii) and I wanted it; those berries of brilliant red arching out from a textured trunk called out to me for ownership. But reality surfaced, and I gave up thoughts of having such a tree in my back yard. So to satisfy my tropical urges, I came home and built a greenhouse.

This greenhouse occupies the space where an old porch once stood. The structure is a lean-to, twenty-seven feet long and six feet wide, facing southeast. Today it serves as a place to house temperate house plants, winter over perennials that I want in the garden proper but that will never survive without shelter, and in the spring, a home for seedlings.

Once this glass house held my collection of orchids and tropical succulents. I can still remember the pots of cattleyas that hung from the ceiling, each plant bearing huge, fluttering blooms that brightened up the winter night. There were no prom corsages here, but cultivars with flowers of white and the palest of pinks, my favorite being the snow white 'Bow Bells'. There were also cymbidiums, including one, *Cymbidium lowianum*, that was a gift from a reader married to an army sergeant stationed in the Canary Islands. That particular orchid arrived in late December





Shortia galacifolia

in a cardboard box that had been shipped by ordinary parcel post. All the enclosed plants were mush, except the orchid pseudobulb that miraculously survived the exposure to cold.

Under all the orchids were fifty-odd members of the stapelia family. These are fascinating succulents with strange flowers – too odd to be beautiful – more like the blossoms that populate the living room of Des Esseintes in Huysmans' book, *Against the Grain*. Each leathery petal had an artificial look in deep, pulsing colors, and the flowers exuded a perfume redolent of spoiled meat.

Stapelia pasadenensis bore flowers so large that I was glad the plants bloomed in spring and could be taken outdoors to be admired. But *S. hardyi* and *S. nobilis* had flowers with more charm (probably because they were smaller), and I delighted in having them bloom and surprise visitors to the greenhouse.

They're all gone now. In late April 1977 we had a sleet storm that coated all the electric wires for miles around with blankets of ice, and the power went out for over two days. Try as I may, I couldn't keep the greenhouse warm enough to save the orchids and the stapelias. Today it serves as a place to winter over my cabbage palm (*Cordyline australis*), a New Zealand plant often set about in gardens of southern England where it lends a tropical air. This plant should be familiar to everyone: it's that bunch of grasslike leaves found in the center of hanging pots, usually surrounded by drooping strands of *Vinca major* 'Variegata' (in garden centers) or in urns guarded by zonal geraniums (usually sold outside of cemeteries). My cabbage palm began life in 1973, is now eight feet tall, and will soon outgrow the greenhouse ceiling.

Another favorite that winters inside is my dwarf redwood (Sequoia sempervirens 'Adpressa'), hardy only in Zone 7 and no match for a Catskill winter. It sits within a carved clay pot, and each year the slender branches are decorated for Christmas. Also treasured is my collection of red and pink flowering maples (Abutilon hybridum) and white calla lilies (Zantedeschia spp.) that spends summers in a partially shady spot next to the terrace. If we lived in California, they would be permanent residents of the garden; instead, I must dig them up every fall before the killing frosts arrive.

Outside, the gardens have developed over time, and like Topsy, just grew. By the time I came to realize the importance of planning, most of the beds were already in place, and once in place I hated to undo the look of maturity they presented. The gardens now contain hundreds of favorite perennials, shrubs, and dwarf conifers, and all of them have met the test of climate. Still, I dream of others.

What I have to go through to have cardoons (*Cynara cardunculus*), with their silvery leaves and huge lavender thistle-like flowers! Seeds must be started in March in order to have any display at all in the summer garden. Then frost must hold off until November, or I must never forget to cover the buds night after night in order to have man-sized plants with their unusual blooms.

My Rosa moyesii is another case in point. If my garden were in a warmer zone, the scarlet hips would charm every visitor's eye. But every fall I must bundle up the plant and pile on mounds of hay just to keep it alive.

There are five plants that I have coveted for years, but I know they are impossible to have:

Pinus wallichiana 'Zebrina' would have a place in front of the bank now covered with hay-scented fern (*Dennstaedtia punctilobula*) so that its long, descending needles, each barred with white, would sparkle in the fall or on summer mornings when the dew would collect at needle's end. Books list this tree for Zone 5, but I tried. It is not.

The Nippon daisy (Chrysanthemum nipponicum) is a fallblooming flower of great beauty. I first saw it in ocean-front gardens along the Jersey Shore where it took the battering of autumn winds with ease. But in our mountain garden, the frost comes too thick and too quickly, and the plants never have time to bloom.

I have a copy of Gertrude Jekyll's Colour Schemes for the Flower Garden and page 122 is well worn. That page has a description of a garden spot warming in the late afternoon English sun where lilies, hydrangeas, and cannas share their space with bridal-wreath (Francoa ramosa), a perennial from Chile. If my garden were warmer, there would be banks of these plants.

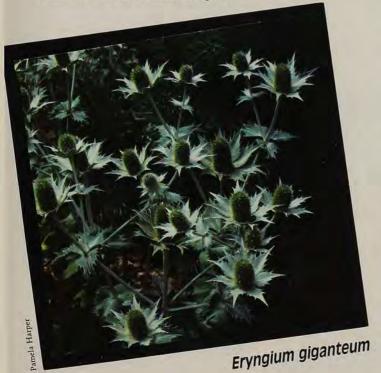
The Anyu nasturtium (*Tropaeolum tuberosum*) is another plant that has haunted me for years. I still have a collection of nursery catalogs that list this plant as though it were as common as a "blooming" hosta. Christopher Lloyd's book, *The Well-Chosen Garden*, has a picture of an early flowering variety, 'Ken Aslet', clambering up from a large clay pot to find its home in a cotoneaster shrub. I've tried planting seed, but it never germinated.

Viburnum tinus 'Eve Price' is a compact form of a viburnum that has been found in English gardens for centuries. Carmine buds open to light pink flowers throughout a mild winter, followed by metallic blue fruits that eventually turn black. It is a Zone 7 shrub. I would plant it next to my scree bed so that the glossy green leaves, when viewed next to the gray and lichened stone, would seem even brighter on rainy days.

The scree bed reminds me of my try with the Himalayan mayapple (*Podophyllum hexandrum*). The seed I obtained from the Alpine Garden Society germinated with ease, and soon I had five healthy plants. Three were lost to slugs; one was planted in rich but shady soil just above the scree plain; another was given to my gardener friend twenty miles away in Pennsylvania. For some reason my plant always leafs out but never blooms, yet my friend's plant not only blooms, but produces the lovely orange-pink fruit.

Then I have a list of lost plants.

Fraser's sedge (*Cymophyllus fraseri*) lived for some years and then perished. The location was perfect—under the shade of a weeping birch and settled in moist earth. Everything seemed destined for success, but by the second year, the glossy, straplike leaves began to tarnish and there was only one quaint blossom. By summer of year three it was gone.





Rosa moyesii

"Stop!" shouts an inner voice. "Soon you will become maudlin with your talk of failure. Those white plastic labels that mark the place of fallen plants will no longer resemble Chiclets but will become lines and lines of tombstones."

"But all those plants I've lost-"

"Write as though you have a garden in a warmer clime."

If only I could garden under a warmer sun, I would have huge banks of Himalayan lilies (*Cardiocrinum giganteum*). Monocarpic they may be, but I would take my chances just to see their ninefoot stalks smothered with their fantastic lilylike flowers. They would be planted next to my Japanese maple, and their roots would be protected by a mass of lilyturf (*Liriope muscari*).

In that garden, the unbounding lilyturf would be held in check by an ambling border of aged bricks (their tops just brushed with moss), and on the nether side of the brick there would be clumps of Oconee-bells (*Shortia galacifolia*), a low-growing evergreen. Surely few American wildflowers are as beautiful as these pink or white bell-like flowers nodding above leaves that turn bronze and red in the fall.

Years ago I succeeded in having one *Meconopsis horridula* bloom and will never forget the flower. If allowed, I would have a bed of these blue poppies, their thorny stems protecting their beauty. Then to play against the blue would be a line of *Calceolaria* 'John Innes', their nodding golden slippers perched on slender stems and looking up at the poppies that are looking down on them.

I would not forget the drama of the evening. Nearby would be a number of evening primroses (*Oenothera caespitosa*), their fragrant, white, four-petaled blossoms unfurling like a Disney nature film as soon as the sun dips in the western sky. And just a few steps away would be a very large and very mature specimen of the angel's trumpet (*Brugmansia suaveolens*). This tropical plant from southern Mexico bears huge, white, pendant, trumpet-like flowers, sweetly fragrant at night. Mine would be potted in an antique black iron urn with large handles made to represent putti from Renaissance Italy.

Continued on page 38

Pronunciation Guide

Abies amabilis AY-beez ah-mah-BILL-iss A. grandis A. GRAN-diss A. lasiocarpa A. lah-see-oh-KAR-pa Abutilon hybridum ah-BEW-tih-lon HY-brid-um Acanthus mollis ah-CAN-thuss MOLL-iss Ajuga reptans ah-JEW-gah REP-tans Andromeda glaucophylla an-DROM-ee-dah glah-KO-fill-ah Arenaria montana a-ray-NA-ree-ah mon-TAN-ah Armeria maritima are-MARE-ee-ah mah-RIT-i-mah Artemisia stellerana ar-tay-MIS-ee-a stell-er-A-na Aurinia saxatilis aw-RIN-ee-ah sacks-ah-TILL-ee Bletilla striata bleh-TILL-ah stry-AY-ta Brugmansia suaveolens brewg-MAN-see-ah swav-ee-O-lenz Calceolaria kal-see-oh-LAIR-ee-ah Calla palustris KAL-ah pah-LUSS-tris Cardiocrinum giganteum car-dee-oh-CRY-num ji-GAN-tee-um Carex CARE-ecks Carlina acaulis kar-LEE-na ah-CALL-iss Cattleva cat-LAY-ah Chrysanthemum nipponicum kris-AN-thah-mum ni-PON-ih-kum Colchicum autumnale KOL-chik-um aw-tum-NAY-lee Cordyline australis core-dee-LIE-nee aw-STRAIL-iss Cortaderia selloana core-tah-DARE-ee-ah sell-o-A-na Cyclamen hederifolium SYKE-lah-men head-er-i-FOE-lee-um C. repandum C. re-PAN-dum Cymbidium lowianum sim-BID-ee-um loh-ee-AH-num Cymophyllus fraseri si-mo-FILL-us FRA-zer-rah Cynara cardunculus sigh-NAR-ah car-DUNK-u-lus Cytisus ardoini sigh-TISS-us are-DOE-nee C. purpureus C. pur-PUR-ee-us Dennstaedtia punctilobula den-STET-ee-ah punk-tee-LOB-ew-la Dianthus deltoides die-AN-thus del-TOY-deez Drvas octopetala DRY-as ok-toh-PE-ta-la Dryopteris dry-OP-ter-iss Eriophorum spissum ee-ri-OFF-o-rum SPISS-sum Eryngium giganteum e-RIN-ji-um ji-GAN-tee-um Francoa ramosa

frang-KO-a rah-MO-sah

Glyceria gli-SE-ree-a Gunnera chilensis GUN-er-ah chi-LEN-sis Hemerocallis flava hem-er-oh-KAL-iss FLAY-va H. fulva H. FUL-vah H. lilioasphodelus H. lil-ee-o-AS-foe-dell-us Hosta HOSS-tah Iberis eye-BEAR-is Ieffersonia dubia ief-er-SON-ee-a DO-bee-ah Lewisia cotyledon var. howellii LOU-iss-ee-ah ka-ty-LEE-don var. how-WELL-ee-eye Leycesteria formosa lest-E-ree-a for-MOE-sa Liriope muscari li-RIE-o-pe mus-KAH-ree Mahonia aquifolium mah-HONE-ee-ah ak-qui-FOE-lee-um Meconopsis horridula meck-on-OP-sis ho-RID-ew-la Menyanthes trifoliata may-nee-AWNTH-eez try-foe-lee-AY-tah Narcissus nar-SISS-us Nepenthes ne-PENTH-theez Oenothera caespitosa ee-no-THAIR-ah kie-spi-TO-sa Paxistima canbyi pack-iss-TIE-mah CAN-bee-eye Phlox subulata flox sub-yew-LA-ta Picea engelmannii PIE-see-ah en-gel-MAN-nee-eye P. sitchensis P. sit-KEN-sis Pinus ponderosa PIE-nus pon-de-RO-sa P. strobus P. STRO-bus P. wallichiana P. wa-lick-ee-AY-na Podophyllum hexandrum poe-doe-FILL-um hecks-AN-drum Polystichum munitum pol-ee-STY-kum mew-NEE-tum Pseudotsuga menziesii sue-doe-SUE-gah men-ZEES-ee-eye Ramonda myconi ra-MON-da mi-KO-nee Raoulia australis ra-OUL-ee-ah aw-STRAIL-iss Rheum alexandrae REE-um al-ex-AN-dree R. nobile R. no-BILL-ee Rhododendron arboreum ro-do-DEN-dron are-BORE-ee-um R. catawbiense R. cah-taw-bee-EN-see R. griersonianum R. GREER-sone-nee-a-num R. lapponicum R. la-PON-nick-um

R. occidentale R. ok-si-den-TAY-lee

R. ponticum R. PON-ti-kum R. williamsianum R. wil-yamz-ee-AH-num R. yakushimanum R. ya-koo-shi-MAH-num Rosa moyesii ROW-sah MOYES-ee-eye Roscoea humeana ROSS-co-ee-ah hewm-ee-AH-na Sedum acre SEE-dum AY-kree S. spurium S. SPEW-ree-um Sequoia sempervirens see-OUOY-ah sem-per-VIE-renz Shortia galacifolia SHORT-ee-ah gah-lass-ih-FOE-lee-ah Spiraea tomentosa spy-REE-ah toe-men-TOE-sa Stapelia hardvi stah-PEEL-ee-ah HARD-ee-eye S. nobilis S. NO-bil-iss S. pasadenensis S. pass-a-DEN-en-sis Thuja plicata THOO-gah pli-KAH-tah Thymus TY-mus Tropaeolum tuberosum tro-pee-OH-lum too-bur-O-sum Tsuga heterophylla SUE-gah het-er-oh-FILL-ah T. mertensiana T. mehr-TEN-see-ah Veitchia merrillii vee-CHEE-ah mare-rill-LEE-eye Viburnum tinus vie-BUR-num TY-nuss Vinca major VIN-kah MAJ-or V. minor V. MY-nor Yucca filamentosa YUCK-ah fill-ah-men-TOE-sah

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Did you hear what happened on Frank's farm?

Some readers will remember a story published in the San Diego Union April 6 reporting a new soil conditioner made from enzymes. The first inkling I had concerning this product for gardening and commercial agriculture came from Acres, USA, a farmer's newspaper published monthly in Ravtown, MO.

The editor and publisher, Charles Walters, Jr., gave permission to quote the story about Frank Finger, a biodynamic farmer near Larned, Kan., and his experiments with enzymes on his soybean and alfalfa fields.

The difference between an inkling of information and an in-depth probe is about the same as Mark Twain's definition of the difference between a lightning bug and lightning. So when the opportunity offered, I made a trip to Frank Finger's farm.

There I set foot on the first enzyme-treated soil I have ever knowingly trod upon. All of central and eastern Kansas looks like a beautifully planned and meticulously maintained park, and Frank Finger's farm seemed to have an extra glow of well-being.

To understand what agricultural enzymes are and what they do, you must first know what they are not. Enzymes are not a fertilizer nor a plant nutrient.

enzymes: acle? a growth miracle? rod its full length of 36 inches into the ground without effort. This could be a boon to hundreds of thousands of acres of land in Southern California.

> Agricultural enzymes also will detoxify soils that have been chemicalized to death with inorganic fertilizers, herbicides and pesticides. They also will adjust the acidalkaline balance to a favorable pH 6.5 to 7, which nearly all plants prefer. Even high alkali soils can be restored to production.

> They will cause heavy soils to flocculate (to loosen and break down) so the structure is loose and plants can develop a more massive root system and irrigation water or rain can penetrate more quickly, evenly and deeply.

> Perhaps the most important thing of all that enzymes do is improve the soil's "cationexchange" capacity. Cation-exchange means the release of the natural minerals and plant nutrients by unlocking them and converting them to a form the plant can use to make its food by photosynthesis.

> No matter how bad your soil is, it is almost certain that you have considerable ancient minerals and trace elements which it needs but which are locked in by an imbalance caused by a lack of organic material and enzymes. By adding both to the soil, the enzymes supply the magic key to unlock

these things and thereby addjust the cationexchange capacity.

Robert Herlocker of Girard, Kan. says:

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Frank Finger's wife, Gay, takes care of the vegetable garden, shrubs and house plants:

"Last spring I sprinkled my row of carrot seeds with 1 1/2 gallons of water with 1/4 cup of Nitron added before covering the carrots. In five days the carrots were up so thick I had to thin them several times. We ate them through the season and mulched them when freezing weather came. We have been digging and eating them all winter."

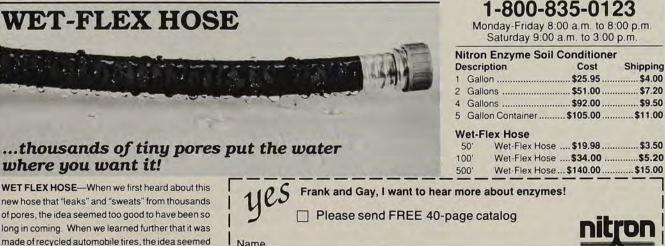
Also, she has a cucumber story: accidently over-treated one of my cucumber plants with a mixture of half water and half Nitron which I had intended to dilute; however, I watered the area deeply and that cucumber plant took over the whole patch. One day in July I picked 79 from it and picked 50 on each of three other days that week. I pulled up all my other cucumber plants to give this one room to spread."

There are many other stories about enzymes that border on fantasy. Perhaps I can tell about them later.

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new hose that "leaks" and "sweats" from thousands of pores, the idea seemed too good to have been so long in coming. When we learned further that it was made of recycled automobile tires, the idea seemed even better. Several hundred thousand feet later, our customers continue to give us feedback on the qualities of Wet-Flex Hose. Wet-Flex Hose works best on low pressure, reduces water usage and eliminates evaporation. Buried subsurface (2 inches to 12 inches, depending upon the crop), Wet-Flex Hose conserves even more water and is "tough" enough to last for years.

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Book Reviews

Social Gardens

Charlotte M. Frieze; photography by Peter C. Jones. Stewart, Tabori & Chang, New York, 1988. 223 pages. Hardcover, \$40.00. AHS member price, \$32.00

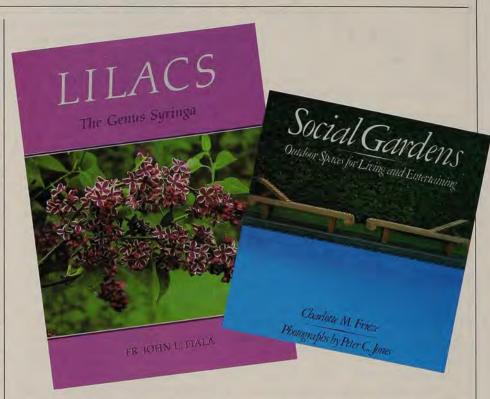
The selection of idea books for garden design is legion, and on the shelves of the bookstore they vie hotly for the browser's attention. Social Gardens by Charlotte Frieze will most likely jump into the hands of a prospective buyer on the strength of its very attractive cover photograph, which shows the inviting scene of a cerulean blue pool with two teak chaises longues placed in front of a perfectly manicured hedge. The striking cover is followed by excellent photographs by Peter C. Jones and accompanied by a dreamy text that should provide many ideas from which garden designers (of both the armchair and professional kind) may draw.

While most garden idea books include many European gardens built from resources of national exchequers, this one consists primarily of private American gardens that probably are not widely known and that have been built with more modest means. Many of the ideas will be useful to people with smaller properties, small urban gardens, and roof decks.

This book is not an instructional manual that gives exact dimensions and details, but rather invites readers to analyze a design problem—such as "What sort of an experience should entering a property be?"—and then leads them through suggestions as to how this experience may be achieved.

Good design is to a great extent an expression of appropriateness; this book suggests appropriate solutions for all sorts of garden design problems. The selected gardens are simple, subtle, and not overdesigned. It is refreshing to read a garden book in which the author makes practical suggestions based on her own observations and experiences rather than parroting trendy design jargon. In this respect, the book follows in the tradition of the late Russell Page's *Education of a Gardener*.

The final pages feature helpful lists of the designers and contractors whose work appears in the book and also lists of garden furniture, ornament suppliers, and nurseries. This is not, nor do I think its author



intended it to be, an exhaustive treatise on garden design. It is a thoughtful work, nicely presented, and would make an attractive and inspirational gift for any garden enthusiast as well as a valuable addition to anyone's library.

-Peter Cummin

Peter Cummin is principal of Cummin Associates, Inc., a Cambridge, Massachusettsbased firm of landscape architects that specializes in residential landscape design work in several states.

The Hosta Book

Edited and compiled by Paul Aden. Timber Press, Oregon, 1986. 133 pages; illustrated. Hardcover, \$29.95. AHS member price, \$25.45.

"While there is no one 'perfect' genus among the perennials, one could make a case for *Hosta*," suggests the dust jacket of this book, in which Paul Aden, who has devoted many years to developing and promoting hostas, offers us the first comprehensive treatment of this popular shade-loving plant.

Aden, owner of the Garden of Aden in Baldwin, New York, and a man who knows his perennials, has compiled a wealth of information on hostas over a period of fifteen years, and is the author of six of the book's fourteen chapters.

To write the rest, he has assembled a distinguished list of co-authors. These writers, lecturers, and botanists, who each contribute a chapter on the subject, represent three continents, giving this book a distinctly international flavor.

Based on the cumulative years of its authors' experience, the book's approach is practical. Although the volume of information may overwhelm the novice gardener, the practiced home landscaper could not find a better reference guide on the hosta.

Breeders throughout the world have shown a keen appreciation for the value of hostas in the landscape and have developed many new cultivars. John Elsley, a distinguished "plant hunter" for Wayside Gardens and George W. Park Seed Company, contributes a chapter on the diversity of these plants, whose color, leaf texture, and shape have been greatly improved. The book contains a liberal quantity of color photographs of new types.

Another chapter of particular interest is by Dr. Samuel B. Jones Jr., a botanist at the University of Georgia, who is currently involved in extensive research on hostas. His chapter deals with the cultivative history of the hosta, the bewildering squabbling about nomenclature, and the relationship of hostas to similar plants.

Aden's most valuable contribution to the book is in the chapters on cultivation, particularly the section on hybridizing. He gives information on harvesting the seed capsules, storing and planting of the seed, as well as instructions on the growing of the hosta seedlings.

The book also contains several chapters on the uses of hostas in the landscape. These include ideas for woodland settings and for color combinations available through using hostas. Andre Viette's chapter on successful companion plants describes other species that can prosper along with hostas in shady locations.

The Hosta Book provides information on hostas and shade gardening found in no other book that I have seen, and would make a valuable addition to any garden library. -John P. Guerin

John P. Guerin is a garden editor, free-lance writer, and lecturer. He owns a landscape company in Atlanta, Georgia, that specializes in shade gardens.

Lilacs: The Genus Syringa

Father John L. Fiala. Timber Press, Portland, Oregon, 1988. 372 pages, illustrated. Hardcover, \$59.95. AHS member price, \$50.95.

Truly monumental books are rare. For lilac enthusiasts, the last one was *The Lilac* by Susan McKelvey, published in 1928. Now we have *Lilacs: The Genus Syringa* by Father John Fiala. The distillation of a lifetime of effort, it has been eagerly awaited by a worldwide audience.

The book contains twelve chapters, with complete sections on taxonomy, including descriptions of several new taxa that are published here for the first time. The chapter on history traces the lilac from its centers of origin to Europe and across to America. There are also chapters on culture, propagation, and landscaping with recommendations of cultivars, species, and companion plants based on Father Fiala's extensive garden experience.

Throughout all the chapters, the reader gets glimpses of Father Fiala's personal philosophy as well as his endeavors with other plants such as peonies and crabapples. The last chapter, on "Lilac Hybridizers of Yesterday and Today," gives insight into not only the goals and criteria for the creation of new lilacs, but also their creators. At the conclusion of the text, there are nearly forty pages of appendices with lists of outstanding lilac collections and gardens; noted explorers, discoverers, and introducers of the species; advice on handling lilacs in floral arrangements; and an extensive bibliography.

But no matter how extensive the chapter headings or range of appendix subjects, Lilacs will be noted for two additional qualities. One is the great number of color plates. Lilacs are known and loved for their flowers, but those flower colors are not easy to photograph or reproduce on the printed page. It is due to Father Fiala's insistence and Timber Press's technical ability that there are almost 400 color photographs. No lilac book ever published has presented such a color menu of the newest cultivars as well as the old standards. With those "true to life" pictures, a gardener can compare cultivars or check the veracity of a catalog description.

The second unique feature of Lilacs is the author's style. There can be no question about his authority. He has been involved with lilacs since he was a boy, has been an active hybridizer for more than forty years, was one of the founders of the International Lilac Society, and has a whole wall of awards to prove his standing in the horticultural community. But beyond that, he writes in an engaging personal style that will draw readers into the text, where they will find new delights on one page after another. The author's enthusiasm for lilacs and the people who are associated with them is infectious and spills out onto the page.

Lilacs is a comprehensive, authoritative reference book that reads like a chat over the back fence. It is a must for any library that is to be considered complete, and for lilac enthusiasts everywhere.

-Dr. Owen M. Rogers

Dr. Owen M. Rogers is professor of horticulture and chairman of the Plant Science Department at the University of New Hampshire. He has been a lilac breeder for over twenty years and is a past president of the International Lilac Society.



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CASCADES

Continued from page 17

into the hillside. Early excavation was backbreaking work using, again, only a mule and drag bucket.

One of the pools is shaded like a mountain glen. Here, conifer branches weep over the blue water, and the edges are planted with plantain lilies (*Hosta* spp.) and various types of ferns. Of the ferns, the most unusual is the sword fern (*Polystichum munitum*), also called the giant holly fern. Gordon collected them from the "wet" side of the Cascades. They are evergreens with fronds ten inches wide at the base and four to five feet in length.

A hidden pool was the first large project that Gordon tackled by himself. The pool is reached by climbing down a rock staircase and entering a sunlit cove sheltered by the hillside. Conifers cover one slope and the other is a mass of flowering trailers; each, in its season, reflects color in the water.

Down from a steep incline, visitors come upon two small, oval-shaped bodies of water called "twin pools." A tiny trickling stream also descends from above, enters the smaller pool, and then feeds the larger. They were the last pools to be constructed, in 1972. Luckily, the Ohmes were able to reach the lower excavations with a tractor, greatly facilitating the work involved.

At the highest point of the garden stands "The Lookout." It is similar to but smaller than the garden shelter. One climbs up to enter it near a small grove of the shinyleaved Oregon grape holly (*Mahonia aquifolium*). From these heights, the cineramic scene is all encompassing—the gardens, the valley, and the distant mountains. The viewer can imagine its majesty in early sunrise, as well as in the depths of winter when the conifers are cloaked in heavy snow.

Mother Nature left this area of the world in a tumultuous state, depositing upon it giant boulders and rushing rivers, and in places such as this foothill, she left the soil barren of vegetation. Visitors to Ohme Gardens can only wonder at the tenacity of the Ohmes in bringing water to this dry land and, with it, the beauty of growing plants. Because their monumental labor was coupled with skill and artistry, they created a unique masterwork. Hopefully, Gordon's words will be heeded in the future, and the gardens will be "maintained and perpetuated for the enjoyment of the generations that follow us."

Ruby Weinberg is a frequent contributor to *American Horticulturist*.

Sources

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- Niche Gardens, Dept. AH, Rt. 1, Box 290, Chapel Hill, NC 27514, catalog \$3.

The Other Side of The Cascades

- Colorado Alpines, Inc., P.O. Box 2708, Avon, CO 81620, catalog \$2.
- Forestfarm, 990 Tetherow Rd., Williams, OR 97544, catalog \$2.
- Girard Nurseries, P.O. Box 428, Geneva, OH 44041, catalog free.

Rhododendrons

- Bovees Nursery, 1737 S.W. Coronado, Portland, OR 97219, catalog free.
- The Cummins Garden, 22 Robertsville Rd., Marlboro, NJ 07746, catalog \$2.
- Greer Gardens, 1280 Goodpasture Island Rd., Eugene, OR 97401, catalog \$2.

Daffodils

- The Daffodil Mart, Rt. 3, Box 794, Gloucester, VA 23061, catalog \$1.
- McClure & Zimmerman, P.O. Box 368, Friesland, WI 53935, catalog free.
- Grant E. Mitsch Novelty Daffodils, P.O. Box 218, Hubbard, OR 97032, catalog \$3.
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Irises

- Aitken's Salmon Creek Garden, 608 N.W. 119th St., Vancouver, WA 98685, catalog \$1.
- Bay View Gardens, 1201 Bay St., Santa Cruz, CA 95060, catalog \$1.25.
- Schreiner's Gardens, 3629 Quinaby Rd., N.E., Salem, OR 97303, catalog \$2.
- Shepard Iris Garden, 3342 W. Orangewood, Phoenix, AZ 85051, catalog free.

Daylilies

- American Daylily & Perennials, P.O. Box 7008, The Woodlands, TX 77387, catalog \$3.
- Andre Viette Farm & Nursery, Rt. 1, Box 16, Fishersville, VA 22939, catalog \$2.
- Gilbert H. Wild & Son, 1112 Joplin St., Sarcoxie, MO 64862, catalog \$2.

Trials of a Zone 5 Gardener

- Carroll Gardens, 444 East Main St., Westminster, MD 21157, catalog \$2.
- Fennell's Orchid Jungle, 26715 S.W. 157 Ave., Homestead, FL 33031, catalog free.
- Mesa Garden, P.O. Box 72, Belen, NM 87002, send two postage stamps for plant list.
- Wayside Gardens, 1 Garden Lane, Hodges, SC 29695, first catalog free.





TRIALS OF A ZONE 5 GARDENER

Continued from page 31

Walking over to the new, circular, 5,000gallon reflection pool, I would pass my clump of sea hollies (*Eryngium giganteum*) with their ghostly gray and serrated bracts. But instead of producing one or two seedlings, as my plants usually do, this new batch would produce an abundance of plants year after year.

Next to the pool—where its reflection would double its size—would be a *Gunnera chilensis*, sending up its giant ribbed leaves on red, prickly stems and proclaiming to all the world around me that Kew Gardens or Chartwell are not the only places with such a brilliant—and threatening plant.

There is one type of bear's breeches (*Acanthus mollis* 'Latifolius') in my garden today. It plods along from summer to summer but only flowers once a decade, and the leaves—the inspiration for the rather baroque effect of a Corinthian column—never attain the size that tourists see when walking the gardens of Rome or southern Italy. In my new garden, there would be a glossy mound of them, four feet high with a spread of twelve feet.

And I must not forget my infatuation with Himalayan honeysuckle (*Leycesteria formosa*). Every few years I start seeds that quickly grow into good-sized plants, and I rush to the garden looking for a spot where they might survive. They never do. In my dream garden, the bottle-green shoots will produce chains of white flowers, each surrounded by a purple bract, and will experience a balmy autumn, allowing the purple berries to form so that my flock of peacocks will relish the fruit as they walk across the lawn.

Most orchids would be relegated to a larger greenhouse, but I would still have a number of *Bletilla striata* blooming in the shade of a broom, perhaps *Cytisus ardoini* with its golden-yellow flowers, or to give an electric jolt to the orchid's lavender, a purple broom (*C. purpureus*).

My garden would not only be warm, but would be surrounded by a magic lasso just like Wonder Woman used. All the plants inside its ring would be safe from pests, either four-footed or winged.

Rhododendrons would be present along the edge of the woods, just beyond the last part of the garden border. Not just any, but perhaps *R. williamsianum* from China, a small shrub with flowers of a delicate pink, or *R. griersonianum* from Burma, with bell-like flowers of shocking scarlet. Nearby would be a five-by-five-foot spot full of *Yucca filamentosa*, so that when the flowers appear the night air will be filled with the sound of whirring moth wings as the moths fly across the face of a glowing moon.

There's an open spot in front of a low stone wall that I built to contain a mix of spring bulbs. I would set in that spot two other plants that I see only in my mind's eye: a *Rheum alexandrae* and a Sikkim rhubarb, *R. nobile.* "Rhubarb," you say. Ah, yes, but what rhubarbs! Plants with panache: Sikkim with its straw-colored bracts on four-foot stems and the other with greenish-yellow handkerchief bracts held five feet above the ground.

In the rock garden there would be my three R's: Ramonda myconi, the type with the deep lilac petals bouncing above those green, crepe-papered leaves; Raoulia australis, from New Zealand, forming a huge mat of sulphur yellow that would border the flagstone path to the garden's interior; and Roscoea humeana, a glowing purple, surrounded by various small sedums scattered here and there, all looking as though they were well over fifty years old. Instead of my present three or four Jeffersonia dubia, there would be dozens, and pink and white candystriped Lewisia cotyledon var. howellii would artfully cascade over the wall just behind the rhubarbs.

Around a little reflecting pool set in the center of the rock garden there would be a thicket of *Paxistima canbyi*, that somewhat hardy dwarf evergreen from the mountains of West Virginia, and just to the right would be many cyclamen, including both *Cyclamen repandum* and *C. hederifolium*, surely some of the most beautiful flowers in the world.

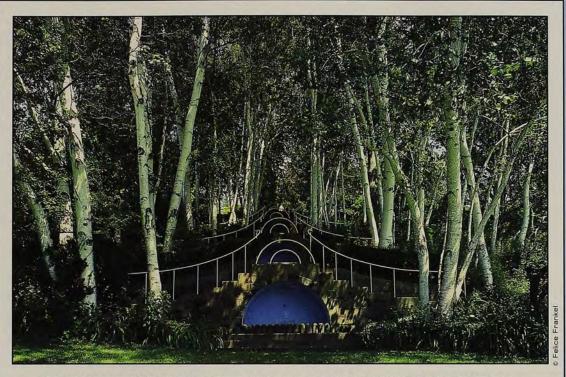
I would not leave out a healthy clump of *Carlina acaulis*, but instead of having, at best, two flowers every three years, my alpine thistles would produce dozens of blossoms.

Finally (and artfully to the left of center), in the greenness of the stately lawn there would be a giant clump of pampas grass (*Cortaderia selloana*), not the common white kind but probably the black- or pinkcolored type.

But I must not ramble on. With all its limits, my present garden is a happy place, ... and soon it will be spring....

Peter Loewer, Cochecton Center, New York, writes frequently for *American Horticulturist*. His newest book is *American Gardens*.

Fletcher Steele, Gardenmaker:



The arching rails of Steele's Blue Steps at Naumkeag in Massachusett's Berkshires echo the semi-circular vaults, while the grove of *Betula papyrifera* highlights the white rails.

A Symposium and Exhibition

For six decades until his death in 1971, landscape designer Fletcher Steele practiced landscape design as a fine art, and served as the fundamental link between the nineteenth century's Beaux Arts formalism and modern garden design. An exhibition illuminating Steele's design innovations and stylistic development will open in the Memorial Art Gallery in Rochester, New York, April 29. To launch the exhibit, the American Horticultural Society is sponsoring a Fletcher Steele symposium in Rochester the weekend of April 29-30. Participants will include Robin Karson, contributing editor for Garden Design and Landscape Architecture who has recently written a biography of Steele; landscape designer Dan Kiley, whose works include Washington's Dulles Airport and the exterior and atrium of the East Wing of the National Gallery of Art; Peter Hornbeck, who was a draftsman and assistant to Steele: JoAnn Dietz Beck, who has studied Steele's ideas for smaller home gardens; Katherine Moss Warner, general manager of Parks Horticulture at Walt Disney World, whose childhood home was surrounded by one of Steele's most dramatic gardens; and a panel that includes Carolyn Marsh Lindsay, president of the American Horticultural Society, discussing the maintenance and preservation of Steele's works. Additional support for this project has been provided by the Memorial Art Gallery of Rochester and the Allyn's Creek Garden Club. The Saturday session, including lunch, is \$50. The Sunday session is \$40. For more information, call AHS tollfree at 1-800-777-7931.

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Letters

This marks the first "Letters" column for the American Horticulturist magazine. We believe that our members should have more opportunities to express their ideas to us and each other, and hope to hear from many more of you in months to come. Letters will be selected; try to keep them to 225 words or less. All are subject to editing for style and length.

Specs for the Rooftop Garden

Regarding your article "Gardening on a Manhattan Rooftop," August, 1988, how can one determine whether or not a roof can bear the weight of a roof garden? You also neglected to specify the suggested depth of soil used, or are all shrubs and plants contained in tubs or pots?

– Jane Ferrell Charleston, West Virginia

David Murray, owner of the garden described, responds:

In determining the weight that my roof can bear, I consulted with a professional building engineer to define the existing roof structure and condition. His report stated that the roof was constructed of steel eye beams covered over with reinforced concrete. Taking into consideration the overall weight load of the bearing walls with the span of the roof, he reported that the roof could safely sustain 120 pounds per square foot, with somewhat more weight on the perimeters.

To determine the weight of the permanent planters, I built a one foot square box thirty-six inches high and bought a fifty-pound bag of topsoil. The soil filled the box up more than twenty-four inches, so I knew that I was safe because I would be adding peat moss and manure to the planting medium. I used this mixture for all the plants and have found that just about anything will grow in eighteen to twentyfour inches of topsoil, either in wooden boxes or pots.

Portrait of a Favorite

I changed my mind about canceling my membership after receiving your letter and seeing the beautiful porcelain berry vine picture in the August issue.

Maybe you would like to hear about our porcelain berry vine. We live in Rich-

mond's Fan District. The vine festoons a five-foot fence between our garden and the alley and every year attracts attention from passersby. The bees like the flowers, and of course, birds like the berries, but they usually let us enjoy them for a while.

A small pot was given to me about twenty-five years ago, and I was told it was a "mystery vine." It didn't seem to be known around here. Virginia Polytechnic Institute and State University identified it for us as turquoise berry, porcelain berry, and *Ampelopsis brevipedunculata*, which is fun to pronounce, and people enjoy hearing the various names.

-Florence Bauer Richmond, Virginia

Kudos for October's Issue

October 1988 has arrived and I enjoyed every bit of its contents. Of particular interest was "The Designer As Artist" on the work of Fletcher Steele. Two years ago on a conducted tour for the Men's Garden Clubs of America, a national organization, I visited the Choate garden. When I opened the October issue it was at the pages showing the grove of *Betula papyrifera*. I recognized it immediately. Truly a masterpiece.

> – Albert Wilson Menlo Park–Palo Alto, California

"Wonderful, wonderful, most wonderful out of all whooping!" (William Shakespeare). Henry Mitchell's article in the October 1988 issue has brought me more delight than one could imagine. I want each and every plant, and a neighbor like Henry Mitchell just over the garden fence!

-Rebecca T. Frischkorn Charleston, West Virginia

After reading several of Marcia Bonta's articles previously published by the American Horticultural Society, it was with pleasure that we looked forward to your October issue and were not disappointed. ("One Woman's Legacy" describing the Caroline Dormon Nature Preserve.)

The response from our friends has been delightful. Comments ranged from "well deserved" to "thanks for helping bring Southern gardens to the front"...

– Jessie F. Johnson Caroline Dormon Nature Preserve Saline, Louisiana

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Sterling Tours, 2707 Congress Street, Suite 1-H, San Diego, CA 92110 (800) 727-4359

April 13-15, 1989

Historic Gardens of Fredericksburg Travel back in time to restored Virginia estates and

gardens. The original residents of homes on this tour include patriot George Mason; George Washington's mother, Mary; Washington's only sister, Betty Lewis; and artist Gari Melchers. You'll also see 300year-old Muskettoe Point and AHS's own River Farm. Leonard Haertter Travel Company, 7922 Bonhomme Avenue, St. Louis, MO 63105 (800) 942-6666.

May 9-25, 1989 The Gardens of Coastal Iberia, France, and Britain

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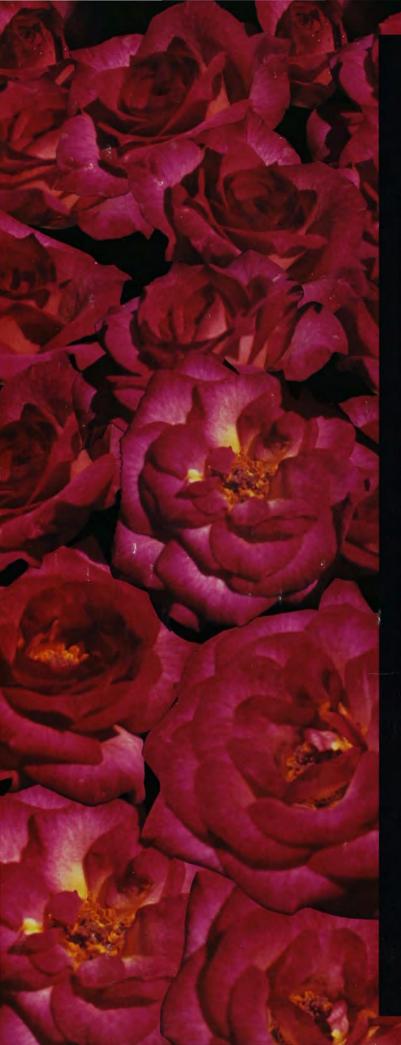
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August 1-21, 1989 U.S.S.R. and the Caucasus

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