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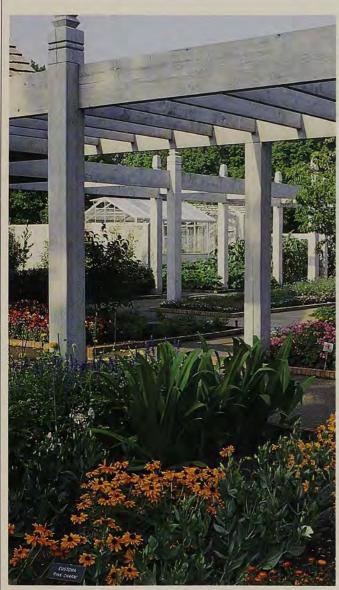
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On the Cover: Tulipa greigii announces the arrival of spring with its low-growing red blossoms and mottled leaves. A self-proclaimed "tulip addict," the late Russell Page was an English plantsman and gifted landscape designer who created beautiful gardens all over the world. Read about his own dream garden starting on page 24, a reprint of the last chapter from his book The Education of a Gardener. Photo by Betsy Fuchs: PHOTO/NATS.

Left: The Francis de Vos Home Demonstration Garden at the Minnesota Landscape Arboretum provides homeowners with new, adaptable landscaping ideas. The Arboretum, featured on page 20, covers over 905 acres and is known for its research on and introduction of many cold-hardy plants. Photo by Janis Kieft.

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WhyDoWe Garden?

If you we garden? This is the question I keep asking myself when I read the results of the annual survey by the National Gardening Association, showing that gardening is, if not the number one pastime in America, among the top two or three outdoor leisure activities. A cover story in *Time* magazine, June 20, 1988, dealt with all aspects of gardening except the one basic question, why? I do not have all the answers. I do know that everybody is talking about gardening, and that, as Eastman Kodak CEO Colby Chandler said in a recent magazine interview, we do not garden for the vegetables, we garden for other reasons. When the John Deere Company built their new headquarters, they asked landscape architect Hideo Sasaki to have no employees more than forty-nine feet away from plants, because of evidence that productivity declines at that point. When PepsiCO was on a plateau, their expansive leader Donald Kendall engineered a move to a suburban location with beautiful gardens all around, and productivity soared.

Poets through the ages have immortalized gardens and flowers; great literature zings with the joy of gardening. The Bible tells us that "The leaves on the trees were for the healing of the nations" (Rev. 22:2) and that "The tree of the field is man's life" (Deut. 20:19).

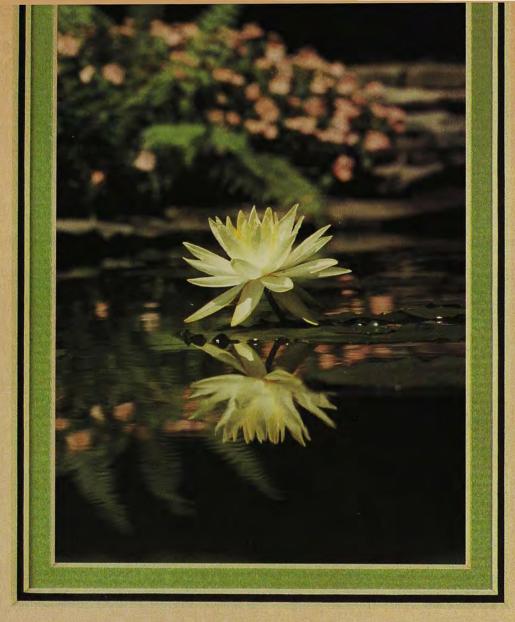
In modern-day Philadelphia, Louise Bush-Brown started an inner city program that has revolutionized viewpoints about city gardening and the importance of hands-on gardening. The Pennsylvania Horticultural Society has refined and built a system, now copied in hundreds of cities, with the same results—renewed self-esteem, decreased crime, and a more beautiful city!

No matter what motivates each individual gardener, our country is alive with the joy of gardening. The Annual Meeting of the American Horticultural Society provides a special time each year for members to eat, drink, and talk gardening. With such a grand common interest, you never need to worry about boring someone with your latest trials and triumphs! Our meeting this year in Minneapolis-St. Paul, Minnesota, July 26-29, will include a special focus on Dr. Liberty Hyde Bailey, the great man of American horticulture who inspired a nation to think about the importance of plants, and who left a legacy that never has been equaled. This rich heritage needs to be explored and rediscovered.

The entire program would please him. He worked incessantly to improve cultivated plants, and to learn from native flora. His constant concern was that we should protect water, our most valuable resource. Each day of our Annual Meeting, today's leaders in the horticultural world will discuss these vital aspects of horticulture. The culmination will be Saturday morning, July 29, when the meeting will focus on the great man himself and underscore the influence that he has had, and we knew it not! Many of his students and colleagues will refresh us with special stories about the giant he was and still is.

I hope that everyone who can possibly attend will share this rich horticultural experience with me in a most beautiful part of our country, with the nicest people you have ever met as our hosts. Everyone is invited; everyone is welcome. I look forward with great pleasure to seeing you there July 26-29.

lardy mark hindsay



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A Thyme Collection Finds a Home

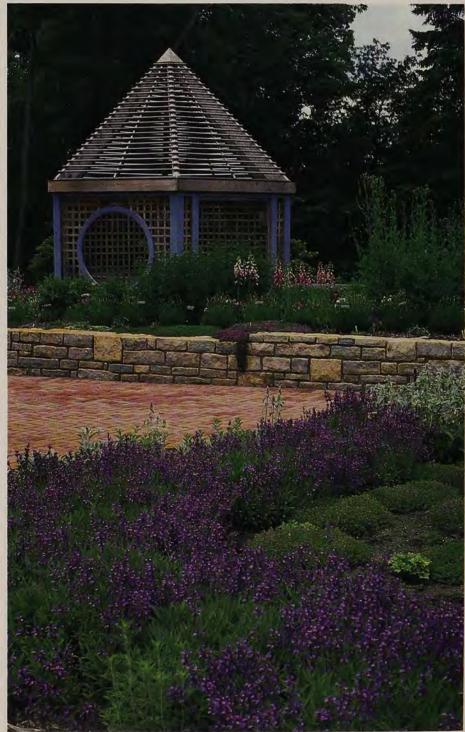
he task: Design an herb garden that will be both sensual and educational; that will look like an herb garden despite a natural setting, rather than the typical formal one; and that will provide a permanent structure for plantings that will themselves be subject to experimentation and change.

The result: the herb garden of the Inniswood Metro Gardens in Westerville, Ohio, dedicated in June 1988.

The herb garden was the culmination of a dream for the Central Ohio Unit of the Herb Society of America, whose approximately fifty members from the Columbus area had been together only five years when the garden was planted. The unit had been the fortunate recipient of a collection of Thymus plants from throughout the United States, which had been gathered and identified by Cornell student Harriet B. Flannery for her doctoral dissertation and which was said by one authority to be the largest such collection in the country. The unit had the thymes in holding beds. They needed a permanent home, but that home had to meet a number of conditions.

It is a charge of the Herb Society of America to its members to plant public gardens for educational enjoyment. The herb garden design needed to place the *Thymus* collection in a display garden that would demonstrate the qualities of the particular genus. Such a place did not immediately present itself; three years were to pass while various considerations were weighed. Eventually, it was decided to situate the garden in Inniswood, a ninety-two-acre garden and nature preserve that had opened to the public in April 1984. But the selected site presented challenges of its own.

Herb gardens are repositories for herbaceous plants that call for association with some *thing*, since they are not effective in open spaces. The three-quarters of an acre chosen for the herb garden was near the former home of Grace and Mary Innis, who had purchased the land in 1960 so



Photos by Janet Oberliesen

that Grace would have land to garden and Mary could pursue her love of wildlife and birds. When Mary died in 1972, Grace deeded the land to the Metropolitan Park District of Columbus and Franklin County, but continued to add plantings while she was able. Eventually, the parks department stepped in to assist.

As a result, the herb garden site, like the rest of Inniswood, was a mature garden. It offered good drainage that had been created by amending the soil and raising the beds, plus ample sun and a natural background of mature trees, both deciduous and evergreen. Historically, herb gardens are geometric and formal. But in this case, while historic considerations were not totally disregarded, the design objective was to blend the new garden into a site that was by its nature naturalistic and free-





OPPOSITE: A gazebo balances the strong horizontal lines of the herbal beds. ABOVE: Raised beds on top of broad, brick walls enable visitors to study the thymes . LEFT: The herb garden plan, designed by Melissa Marshall of Environmental Planning & Design in Pennsylvania.

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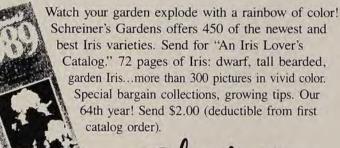


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THE DESIGN PAGE

flowing. At the same time, it had to be recognizable as an herb garden, both visually and through the fragrances it released.

Most importantly, the site had to enhance and emphasize the thyme collection. It also had to be a decorative garden and a forward-looking one, fitting into its site so perfectly that it would offer a fresh appearance twenty years hence, drawing the public back again and again. Therefore, there is no set planting plan; plantings are determined by the educational programs of the current year. Creativity is encouraged, to the benefit of the public and the herb society whose members are responsible for keeping the garden planted, maintained, and beautiful. The excitement lies in growing the plants, experimenting with plant combinations, and remaining open to possibilities.

There were many contributors to the concepts involved in the garden design. The horticultural mentor for the garden was Rexford B. Talbert, recognized national authority of *Thymus* taxonomy, who had also advised Harriet Flannery in her doctoral study. It was Carolyn Marsh Lindsay, a member of the Central Ohio Unit during the garden's early planning and now president of the American Horticultural Society, who proposed displaying the *Thymus* atop a wall.

Members of the Western Reserve Unit of the herb society, whose herb garden in the Greater Cleveland Garden Center has won national acclaim, were also generous with assistance. Elliot White, landscape architect for Metro Parks, pulled all of the proposed elements and ideas together for Melissa Marshall of Environmental Planning & Design of Pittsburgh, Pennsylvania, who drew the final design.

From a path that is the main north-south axis of the botanical garden, the herb garden is entered through pergolas that balance a gazebo further ahead, lending vertical structure to a garden that might otherwise be too strongly horizontal. This sensory experience—wisteria and the fragrant climbing rose 'Pink Pillar' grow on the pergolas—welcomes one to the intimacy of the first garden room, yet the eye is drawn beyond. Hedges of arborvitae, a gift of the Western Reserve sister unit, embrace the space.

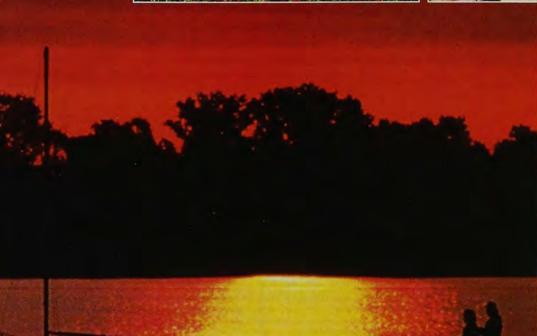
Growing along the top of the wall that curves on into the garden is the *Thymus* collection, arranged to allow for taxonomic study of the species. Since the iden-

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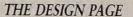
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tifying characteristics of Thymus species the small details that set them apart morphologically, such as hairs along the stems and the shape of the corolla-need to be examined at close range, the wall is designed to be sat upon, lens in hand. Reflecting the curve of the wall on the other side of the path is the raised bed that holds the hybrid thymes.

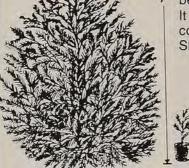
Getting to Inniswood

The Inniswood Metro Gardens are open 7 a.m. to dark daily. Admission is free. To get there from Cleveland's I-270, take the Cleveland Avenue exit north to the first traffic light. Turn east on Schrock Road and proceed to where it deadends at Hempstead. Turn south to the garden entrance. More information can be obtained by writing to 940 Hempstead Road, Westerville, OH 43081, or calling (614) 895-6216.

Within the first of several special garden spaces, the eye drops from the background of towering trees to transitional trees and shrubs, each chosen for exhibiting qualities that would allow it to be categorized as herbal. An apricot is planted in the near distance, then the eye drops again to the rue and the mallow (Malva alcea var. fastigiata) of the Blue-Grey Garden. A striking ribbon of color is formed in summer by the bloom of mallows and six lavenders (Lavandula angustifolia 'Dutch', L. dentata, L. angustifolia 'Hidcote', L. vera, L. angustifolia 'Munstead', and L. angustifolia 'Jean Davis'). These act as a backdrop for the thymes themselves, whose blooms range from white to a deep cerise, although a majority are pink or lavender in hue. The thymes in turn spill over the edge of the wall, marrying those stones to the brick of the path. This carefully thought-out design was used to good effect to set off the Thymus on the evening of the late June dedication. Earlier in the spring, before the lavenders and mallows were in bloom, the effect had been achieved with a lateblooming feather hyacinth, Muscari comosum 'Monstrosum', with its lavender-colored blossoms.

These individual gardens demonstrate the different ways in which many herbs can be used; since the focus is on Thymus,





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these plants appear throughout. For instance, its use in landscaping can be seen in a thyme lawn, which includes T. 'Doone Valley', T. quinquecostatus forma albiflorus, and T. praecox subsp. arcticus 'Coccineus'. References to history include a medieval thyme seat and an Elizabethan knot garden. The culinary garden includes the thymes most apt to be used in cooking, while T. vulgaris 'Orange Balsam' puts in an appearance in the fragrance garden. Thymes used in the bee garden along with other bee favorites are T. 'Porlock', T. 'Wedgewood', and T. herba-barona.

In the Bible Garden-which unit members think of as the secret garden because of its partially obscured location-thymes grow between the stepping stones, illustrating yet another use of the plants in home landscaping. In a hand-hewn, antique sandstone trough, miniature thymes demonstrate their adaptability to container growing and miniature landscapes. On the banks bordering the park's entrance, T. 'Pinewood' is grown for its attractiveness as a ground cover and its ability to control soil erosion.

Throughout the garden, large terra cotta pots on stone bases contain herbs not native or hardy in the central Ohio area, such as myrtle, cinnamon, and pomegranate. These, too, reflect gardens of old. All plants are grown for a purpose: to complement, to be studied, or to beautify.

The Thymus collection that began with Flannery's study is now displayed for anyone to review and enjoy. Other specimens, housed at The Ohio State University, are available for study by other institutions upon request. The thymes have become a primary study project for the Central Ohio Unit; their goal is eventually to serve as a registry for the thymes. But their herb garden itself, because of its design, encourages study by visitors, enticing them along area by area, curve by curve, reaching out and pulling them in. They are invited to touch, feel, smell, and experience fully. Their footsteps release fragrances, as does brushing against the plants. Although passive, the garden becomes participatory. As visitors depart, oils of the plants linger on flesh and clothing, calling them back for another adventure with herbs.

-Hope S. Richardson

Hope S. Richardson, editor of a nationally circulated newsletter, writes a biweekly herb gardening column for Morgan County, Ohio's weekly newspaper and has been growing herbs for sixteen seasons.



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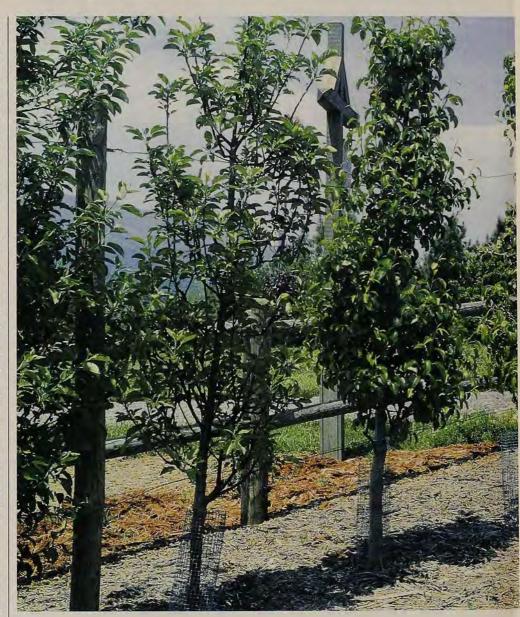
Train Your Own Mini-Orchard

Ithough I had been intrigued with the possibility of espaliering fruit trees for a long time, it was not until three years ago that I had a good opportunity to try this ancient art form, which goes back at least to the Roman Empire. My husband and I needed to move our vegetable and small fruit garden, and I saw an opportunity to incorporate six apple and four pear trees into my new garden plan. An added impetus was our discouragement with the task of caring for the dwarf, semi-dwarf, and full-sized specimens in our orchard.

For years John and I had grown several dozen fruit trees in the conventional manner. John is a fruit fanatic: we tried apples, pears, peaches, nectarines, plums, apricots, and cherries. When we began our orchard, apples were the only fruit trees sold as semi-dwarfs. As soon as the others (except peaches) were offered as semidwarfs or dwarfs, we substituted them for our full-sized trees, reasoning that, at twelve to fifteen feet, they would be easier to care for than those that grew to twenty-five or thirty feet. But each year as we got older, the difference in height became less meaningful. No matter how high you climb it, a ladder is a ladder, and the spraying equipment gets harder to carry and operate. We had to face the fact we were not as strong, acrobatic, and fearless about heights as we once were. I was ready to tackle something different: espaliers.

From my reading about espaliers and my experience with our other fruit trees, I knew that not all individual whips-single stems without any major branchingare good candidates for espaliering if you're going to be fussy about your design. In choosing the conformation to which I would train the new trees, I took three things into consideration. First, as I have so much gardening to do, I wanted the setup to be as work-free as possible. Second, I was limited as to location. Third, my objective was not a pretty design, but to grow as much fruit as I could. Going straight up was the answer, and this suited the natural growth pattern of the apples and pears I wanted.

If my goal had been a perfect shape, it



would have been easier to buy a tree already selected for and pre-pruned to the desired espaliered shape. But for the vertical shape I had in mind, branch location was not a critical factor. Instead, I looked for a young straight whip, called a maiden.

A two- or three-year-old tree is all right, provided that the branches are in the correct places for your chosen design. However, you should be careful to choose a reputable dealer and select a spur-

type tree on dwarfing or semi-dwarfing rootstock.

Spur-type fruit trees have more spurs on each limb and bear from the trunk outward, making them easier to espalier. Spurs differ from branches in being knobby, and they have leaves in clusters. Read captions in mail order catalogs carefully: some apples with "spur" in their names are not spur-type as dwarfs, but only as semi-dwarfs. For pears, choose heavily spurred







Photos by Barbara McEwan

LEFT: The McEwans' semi-dwarf fruit trees are each pruned as a cordon. TOP: Pears can be easily picked from a cordon. ABOVE: A fruit tree before pruning, showing the metal brace for the trunk.

types like 'Moonglow'.

Rules for pollination, fertilization, soil, amount of sun, and planting are the same as for free-standing specimens.

Each of my semi-dwarf trees has been pruned as a cordon-a trunk with a series of short branches emanating from it at intervals. The trees are spaced three feet apart and the branches are kept to six to ten inches; thus I have ten different kinds of fruit in a space that would be big enough

for only one semi-dwarf. (These vertical cordons can be set as close as thirteen inches apart.) Because the energies of each tree are concentrated into growing fruit and the number of fruits is artificially limited, each individual apple or pear is likely to be bigger than normal. With maximum sun, they also will be better colored and less subject to insects and disease.

Espaliering trees is comparable to growing grapes; Colonial Americans used a postand-rail fence as a horizontal training system for both. My support system consists of horizontal wires between pressure-treated posts; the wires support the trunks, not the branches. Additional support of the trunk, such as a sturdy stake, is desirable for the first year and may be necessary in succeeding years depending on the dwarfing rootstock used. In general, if the tree is kept to a narrow column shape there is little chance for the trunk to snap off.

Despite the practice I'd had pruning our orchard trees, I still was hesitant about making the first cuts on our new possessions. I was comforted, though, by the certain knowledge that the goal of every plant is to reproduce. Because pears bear on longlived spurs, and because I had been careful to choose apple varieties that bear on spurs rather than the tips of branches, I was certain that my ten trees would produce some fruit even if I made mistakes.

While the tree's framework is being established, all flowers should be removed. Rub off all buds on the trunk and arms (if any) that are not necessary for the framework, and remove all suckers and watersprouts.

When the correct height has been reached, pinch out growing tips at each pruning. Choose two or three of the strongest buds on each spur and remove the rest. If you're missing a branch in a position where you want one, cut back the stem to force growth where you need it. Spurs should not be removed; they will produce the flowers and thus the fruit. You can assist in spur formation by cutting weak, year-old lateral branches to four or five buds. The outermost buds will form shoots. Remove these to leave the innermost buds, which will form fruit spurs.

Shoots, unlike spurs, are usually straight and will grow rapidly to six or more inches long, with leaves spaced farther apart than they are on spurs. Maintenance pruning of shoots depends on how vigorously the tree is putting forth new growth.

Espaliers are not pruned during the dormant season, as is done with other trees, but in mid-June, mid-July, and again in mid-August if growth demands it. How-



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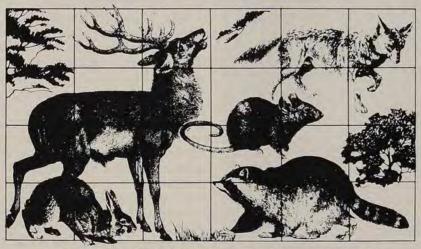
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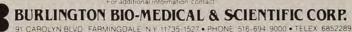


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SEASONABLE REMINDERS

ever, if the tree isn't performing well, skip the summer pruning and cut back the central leader or offending branch in winter. This should stimulate growth in spring. If more than one shoot develops on the central stem, save the strongest and straightest and remove the others.

Pruning Tips for Single Verticals

First Year: Stake whip when it is planted. Allow it to grow through the first year without pruning, unless the tree is growing vigorously, in which case prune the side shoots in August to six inches or to four buds.

Second Year: Begin the framework. Allow the side shoots to grow ten to twelve inches, then prune back to six to eight inches. Prune to a single bud any subshoots coming off the main side shoots. This first pruning should probably be in mid-June. By mid-July, if shoots have grown to ten or twelve inches again, prune back to six to eight inches. In mid-August, prune back to six to eight inches again if necessary.

Repeat Each Year: After the leader reaches six feet, pinch out the new growth on the leader when you prune the side shoots.

Because my new trees are constrained in size and no ladders are needed, the pruning process takes me about five minutes per tree. This is hardly an excessive amount of time; even though it must be done three times a year, the total still compares very favorably to pruning a free-standing semi-dwarf during the dormant season. With so little girth to each tree, there is no problem in getting to every part of it for the purpose of spraying and picking.

No matter what your age or the size of your property, espaliers have a lot to offer anyone who wants an orchard. Over the centuries some basic patterns have developed, ranging from the simple vertical cordons that I have described to U-shapes and elaborate systems of arms that can challenge the most expert horticulturist. Whichever route you take, the end result will be rewarding.

-Barbara McEwan

Barbara McEwan, freelance writer and long-time gardener, lives in Goode, Virginia.

enzymes: a growth miracle? Did you hear what happened on Frank's farm? shallow soil

by Pat Branin (Branin was the organic gardening columnist for the San Diego Union.)

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 Raytown, 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 indepth 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.

Used over a period of time, enzymes can relieve problems of

by penetrating hardpan and even marl. Finger demonstrated this on a field where he had hardpan near the

surface. He pushed a %" steel rod its full length of 36" 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 acid-alkaline balance to a favorable pH 6.5 to 7, which nearly all plants prefer. Even high alkali soils can be restored to production.



Perhaps the most important thing of all that enzymes do is improve the soil's "cation-exchange" capacity. Cationexchange 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 adjust the cation-exchange capacity

Robert Herlocker of Girard, Kan, says:

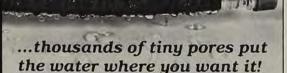
"I applied Nitron to 200 acres of soybean ground at the rate of 1/2 gallon per acre in two applications. They received approximately 11/2 inches of rain before harvest; the normal for this period is 5 inches. Even though these beans were hailed on, there was no ledging (bruising or loss of foliage), and the 200 acres averaged 35 bushels per acre."

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 11/2 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."

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

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THERE'S AN ANEMONE **FOR YOU**

by Elisabeth Sheldon

t's easy to fall in love with anemones. In trying to analyze their appeal, I think of the words "guileless," "pure," "in-nocent," and "elegant." Perhaps these adjectives don't apply to all the 100 or more species of the genus, but I still want to lay my hands on each one that will grow in my area.

Anemones are members of the buttercup family or Ranunculaceae. They have compound dissected or divided leaves, and their flowers have no petals but, instead, showy sepals that we take for petals. The many stamens, sometimes surrounding a central green knob, are part of their attraction, particularly when the flower is white. Their native habitats, almost all in the Northern Temperate Zone, include alpine peaks, dry, grassy Mediterranean hillsides, and dense shady woods. Some of them need limy grit in order to flourish; others want rich, moist soil. They range in size from a few inches to four feet high. Some are tuberous-rooted, others are rhizomatous; some species flower in spring, others in summer, still others in the fall.

This brings us to the area in which taxonomists are divided. Some, such as the writers of Hortus Third, list the species pulsatilla under the genus Anemone. The European pasque flower, called Pulsatilla vulgaris in Harkness' Seedlist Handbook, most rock garden books, and the Royal

Horticultural Society's Dictionary of Gardening, is Anemone pulsatilla in Hortus Third. What many other authorities refer to as Pulsatilla alpina, Hortus calls Anemone alpina, and so on. So, if you can't find the anemone you're looking for in a garden book, try looking under both "a" and "p."

There are several basic differences between the pulsatillas and other anemones, but the one most readily noticed by gardeners is the difference in the way they form their seeds. In pulsatillas, each flat seed in its thin container is attached to a style (part of the pistil) that eventually becomes feathery. A pulsatilla flower gone to seed carries a spherical grey, fluffy ball, similar to the seed cluster of clematis, that gradually loosens and releases each feathery style to fly off with its seed. This method of self-propagation contrasts with that of many other anemones, whose spent flowers form what looks like a thimble - a dotted, dense, truncated cone. These expand as the seed matures and set adrift little wads of cotton in which the seeds are swathed. Four of the American anemones - A. virginiana, A. caroliniana, A. riparia, and A. cylindrica - are called thimbleweed, because they are of this group.

Pulsatillas are held dear by many people, partly because they bloom so early in the spring. The best known and most widely

Satiny purple pasque flowers (Anemone pulsatilla) arise from a nest of finely divided foliage in early spring.





Photos by Pamela Harper

eft: Anemone nemorosa 'Allenii' has daisylike flowers that bloom in the spring.

Right: A fall-blooming Japanese anemone, 'Honorine Jobert', provides a mass of white blossoms about three to four feet high in the garden. Opposite: An American native, Anemone canadensis, produces white flowers, perfect for a naturalized setting.

planted of this group is the pasque flower or Easter flower (Anemone pulsatilla) that does indeed often bloom at Eastertime, even in northern North America. As early as the middle of March, the pasque flowers in my house start making preparations to bloom; in the center of the dry brown lace of the previous year's foliage small, pointed, furry ears are poking up, their rose-colored, rounded bases barely showing. Soon each plant will look like a nest of grey rabbits, and the lavender or wine-colored cups, formed of satiny sepals, will begin to open in the nest, gradually rising out of it, their stems growing taller each day until they reach ten or twelve inches. Plants pleased with their environment will carry more than forty blossoms at a time and will seed themselves in the most unpromising sites-rocky, sandy, or woody places where there is almost no nourishment. There they will thrive if moisture never remains long on their roots, and even if they are baked by the sun and whipped by the wind. There are several cultivars of pasque flower in white, purple, and red, the last, 'Rubra', sometimes blooming in a beautiful claret color. The cultivars are variable, however, when grown from seed.

Many other pulsatillas (or anemones of the pulsatilla group) are natives of Europe and Asia. Of the two from America, Anemone nuttalliana which grows out West, is similar to the pasque flower (Anemone patens), holding its glistening lavender cups clothed in silver fur close to the ground before the foliage unfurls. The mound reaches about six inches in height. Another pulsatilla found in the alpine areas of Europe is the beautiful Anemone vernalis.

One of the most enticing descriptions of a plant I've ever read was Reginald Farrer's writing of Anemone vernalis:

Anemone vernalis takes us high high into the Alps . . . Spread out flat upon the ground, still sere and bare with the passing of winter, lie pressed the two or three carrotty leaves, more coarsely and sparingly cut than in any [other] Pulsatilla; next, an inch or two of stem, shaggy with fur of bronzy gold, a fluffy frill of the same, and then, almost sitting upon the moor, like some mystic water-lily, a great gobletshaped flower, staring up to the sun, white as an opalescent pearl within, and tasselled with fire, while the outside of the pearl is ashimmer with gold and violet silk, iridescent as it catches the sun in countless shifting shades of lilac and fawn and milk . .

It almost brings tears of longing to one's eyes. Two years ago, I actually germinated seed of this alpine goddess and set the plants out in a raised bed. But I failed to incorporate grit and lime into the soil, so for that reason, or because of our non-alpine climate, the plants produced only a few rather muddy and undistinguished blossoms last spring. I mean to transplant them and to go on trying for something that

might approach, however distantly, the sublimity of what Farrer saw on the mountain. I'd like to try A. alpina too, if I can find it in a seed exchange list. It grows taller than the six-inch A. vernalis—to as much as eighteen inches—and has white flowers with blue on the reverse side. There's an A. alpina subsp. sulphurea as well, with sulphur-yellow flowers.

As for the proper anemones, about which there is no taxonomic argument, most people are familiar with the ones that are sold by bulb companies. Unfortunately, the bulb dealers often fail to inform gardeners that most of them, such as 'St. Brigid', 'St. Bavo', and 'De Caen', are not hardy in cold climates. These come from the species A. coronaria and A. pavonina and are often referred to as florists' anemones; in the spring one sees great glorious bunches of them on all the street corners of Europe. One catalog lists the scarlet anemone (A. × fulgens) for my zone, Zone 5. Since it is a cross between A. pavonina and A. hortensis, and A. pavonina clothes the brown hills of Turkey with cups of pink, lavender, and scarlet each spring, I would be overjoyed to be able to grow at least the scarlet one, A. × fulgens.

Another tuberous anemone, A. apennina, is too tender for the North, but A. blanda, from Europe and Asia Minor, which has the same daisylike blossoms as apennina, survives and spreads. A. apennina is

usually offered only in the species color blue, but A. blanda has cultivar colors of blue, pink, or white. I have A. blanda 'White Splendour' and 'Blue Star' in a light humus soil on the edge of the woods garden where they are somewhat protected by surrounding trees and shrubs. Nevertheless, I cover them with pine boughs in late fall just to make sure. They start to shine through the boughs in very early spring, and when I carefully lift off the branches I see hundreds of smooth shoots, each year more numerous than the year before. 'White Splendour' is larger and more dramatic than the blue, but doesn't spread itself around with such generosity. 'Blue Star' will soon be sprinkled all over that area of the garden.

The same can be said of another daisy-like, six-inch plant, the European wood anemone (A. nemorosa). I have sent to Oregon for A. nemorosa var. robinsoniana and 'Allenii', only to have them die or fail to multiply, yet one that I got as a bonus in a friend's gift clump of Japanese painted fern is turning up everywhere. A. nemorosa sends slender stems up from small twiggy rhizomes, and the leaves, three-parted and deeply cleft, are extremely pretty. In the wild, this anemone has considerable variation.

The American wood anemone, A. quinquefolia, is not quite so charming as the European one, but it has a delicate appeal all its own with small white flowers, each on a fragile stem, that gleam above the three, deeply-cut involucral leaves. It grows where the soil is acid, rich, and always moist. A. canadensis, another native of our woods, is a tougher individual and will romp all over your own woods if given a fair start. It will take full sun as well as shade, so more areas are available in which it can spread its thin, brown, ever-multiplying roots. The white blossoms push up as high as two inches above the palmatelydivided buttercup foliage, and if it is growing in good moist, loamy soil, it may flower from May to September.

Some people consider Anemone deltoidea the best of the American wood anemones—as fine as the European nemorosa. It should be planted in rich humus in a woodland area, where its running roots can move about easily. The low, muchdivided, shiny dark green leaves are enhanced by the appearance, on six-inch stems, of two-inch white blossoms, sometimes with a hint of pink or blue. This anemone comes from the evergreen forests of the West.

There is a yellow wood anemone from Europe and Siberia, *A. ranunculoides*, short and tuberous-rooted with three-to-five-part, deeply-cut leaves and golden yellow single





Pamela Harper

or semi-double flowers. You can often get its seed from seed exchanges, then set out your plants in shady or partly shady sections of the garden.

For years I've been trying to germinate seed of a tall (eighteen inches) anemone that carries its pinkish-white flowers in umbels, *A. narcissiflora*. It comes from the moist mountain meadows of Europe and Asia and looks wonderful in pictures, but won't perform for me. If I could obtain fresh seed it might be a different story.

I do have three potted plants of *Anemone rupicola* out in the cold frame, raised from seed last year. I am waiting to see if they will accept being this far from the Himalayas and will produce the large white flowers with pink undersides that are said to be lovely.

There are dozens of pots of A. magellanica in the nursery. It's a favorite of mine, appealing in a quiet way. It holds its many eight-inch stems straight up above the divided foliage, and when they are all almost the same height, each one produces a small, flat, cream-colored flower. These subsequently make thimbles of cotton-covered seed. So do the big, robust A. multifida and A. crinita. These plants are similar to A. magellanica, but everything about them is larger, including their off-white flowers. At least the plants I raised from seed are off-white; Hortus doesn't list the species crinita but says the flowers of A. multifida, which comes from our Western states and Alaska, can be white or yellowish.

The descriptions of *Anemone palmata* puzzle me—they don't quite tally with the

appearance of some plants so labeled that I have grown from seed. Some references say it's nine inches high with two-inch golden, or yellow, flowers. Mine are yellowish-cream. They are extremely handsome plants, but possibly not *palmata*; you can never be sure with donated seed.

I'm sure of Anemone sylvestris, and sure too that it must be the prettiest of all the medium-height white anemones. A delightful, refined yet ebullient creature, it gives freely of its pure white, fragrant blossoms for many weeks in spring and often again in fall. The buds nod like those of poppies, then straighten up to display their golden, stamened flowers to best advantage. Its stolons are busy underground so the clumps keep spreading, yet the plant could never be called aggressive. One is

told to place it in woodsy soil in shade, so that is where I obediently put it, but my neighbor has a great clump of it baking on a sunny bank where it couldn't look healthier.

We have taken the long way around for the reader who might have been looking for a discussion and perhaps a clarification of the "Japanese" anemone. Let me state firmly that I have no intention of trying to untangle a skein that my betters before me seem to have failed to unravel. I've thought, until I went into the subject seriously, that there were A. japonica, A. hupehensis, and A. vitifolia species, then hybrids or special forms of these. That may be true, but I only know that the white A. vitifolia species exists because I raised it from seed. (It's not hardy, unfortunately.) As for the others, plants from seed labeled "Anemone hupehensis" proved to be indistinguishable from plants I purchased as A. japonica, and after poring over many books, I can only conclude that these anemones have been hopelessly jumbled. A. vitifolia 'Robustissima' is easy-it's a pale pink, two-to-four-foot anemone that resembles the other tall, fall-blooming ones, except that it blooms a month earlier. The other ones, whether being sold as A. japonica or hupehensis or hupehensis japonica or A. × hybrida, are all stunning, tall, lateblooming perennials bearing elegant buds, then flowers of white, pale pink, rose, or plum in late August and September, even into October. The singles resemble dogwood blossoms. They have very enterprising horizontal underground stolons; once they've decided not to die and have started to shoot up, they'll walk all over your garden. I have recently dug out all the ones I acquired as species, and replaced them with cultivars with demure names such as 'Alice', 'Queen Charlotte', and 'Margarette' (also known as 'Margarete'), feeling that individuals so named could hardly prove to be louts and bullies. I am sanguine but not certain, and will report later.

The single A. japonica 'Alba' is not so hardy as the tall pink anemones, so one has to protect it and cheer it on rather than beat it back. The superb white 'Honorine Jobert', which will make an immense fourfoot clump, may be a bit hardier. When you look at a single white Japanese anemone, you say to yourself that it's the ultimate in flower beauty, until you see the double white 'Whirlwind'. These flowers have two rows of white sepals (bracts) with green undersides, fourteen or fifteen of them in each row. Then there is a circle of deep gold stamens with a tight, green button pinning it all down in the center. They have



Dick Keen

pposite: Anemone vitifolia 'Robustissima', an excellent tall border plant, colors the garden with delicate pink flowers in late summer. Above: Available in cultivars of pink, white, and blue, Anemone blanda grows two to eight inches high.

a gay, ruffly, dancing look about them.

Anemone japonica 'Prince Henry' is described in some catalogs as being eight inches tall, but it actually produces its dark rose double daisies at about fifteen inches. It's a fine plant, but I'm finding it to be almost as determined a colonizer as the tall unnamed singles I've tried in vain to curb. Of the taller Japanese anemones, one of the best is 'Max Vogel', standing thirty-six inches high and bearing large semi-double, clear pink flowers of good substance.

These tall hybrid anemones all bloom in late summer and fall, carrying the perennial border triumphantly through a trying period, if it is a border that eschews the deep yellows and oranges that seem to be natural for that time of year. If one has separate spring, summer, and fall borders there is no problem, but if, like most of

us, one has a single large area for perennials, one has to plant carefully in order to have a satisfactory amount of appropriate color after June. I, for one, draw the line at planting Rudbeckia 'Goldsturm', and the Helenium, Heliopsis, and Helianthus species amongst the pinks and mauves of the phlox. As mentioned above, the clumps of A. vitifolia 'Robustissima' will start to open a month before the Japanese anemones in late July or in August. Then the Japanese cultivars come on as these finish, while the phlox is still going strong, and are perfect companions for them if their tendencies towards aggression are firmly controlled.

Elisabeth Sheldon, Lansing, New York, is working on a book for publication in September that will include this article and others she has written for *American Horticulturist*.



C. Colston Burrell

The Minnesota Landscape Arboretum

If it grows in Minnesota, it must be hardy!

by Janis Kieft

orthern gardeners are a special breed, but no matter how dedicated they are, they also must have special plants. Thirty years ago, the Men's Garden Club of Minneapolis recognized the need for a place to test trees and shrubs that would withstand Minnesota's severe climate. With the help of the Minnesota State Horticultural Society and the Lake Minnetonka Garden Club, they purchased a 160-acre site that they turned over to the University of Minnesota. Thus the Minnesota Landscape Arboretum, now spread over 905 rolling acres twenty-seven miles from the university's St. Paul campus, was born out of the need for cold-hardy plants for the area's gardeners, and research plots are intermingled with its formal gardens and natural landscapes.

The arboretum, part of the university's department of horticultural science and landscape architecture, is one of only a few









OPPOSITE: The Elizabeth Carr Slade Perennial Garden, ABOVE, LEFT: A member of the Northern Lights azalea series. ABOVE, RIGHT: The Japanese garden features Minnesota hardy plants. LEFT: The Palma J. Wilson Rose Garden. RIGHT: The 'Princess Kay' plum with fragrant, white spring blossoms.

Photos Courtesy of Minnesota Landscape Arboretum

institutions in the United States involved in breeding cold-hardy plants. Since it was founded, it has been evaluating woody plants for adaptation to local environmental conditions, and thus providing valuable data to both professionals and consumers.

These breeding and evaluation activities have had an impact not only on the northern landscape, but also on the economy of Minnesota and surrounding states.

The Horticultural Research Center (HRC), founded in 1907 and now part of the arboretum, has developed fruit varieties that made the commercial production of apples and strawberries possible in its home state. Two-thirds of the apples grown in Minnesota are HRC hybrids. Nursery professionals, commercial growers, and home gardeners have all benefited from arboretum plant introductions such as 'Northwood' red maple (Acer

rubrum 'Northwood'), 'Northern Sun' forsythia, the colorful Northern Lights azalea series, and more than seventy varieties of apples, plums, apricots, pears, raspberries, and strawberries.

A fledgling blueberry industry was launched in Minnesota with the arboretum's introduction of 'Northcountry', 'Northsky', and 'Northblue' blueberries. Half as high as most cultivars, these plants resulted from crossing native lowbush blueberries with their more productive highbush relatives. In addition to producing fruit, the bright red or maroon fall color and good winter form make blueberries an excellent choice for the landscape.

The arboretum's wine grape breeding program has received national recognition for developing a wine grape that is winter hardy and produces high quality fruit. Crosses of the Minnesota native river-bank

grape (Vitis riparia) with the classic wine grape of Europe (Vitis vinifera) have resulted in several promising grape selections currently being tested in Minnesota and other parts of the country.

Two newer plant introductions are 'Cardinal' dogwood (Cornus sericea 'Cardinal') and 'Princess Kay' plum (Prunus nigra 'Princess Kay'). As its name suggests, the stems and twigs of 'Cardinal' dogwood turn a bright cherry red color that lasts throughout the winter. The 'Princess Kay' plum also provides winter interest with its dark trunk and large white lenticels. In early May, before its leaves open, it blossoms with fragrant, white, double flowers.

As the arboretum's research program has grown in importance, its species collections and display gardens also have been expanding. Nestled in its highly varied landscape is a series of fourteen formal gardens and sixty generic collections displaying more than 5,000 different species of plants adapted to northern climates.

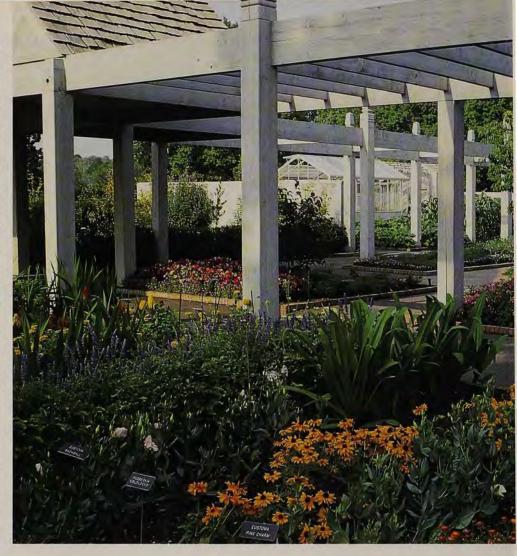
A favorite spot for springtime visitors is the Grace B. Dayton Wildflower Garden, which features native plants of the deciduous woodlands. Snow trillium (*Trillium nivale*) and bloodroot (*Sanguinaria canadensis*) appear shortly after the snow melts. As tree buds open, a variety of ferns and other woodland wildflowers carpet the six acres with the subtle hues of spring. A population of the dwarf trout lily (*Erythronium propullens*), a plant listed on the federal endangered species list and found only in Minnesota, is preserved here.

Six herb gardens exhibit plants for culinary, fragrant, medicinal, and dye purposes. In the Knot Garden, gray santolina (Santolina chamaecyparissus), green santolina (Santolina virens), lavender (Lavandula angustifolia 'Hidcote'), and germander (Teucrium chamaedrys 'Prostratum') are interwoven in an intricate knot pattern from a design that originated in the Middle Ages. A medieval monk's garden has been created in the Mary Cushman Wells Staples Cloistered Garden, which contains an arbor of climbing hops (Humulus lupulus) and bittersweet (Celastrus scandens), and beds of medicinal herbs.

The Elizabeth Carr Slade Perennial Garden displays some of Minnesota's hardiest perennials, and provides continuous bloom from late March until frost. This circular garden has a pool of fragrant water lilies and is enclosed by four large beds that welcome spring visitors with the soft pinks, whites, and blues of irises, peonies, and columbines. The season ends with the bold purples, rich indigos, and blazing yellows of mums and asters. Lily, delphinium, monkshood, and phlox are a few of the traditional garden plants that grow to perfection in the area's cool nights. In this formal setting, visitors may be surprised to see many Minnesota prairie natives, such as oxeye (Heliopsis helianthoides), purple coneflower (Echinacea purpurea), and ironwood (Vernonia spp.).

More than 150 cultivars of hybrid tea, grandiflora, floribunda, miniature, and tree roses bloom throughout the summer in the Palma J. Wilson Rose Garden, situated on a hillside overlooking a panorama of woods and marshes. The elegance of this two-level terraced garden is enhanced by a picturesque gazebo, splashing fountains, and a reflecting pool.

Garden roses require extra protection in a climate where winter temperatures can reach minus 35° F. Every fall, Minnesota Rose Society members end the growing season by burying the garden's 300 rose bushes. Using the "Minnesota Tip" method,





Courtesy of Minnesota Landscape Arboretum

TOP: The Francis de Vos Home Demonstration Garden displays colorful combinations of annuals and perennials to inspire and educate homeowners. ABOVE: 'Northern Sun' forsythia was developed to be hardy enough for Minnesota winters. developed by Rose Society member Albert Nelson, they carefully dig a trench near each plant, gently loosen its roots, then push the entire rose into the trench and cover it with soil. A layer of mulch and snow provides additional protection. In spring, society members return to uncover and prune the roses for the new growing season.

While many of these gardens are designed on a grand scale, the Francis de Vos Home Demonstration Garden was developed with the average homeowner in mind. Named after Dr. Francis de Vos, the arboretum's second director and a past board member of the American Horticultural Society, it offers visitors a variety of ideas for flower, vegetable, shade and sun gardens, a rock garden, and patios and decks. Each display combines the best plants for Minnesota gardens with attractive building materials and innovative construction techniques.

On the drawing board is another display that will offer a practical guide for homeowners, the Eleanor Lawler Pillsbury Shade Tree Exhibit, made possible by a \$100,000 bequest from the widow of the baking magnate to mark her 100th birthday in



1987. (Editor's Note: To recognize her longtime support of the arboretum, the American Horticultural Society will be honoring Eleanor "Juty" Pillsbury with one of its annual awards at their July meeting in Minneapolis-St. Paul.) As envisioned, the exhibit will demonstrate the benefits of trees in the landscape and various considerations for selection, such as growth rate, shape, the amount of shade they provide, and even the sound their leaves make.

From the de Vos demonstration garden, a winding path leads to the quiet Woodland Azalea Garden, which surrounds a tranquil, stream-fed pond. This site's high, open shade and ample moisture provide the perfect growing conditions for ferns, woodland plants, and daffodils. The garden showcases the Northern Lights azaleas developed by arboretum research staff. Able to withstand winter temperatures of minus 35° F without special winter protection, Northern Lights clones and hybrids reliably produce flowers the following spring. They range in color from several shades of pink to white, light purple, golden yellow, and orange.

Seisui-Tei, or Garden of Pure Water, is a Japanese garden of traditional design

featuring Minnesota hardy plants, such as Northern Lights azaleas, amur maple (Acer ginnala), and Japanese red pine (Pinus densiflora). Pruned to look gnarled and windswept, the pine trees appear to be hundreds of years old. Water cascades over boulders and into a small pool. This garden is especially picturesque in the winter when the granite lanterns and stone pagoda are draped with snow.

n summer, the visitor can find a respite from the sun outside the Japanese Garden entrance in the arboretum's Hosta Glade. A canopy of tall sugar maples shades the 350 species, varieties, and cultivars of hosta (Hosta spp.) in this, the largest public display of this genus in the world. Lush shades of green, vellow, and cream carpet the ground, providing an aesthetic as well as physical coolness. Longtime favorites such as H. sieboldiana and H. plantaginea are on display along with newer introductions of gold, blue, and variegated cultivars. Gently curving paths, retaining walls, and scattered garden benches provide a setting where visitors can relax among the shadeloving plants.

The Minnesota Landscape Arboretum serves as the international registration authority for the genus Hosta. Its Andersen Horticultural Library holds the records of the world's 600 registered hosta plants; registrar Mervin Eisel reviews approximately 125 new hosta registrations each

While the arboretum is developing and recording new cultivars, it is also concerned with preserving the native landscape of Minnesota. When entering the grounds, visitors pass through a native wetland filled with eight-foot-high reed grass (Phragmites communis). On the other side of the park, twelve acres have been restored to the tall grass prairie that once covered a third of the state. Elsewhere, stands of maple and basswood trees remain from the Big Woods that once stretched along the Minnesota River Valley and throughout the Minneapolis-St. Paul area. Ponds, open fields, streams, and a tamarack bog are other natural features that can be seen at the arboretum.

The Snyder Education and Research Building is the focal point of arboretum research and education activities. Administrative offices, an herbarium, classrooms, and the Andersen Horticultural Library are all housed in this building, which opened to the public in 1974. The attached Meyer-Deats Conservatory was dedicated in 1980 as a place to study indoor plants.

In the Andersen library, horticulturists can research the origin of a plant species and gardeners can locate a rare plant. The only horticultural research library in the upper Midwest, its collection includes more than 9,000 volumes and 350 periodicals related to botany, natural history, landscape architecture, and horticulture. The collection includes rare books, old herbals and botanical illustrations, classics of early European botany and horticulture, and early American historical materials.

Also housed in the library is one of the country's largest seed and nursery catalog collections, which comprises more than 1,000 current and some 2,000 historical catalogs dating from the mid-1800s. This collection, together with the library's extensive microfiche holdings of catalogs published before 1840, is a primary tool in tracing the development of North American horticulture. The library also maintains a computerized index that lists 30,000 of the world's cultivated plants by botanical name. In 1987 this data base was published as Andersen Horticultural Library's Source List of Plants and Seeds, and sold to individuals, nurseries, and libraries throughout the United States, Canada, and Europe.

Members of the American Horticultural Society who attend its annual meeting July 26-29 will have the opportunity to explore the library and grounds on the second afternoon of the meeting, when a bus excursion will include a picnic at the arboretum and time to tour some of its many gardens.

Janis Kieft, a native Minnesotan and an avid gardener, is the information representative for the Minnesota Landscape Arboretum.

On Your Own

If you won't be visiting the Minnesota Landscape Arboretum as part of our Annual Meeting tour, you can get there from I-494 in Minneapolis by taking exit 11-C, or State Highway 5, west for nine and a quarter miles. The arboretum is four miles west of the town of Chanhassen. A sign is posted a quarter mile east of the turn to the entrance, which will be on the driver's left. The arboretum is open daily all year from 8 a.m. to sunset. There is a small gate fee. More information can be obtained by writing to 3675 Arboretum Drive, P.O. Box 39, Chanhassen, MN 55317, or calling (612) 443-2460.



GARDEN

by Russell Page

Landscape designer Russell Page (1906-1985) spent most of his long life designing gardens for other people all over the world: England, Belgium, France, Italy, Switzerland, Spain, Egypt, Iran, the West Indies, and the United States. Among those he designed in the United States are the Frick Gallery and William S. Paley gardens in New York, and in Washington, the concept for the U.S. National Arboretum's National Capitol Columns. His last major project was landscaping for PepsiCO headquarters in Purchase, N.Y. Trained at one point as a painter, he endowed all of his private and public gardens with his impeccable sense of plant form, and attempted, he wrote, "to shape gardens each as a harmony, linking people to nature, house to landscape, the plant to its soil." Yet sadly, at the time he wrote his classic The Education of a Gardener in 1962, this man who fell in love with gardening at age 14 when he bought a Campanula pulla for a shilling at an agricultural fair, had no garden of his own—just a well-tended daydream. This month, American Horticulturist continues its series of articles on the dream gardens of famous garden writers with the last chapter of Page's book, in which he describes this fantasy landscape.

Betsy Fuchs: PHOTO/NATS

Above: A cheerful tub of pansies. Opposite: Scarlet tulips in the spring.



his book could have been called Other People's Gardens if this title had not been used already. I have no garden of my own and what I have learned has been from the years of working on other people's ground. But I allow myself daydreams that I one day mean to have.

I hope that it will be on land which is neither chalky nor too acid, with soil to which I can add peat or lime. I hope, too, for soil which is not heavy clay that takes years of back-breaking labour to lighten, nor a hot dry sand whose thirst for water and manure I could never assuage.

It must be a small garden and a simple one; one man's work, mine perhaps, and in any case not so large as to need an armoury of mechanical devices or a fulltime mechanic to keep these in running order. However good the soil, the first thing I shall do will be to make two enclosures, for compost, each five feet wide by ten feet long and walled in to a height of three feet. Into these will go everything that in a few months will ensure me a regular supply of rich black humus, since I know no better way of having a garden relatively free from pests and diseases. There are limits to the time, trouble and money I am prepared to spend on spraying my garden with chemical preparations which can so easily destroy nature's subtle balances and, by eliminating one pest, fatally leave the door open for others.

Once I have made this, the garden's future larder, I can start to consider the site. First of all I should say that I plan to make my garden in England since, all things considered, I do not know a better country. I would rather start with an old garden, however badly arranged and however neglected, since a few mature trees, an old wall and even a few square yards of good soil will give me the advantage of a twenty year start, all the more so as I shall be so late a starter. First I shall take out all the rubbish, elder bushes, nettle beds and any trees which are ugly and misshapen or too crowded. I shall thin out old shrubberies without pity and prune back any specimens which I may wish to keep and, later perhaps, transplant. All soft green rubbish will go to the compost heaps, the rest I shall burn and save the wood ash where I

Excerpted from the book The Education of a Gardener by Russell Page. Copyright © 1962, 1983 by Russell Page. Used by permission of Vintage Books/Random House, Inc.



Jessie Harris

"I am a tulip addict and will not be able to deny myself a bed or two of tulips and pansies, forget-me-nots, wallflowers and bachelor's buttons in spring."

can. Only when I have cleaned the garden and ridded it of everything I know I will not want, shall I make a careful survey on paper as a basis for an eventual plan.

My garden will be very simple. There will be no herbaceous borders, no rose garden and no complicated formal layout with all the bedding out, edge trimming and staking which these forms of gardening involve. A ground-floor room in the house or a converted outbuilding will be my workroom, part library for garden books and catalogues, part studio for drawing board and painting materials, part tool shed for all the small tools, string, raffia, tins of saved seed and all the odd extensions and aids to the gardener's two hands.

I see my workroom with one wall all window, and below it a wide work table running its whole length with a place to draw and a place to write. Walls will be whitewashed, the floor of brick, there will be a fireplace and chairs for talk, and at least one wall lined with books.

This room will open south or westwards on to my working garden and I shall design this just like one of those black-japanned tin boxes of water-colours. I see this working garden as a rectangular space as large as I can afford and manage. With luck or good management or both, high walls will

protect it to east and north and I shall enclose the other two sides with a low wall or a five feet yew or box hedge. Under the walls I shall make a three or four feet wide bed for climbing plants and others which like the warmth and shelter that a wall at their back will give them. I shall then divide the rest into small beds, perhaps four and a half feet or five feet square, separated by eighteen inch paths of bricks on edge or stone or even pre-cast cement flags of a good texture and colour and set, like the brick or stone, in a weak cement mixture so that no weeds can grow. The number of beds and their exact dimensions will depend on the area of my ground but they must be small enough to be easily accessible from the paths surrounding them. In working out my simple criss-cross pattern I shall surely find it useful to have a few beds as double units, nine feet by four foot six or ten feet by five feet. In fact this garden will closely resemble the "system garden" of an old botanical garden whose small beds are each devoted to growing numbers of the different plant families. I shall use this garden as paint box, palette and canvas, and in it I shall try out plants for their flower colour, texture of foliage and habit of growth. In some beds I shall set out seedlings for selection, in others bulbs, in others plants combined for essays

in colour. Each bed will be autonomous, its own small world in which plants will grow to teach me more about their aesthetic possibilities and their cultural likes and dislikes. I shall make no attempt at a general effect, for this will be my personal vegetable museum, my art gallery of natural forms, a trial ground from which I will always learn. I may use a flowering tree here or there above some of my postage-stamp squares in places where I want to grow plants which appreciate a dappled shade, and I may hollow out a square or two as pools for water lilies or Iris kaempferi.

So, close to my workrooms, I shall have my palette, changing from year to year and season to season and accessible and workable in any weather. I see already a square with tufts of white and coral-feathered. scarlet and rose-pink tulips whose foliage as it dies off will be covered by the new leaves, blue-grey, green or yellow-green striped with white, of the various hostas, and camassias with their sober flowers of lavender grey. In another square will grow Euphorbia wulfenii and hellebores and perhaps some long spurred aquilegias. There will be lilies too and lavender, some of the old-fashioned roses and all the garden pinks I can find. Perhaps I shall have a square or two of delphiniums, plants I like only in an enclosed garden. Here I shall test kurume azaleas for their colours as seen in sun or shade; primula species, rodgersias, moraeas and meconopses will grow in squares of specially moist and peaty soil, helianthemums and cistus in others which are sandy and dry. Here, I shall find, living and growing, the coloured expansions of my pleasures as a painter and gardener, as well as an addict of catalogues and dictionaries.

Only in an enclosed garden would I want to grow plants in this apparently chaotic way. Even so, any elaborate design, with axes and central features and with differing proportions of beds and paths of grass and water, would destroy the charm and defeat the purpose and meaning of this garden. This is why I shall make my plan a repetition of small units so that it will resemble the neatly partitioned drawers of a numismatist's cabinet or more exactly, a page from a stamp collector's album.

I do not find it easy to envisage my future garden without its house—it is like drawing a body without a head. But whether the house is large or small, its walls will be covered with climbing plants and below



Gold-colored wallflowers (Opposite) add sparkle to the intense purple tones of pansies (Left).

Anne Reilly: PHOTO/NATS

them there will be growing things. Against the house, in full sun and sheltered from the wind, there will be a wide paved space and perhaps to one side a few rectangular flower beds edged with box or lavender. I am a tulip addict and will not be able to deny myself a bed or two of tulips and pansies, forget-me-nots, wallflowers and bachelor's buttons in spring. In summer I shall plant these beds with thick patches of half-hardy annuals. Only a prophet can know which to plant each year. In a wet summer zinnias will be a failure, (and I love white zinnias and white tobacco flowers near a house); or I shall try a particoloured bed of Phlox drummondii only to see them wither to nothing in a scorching season. But I am willing to try my luck rather than forgo petunias and fuchsias, ageratums, dwarf dahlias, hardy chrysanthemums-all gaudy flowers whose place is near the house.

As with the house, I cannot predict my future landscape. I should like a stream, and a fast running one too, at least for part of its course through the garden. If it drops in level three or more feet, I shall arrange to dam it in three or four places with stones artfully placed to give each little fall of water a different note, for one of my greatest pleasures is the sound of falling water. I would do little more by way of water gardening, as I do not care much for bog and waterside gardening in places where I can dispense with it. If the yellow flag iris grows there, and meadowsweet, perhaps I would replace the wild iris with the blues and whites of Iris sibirica and Iris laevigata, but discreetly and with a light hand; and if there were room I would add a few of the tall pink herbaceous Spiraea venusta. I should certainly try to establish Primula rosea along the moist part of the stream's banks because of a predilection for the bright carmine pink of this Himalayan plant, so unusual a colour in early April. In the showers and fleeting sunshine of early spring, Primula rosea looks as stalwart and happy as a native primrose, so vigorous and strong and so prolific that it ought, years since, to have naturalised itself down half a hundred English streams. As far as I know it never has, but I shall be satisfied to go on trying to encourage it. I may, too, allow myself a clump or two of Primula florindae. I know it is coarse compared with the lovelier P. sikkimensis, but, coming in July, its tall heads of drooping cowslip yellow flowers look native and it establishes itself easily. So much for my

stream. I hope it will be shaded along its course just for the faint mystery it evokes as it emerges from shadow into sunlight and for this I may want to aid and plant a simple native tree or two.

The main part of my garden will take the shape of a pool of lawn, which may run level away from the house or perhaps rise or fall. It may extend from the house thirty yards or sixty or a hundred, but whether it is wide or long, whether it runs up hill or down, I shall try to give it a shape complete in itself. It will be the vital open space which links and gives meaning to everything else-house and hedges, trees and plantings, the clear or cloudy sky. To enhance them all I shall try to give this open space a definite but not rigid form. As I do not see the house as an architectural gem demanding a formal treatment, I shall avoid a formal shape and define it nearest the house with curving hedges or some simple and unified planting scheme. Farther away I shall try to outline its shape by light and shade, rather than underline it by a rigid and brightly coloured planting. I shall think of this, the centre of my composition, as an enclosure rather than as a glade. Glades, at least as they are used today, suggest a succession of irregular capes



Photos by Dick Keen

"A garden really lives insofar as it is an expression of faith, the embodiment of a hope and a song of praise."

and bays with carefully planted groups of flowering shrubs. In a curious way these imply dispersion, a theme which best suits large properties where you are thus drawn farther and farther into the garden to discover new walks and vistas. But mine will be a small garden and my theme should suggest containment. If there is a view I will try to frame it in, so that it too contributes to the central open space which, for all its apparent emptiness, will still be a focus and centre. For here the vibrations, the intentions and qualities of all the different elements of the rest of the garden will meet and mingle to give the whole its unity.

Since I have chosen the English landscape as my setting, I shall avoid pushing any abstract forms too far. I would not try to merge house and garden in the Californian manner, as the climate will make this an uncomfortable anomaly, nor would I aim to embody the abstractions of my concept in a wilfully exotic way. The mood I seek above all is one of relaxation given by a garden, easy and untortured, in which plants, however rare and strange, will grow and take their place naturally and discreetly.

In the back of my mind lurks the picture of some native growth of trees, a few beech or oaks or birch perhaps or Scots fir, some form of little copse with hazel stools or a few wild hollies. Or if this is an old garden

there may be a few good trees or an overgrown orchard, so that some good part of my garden has a canopy of leaves and the silhouettes of trees to break the skyline. If there are spruce and fir, out they will come: most small gardens are better without them. I might spare a fine isolated horsechestnut or sycamore but I should remove both at once if they were in any place which I intended to plant: the chestnuts because they make a dank and sour shade in which even ivy can scarcely grow and the sycamores for their graceless youth and their unlovely foliage, usually blackened with disease by July. Canadian poplars would share the same fate.

Perhaps my main grass area will reach as far as the foot of the nearest trees. If so, I will define its edge by fairly compact drifts of large shrubs chosen for their effectiveness as mass and texture rather than for the colour of their flowers. These might be box or yew or perhaps rhododendrons or viburnums or cotoneasters. As they will mark the far limits of the lawn, I would not have them too brightly coloured. The scarlet or strong rose pink of certain rhododendrons, for instance, would falsify the whole perspective. Whether in the open or in shade, I would frame my lawn with carefully modulated greens and use clear pale colours-cream, pale yellows, soft pinks and blue mauves in sunshine and much white with clear mauve and accents

of coral pink in the half light and shadows. I like white flowers, especially camellias, roses, rhododendrons, viburnums and hydrangeas, the silky whites of Romneya coulteri, the mauvy white satin of wood anemones and philadelphus "Belle Etoile," the icy snow-white of certain camellias and of the double white rugosa rose. By juxtaposition you can underline and bring out these different tonalities of white or enhance them by contrast and reflection.

I shall have to work warily with flower colour in such a small garden and avoid all the sensational and too dramatic effects of brilliant colouring, unless there is enough room to hide an occasional explosion of colour—reds and salmons and scarlets, black purple and orange—in places where they would not disrupt the pervading quiet harmony.

But the garden's most usual livery is, after all, green and I shall make it my main task to handle my plants and arrange them in their own terms of green. If I can succeed in groupings good in their form, textures and differing tonalities, I shall be sure of harmony throughout the yearly rhythm of the garden. Then only I will consider flower colour as an added study and delight.

At this point I have to warn myself quickly against the anaemic approach of certain modern purists who have pushed the theory of understatement in planting to ridiculous lengths, planting one bulrush and one Caltha palustris, for example, in a formal pool in the patio of some elaborate modern house, or else thinking that a patch of marram grass and a few tufts of osier will enhance the bright avant-garde conceits of a pavilion at an exhibition. Such aridities, and they are increasingly frequent, are a bleak denial of all the pleasures of gardening.

If I am prejudiced I am also tolerant and ready to understand a garden designer's revolt against the popular passion for bright flower colour at all costs. I remember a vast fan design of beds, a hundred square yards perhaps, solid with scarlet salvias spilling out over a rough grass slope in a public park in Geneva-a vulgar and thoughtless splash of colour, all the more surprising as it lies within a few yards of one of Europe's better rose gardens. At the other end of the same scale I think of a small English inland garden, often cited as a model of good planting and planning. Here under a grey and clouded sky I saw flower borders planted with infinite love and trouble in a most carefully thoughtout scheme of purple and crimson and orange. Purple berberis and rhus, cascades of Clematis jackmanii, groups of Phlox paniculata in Tyrian purples and royal crimsons and well grown clumps of tiger lilies all combined to create a garden picture as strident as it was oddly funereal.

Between these two extremes of under and over-statement we have to tread carefully. I see my green lawn and its surroundings as the one part of my garden which I shall design entirely as scenery. Large or small, this link between the house and its surroundings will be an exercise in landscape composition.

I should like to keep my pool of lawn, and the planting which rings it, free from the hard intrusion of a path. I would rather make a path as an outer ring lying well behind the plantings that fringe and shape the lawn, and as a main line of communication linking all the parts of the garden. It will start somewhat formally, passing to one side of the house between flower beds. Here it may be of brick or stone, but as it passes round and through each part of the garden its material will change accordingly. To make sure that it dries quickly and is practicable in all weathers, I will give it a foundation of at least nine inches of broken stones or brick rubble and three inches of ashes or coarse gravel above that. Only then will I surface it with good binding sand and perhaps fine sieved and washed pea-gravel. Pea-gravel is better than crushed gravel or stone whose sharp edges will ruin even the stoutest shoes.

The path will make its way from the slightly formal arrangement of flower beds next the house through a series of secondary garden pictures, all lying outside and invisible from the central part of the garden. These will be as elaborate or simple as the nature of the garden and my own possibilities allow. Perhaps I shall be able to bring my path through plantings of flowering shrubs, large enough, maybe, to need narrow paths breaking away from the main one to rejoin it later. Here I would use sub-shrubs that I like and could make grow to break the edges of the pathslavenders and pontentillas, ceratostigma and caryopteris, leonotis and phlomis, cistus and helianthemum, and heaths, not all, nor all together, for my choice will depend on soil and site. I see all this as gardenplanting, grouped harmoniously surely, but intimate and designed as garden and not as landscape. These small shrubs will be like foothills for the higher mounds of all



Dainty blossoms against shades of green: (Opposite) forget-me-nots and (Above) Plumbago capensis, a tropical plant.

the larger shrubs I might want to grow informally. I say informally as, if I have room, the lilacs and philadelphus, laburnums and other domesticated flowering shrubs will need another and slightly more formal setting in an enclosure which would include such roses too as I might want to grow. These are the roses which may be left to grow into large bushes with only an occasional pruning to remove dead wood and keep them in shape. I have a catholic taste and would happily mix the strongergrowing floribunda types, "Queen Elizabeth" for instance, with shrub roses like "Fruhlingsgold," R. nevada, R. gallica versicolor as well as damask roses and R. centifolia and the lovely free-flowering perpetuals like "General MacArthur," "Ulrich Brunner" and "Caroline Testout." Nor would I leave out hybrid musk roses, such as "Penelope" and "Pax". In this part of the garden I see, amongst the bushy roses, thick clumps of perennials, too coarsegrowing for my "system" garden, but which I would not like to be without: herbaceous paeonies and thalictrums and a dozen varieties of Phlox paniculata for their fresh colours and the honey sweetness they bring in late summer and all the Japanese anemones I could lay hands on. I would have crown imperials and Galtonia candicans, Lilium candidum and deeply planted clumps of certain tulips, cottage and Rembrandt, left in place to come up each year. In this year, although the individual flowers will be smaller, the clumps will increase and

make great bouquets growing larger every year. Between all these will run my path primly bordered with London Pride or alchemilla or with the handsome foliage of bergenia or hostas.

At this point in our imaginary walk we might pause and consider the question of the kitchen garden. I have to think of it as a luxury-it would be my modest equivalent of the rich man's yacht or racing stable. I would want its produce but not at the cost of working it myself. But for the moment I will imagine myself with a neat kitchen garden divided by the path into four quarters, all neatly edged with box. For all it harbours slugs, needs cutting and is, in general, the working gardener's bane, I would not care for a kitchen garden without box edges and, as well, neatly pruned espaliers and cordons of apples and pears. In my four quarters I will grow only those vegetables whose taste is ruined if more than an hour elapses between their being culled and cooked-like asparagus, green peas, new potatoes and baby carrots. If ever I have this kitchen garden I shall make it an even costlier adventure by making all the paths in asphalt with gravel rolled into the final coat of bitumen or, of well-roughened concrete with wooden laths set in flush every three feet as expansion joints and to prevent crazing. Weeding paths is an appalling waste of time and the use of weedkillers means the death of anything growing along the edges.

We have wandered so far beyond the limits of our modest garden dream that we might just as well let our path, as it comes to the kitchen garden, pass into the shade of a nut walk, an old and lovely gardening convention which is simple enough to realise. Here the path will be about five feet wide; on either side I shall plant hazel nuts spaced about six feet apart. In a few years these will make clumps of dark brown stems arching upwards and outwards and joining overhead. Hazels and hazel shade are companionable to plant life and here at their feet will grow a whole company of plants which thrive in just such conditions, primroses and particularly the double mauve one if I can find it, polyanthus, Anemone appennina, A. blanda, A. fulgens, hepatica, helleborus, Anchusa myosotidiflora, foxgloves perhaps, dwarf campanulas and as many dwarf daffodil and tulip species, scillas, muscari, chionodoxa and other small bulbs as I can afford.

At this point we must trace our way back, pass through the flowering shrubs



Jessie Harris

"I shall use this garden as paint box, palette and canvas, . . . I shall try out plants for their flower colour, texture of foliage and habit of growth."

and plunge into the shade of a little wood. Under the trees the path will change. I will surface it here with sand and leave it to become moss-grown and strewn with fallen leaves which an occasional raking will keep in order. If the foundations are solid enough, only dwarf weeds or grass will grow which will give no trouble for coarse weeds need a richer nourishment than they will find here. In the Eastern United States you constantly see woodland garden paths thickly coated with pine needles or tan bark or a mixture of the two. These make an agreeable walking surface and keep down weeds very effectively.

Here in the wood out of sight of the main view from the house, I can experiment with shade-loving plants: rhododendrons, for instance, or azaleas, or hydrangeas in as brilliant or modulated a range of colours as I choose. My choice of plants will depend on the nature of the wood. Perhaps the tree boles will be better left unobscured by busy plants and I will keep my plantings low. I may choose Gentiana asclepiadea, the willow gentian, in drifts, kirengeshoma and smilacina and tiger lilies, dog's tooth violets, trilliums and ferns which will all do well if the soil is deep and moist and slightly acid. In drier and sandier soil I might prefer to make groups of carefully selected white and clear pale pink foxgloves. But whatever species or combinations I choose, I shall try to

keep the planting very simple, grow only a few varieties but exploit these to the full, for I have seen too many shady woods and copses ruined by over-complicated and fidgety plantings.

By now we will have come through the wood into open meadowland where any definite path will look altogether out of place. Even so I shall not abandon my foundation but again sand the surface and let the grass gain on this as it will. The path will still drain quickly and give a good walking surface which an occasional mowing will keep in order.

Here perhaps I shall find the stream I hope for or at least a pond which I should handle with the same reticence as the stream. In the grass I should like to try and establish two meadow plants. One is the wild blue geranium which makes clouds of soft blue where the sloping meadows of the Yorkshire dales drop away to pebbly, aldershaded becks in which dippers and water wagtails dart from stone to stone in the singsong chatter of broken and falling water. For these I will clear and dig a space large enough to hold a hundred plants in the hope that they will thrive and naturalise themselves: if they do not I shall not insist. Salvia superba, the purple meadow sage, is another wild plant I should like to grow among the meadow grasses as naturally as it does, along with the yellow tansy and milky-blue chicory, on the open roadsides

of the Ile de France.

By now I have hopefully pictured an ambitious garden but one still without a small greenhouse where I could grow plants from seeds and cuttings and winter geraniums and fuchsias and other potted plants. I like pot gardening and would use plants in pots on steps, low walls and on my paved terrace space, grouping them in simple flower pots of all sizes. I should use cannas and yuccas and hedychium, Francoa ramosa, tigridias, yellow and white lantanas clipped into balls, and the dwarf pomegranate, which grows so easily from seed and whose neat foliage and orange scarlet flowers are an exact miniature of the ordinary pomegranate.

Part of the greenhouse I shall save for the pale blue Plumbago capensis and especially for Jasminum polyanthum so that through the winter months I can cut sprays of its brown-red buds and intensely fragrant white flowers. I shall have to find room too for bowls and dishes set with bulbs of narcissus "Paper White" to bring into the house for Christmas, for a few Roman hyacinths and scented creamy freesias and other spring flowers; there would always be enough for one small vase to relieve the dark days of winter. If I have two heated frames next to the greenhouse they will be enough to grow half-hardy annuals for my flower beds in good time for me to set out sturdy plants towards the third week in May.

Wherever I make my garden the main elements will not change: in front of the house a deliberately composed "landscape," so quietly arranged that one would not tire of it; nearby a working garden: and subsidiary to both of these, such additional features as the landscape, the soil and the site would indicate and as I could afford. To try and describe the structure of a non-existent garden is, I fear, but to make a rusty catalogue. Walls, paths, trees, shrubs, lawns and terraces, lists of plant names, tool sheds, greenhouse, parking space and all the rest are like the separate pieces in a box of toys to be put together to make the structure and fabric of a garden. If that were all, it would be a slow and arid process, the mere application of technique and experience towards changing the external appearance of one tiny plot of ground-an infinitesimal point on the planet's surface-a pastime like another, as constructive, no more nor less, as playing patience or doing jigsaw puzzles.



Opposite: Clusters of petals in wild geraniums. Left: The arching panicles of Buddleia alternifolia.

Anita Sabarese

A garden really lives only insofar as it is an expression of faith, the embodiment of a hope and a song of praise. These are high-sounding words but wherever I set my aim, high or low, the achievement, by the very nature of things as they are, is bound to fall far short of them and a too modest aim may well result in an insignificant achievement. I use the word aim perhaps too loosely, for I will surely have many aims in connection with every garden I attempt; the first perhaps quite simply is to leave a place more beautiful than I find it. By itself this is a subjective aim, one for my personal satisfaction and related to my own inevitably subjective ideas about beauty. So, at once, I have to expand or add to my aim and endeavour to understand the point of view of others. Will my garden spell for them the message it has for me? So my aim widens to include some understanding of my fellows. Nor can that be all or enough. I have to understand too the nature of all the processes that will go to make the garden, the rhythm of activities and where in each process this rhythm checks and falters and can resume only with the application of a stimulus at an exact moment. These are the rhythms also of all human as well as all vegetable processes: men, like trees, can be moved at certain moments and not at others. I draw and draw, searching for a composition which will come right in its own time

only, perhaps at once, perhaps after hours and days of work. Of course the answer is inherent in the problem, and I find the solution only as soon and as clearly as I see all or enough of the factors which compose the problem. So now my aim includes my own necessity for clearer thinking. You see now to where this leads, for a finer quality of thinking comes only with a wiser heart and where must I look to find the heart's wisdom? All these I must remember as I struggle with problems of drawing and composing on paper, with the spadework of calculation and lists, the difficulties of construction, the chance vagaries of behaviour of plants and men, soil and weather for which I have to remember to make allowances.

I am forced to a life-long discipline and a necessary and constant awareness so that eagerness may not turn into ill-temper and hopes not well based on facts founder in useless despair or wither into a frivolous cynicism.

When I come to build my own garden it can scarcely take another form than the one which is a reflection of its maker. If I want it to be "ideal," then I too must set myself my own ideal, my own aim. Now, as for a painter or a sculptor or any artist comes the test-what values does the garden-maker try to express? It seems to me that to some extent he has the choice. He may choose the easy way and design a

garden as a demonstration of his technical skill and brilliance, go all out for strong effects or see the problem as one of good or bad business and so plan accordingly. Or he may try to make his garden as a symbol and set up as best he can a deliberate scaffolding or framework which nature will come to clothe with life. Perhaps circumstances will help him to decide that his garden theme should be devoted to water and so he will devote his garden to showing all the aspects he can of water: still and quiet water to reflect the soft green shade of summer trees, the purple greys of a coming storm or the brightness of white clouds crossing a clear blue sky, or shallow water running shining over a pebble bed or breaking into white foam where it falls. He may want to show water making lacy patterns against stone or bronze or use it in a hundred other ways to demonstrate its manifold aspects and attributes.

I can see another garden with another theme, one where the texture and shapes of foliage would be all important, a green garden which the eye would explore as it would an Altdorfer forest, layer upon layer of leaves sombre or caught in sunlight or in dappled silhouette. I remember a sequence in the Japanese film, "Rashomon," when the camera "travelled" with its lens focused upwards to the topmost branches of a forest set against the sky. As the end-Continued on page 34

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MY GARDEN

Continued from page 31

less succession of leafy patterns flickered across the screen, each with its definite shape and nature, one felt part of the world of trees and leaves and light and this, in quite another medium, gave to me at least a newly felt understanding of a whole dimension of the gardener's art.

In my garden I might choose to try and illuminate more especially one aspect of the force of nature. I could consider the growing point, the nose of a bulb of snowdrop or scilla and the strength and the heat it generates to force its way through the frozen earth, and then its symmetrical expansion of leaves and flower, in controlled and lovely explosion. So often these and all the natural phenomena of spring pass unnoticed. We take them for granted and hardly look. Why should I not devise my garden deliberately as an act of appreciation to the forces which bring about this ardent growth? Why not design and plant some part of it to focus attention and perhaps so widen my understanding of just this one aspect of nature?

After aconite and snowdrop the crocus next pierce through and then the early daffodils usher upwards all the spears of spring hyacinths and the orderly regiments of tulips. The fat buds of crown imperials come with the unfolding rosettes of Lilium regale and the deep red-brown knobs of paeonies which soon unfurl the elaborations of their young spring foliage. From the black mud burst the incredible spathes of Lysichiton camtschatcense and arisaema and under the trees two more modest aroids, our native Lords and Ladies and the mousetail Arisarum pierce the woodland floor. Ferns no sooner break through the spring moist earth than the uncurled spring of each young frond uncoils with all the ogival curves and volutes of a Gothic crozier, and the blue-grey spear heads of flag iris burst from the ground sharp with the urgency of growth.

Those are the rites of spring, the earth turns and in a few sun-warmed hours the ice recedes and the soldanella's fringed lilac flower shines in a dark earth pocket against the snow.

My imaginary garden thus takes many forms and each of its forms has many aspects. Sometimes I see it as a sandy hollow ringed with dunes planted with marram grass against the shifting winds. Beyond the dunes the grey blue sea rolls and thunders on till the rhythm changes and it recedes leaving the long level reaches of sand glistening in the sun. My garden repeats in vegetable forms the shapes and colours of the waves with brakes of the silvery seabuckthorn, Hippophae rhamnoides, and sea-green mounds of atriplex to protect wide plantings of blue-grey echinops and ervngium, static Veronica hulkeana, teucrium, silvery santolina and cistus and Buddleia alternifolia, senecios, Cineraria maritima and seakale; all plants armoured in silver to meet the challenge of the sandy soil in this sunny and airy garden.

Like clouds moving across the sky dissolving and re-forming now in towering rounded masses, now in long streamers or curling wraiths, now jagged and torn or neatly spread in fish scale pattern over the sky, my garden's patterns shape and reshape themselves. A leaf or a twig, the feel of a stone step under one's tread, a trickle of water, the musky smell of a cyclamen plant set in a pot that you have but to tap to know from the sound whether it needs watering or not, such transient impressions as these can open a door and set in motion a whole world of garden pictures. Each second is new and in each second are implicit a hundred gardens. In one it is sunset and suddenly there is a chattering in the pine trees and in the moment of evening's hush eight magpies wing through the air, drop down for a moment among the short grasses where the harebells flower and then, calling to each other, disperse and whirl severally back into the trees. Elsewhere the butterflies, peacocks and red admirals, settle thickly on the purple honeyscented panicles of buddleia. Below the great stone house is a lawn squarely hedged with dark green yew, where a white peacock spreads the splendour of his tail and sets his wing quills drumming. Where a russet brick bridge spans the moat, an old Persian lilac makes a mound of blossom to hang over the moss-green water where later the dragonflies will seem to tease the golden carp.

So, as in a kaleidoscope, the brightly coloured trifles shift and at each turn comes a new garden picture, dimensioned in time as well as space; where each leaf, though long since dead and withered, burgeons again and the gossamer web for ever catches the dew of a morning long since past.

Sometimes my garden seems like a mirage always receding but if ever this intermittent vision becomes a reality, wherever it is, whatever its size and shape it will be satisfying for like all gardens it will be a world for itself and for me.

Book Reviews

American Gardens

By Peter Loewer. Full-color photographs. Simon and Schuster, New York. 1988. 193 pages. Publisher's price, hardcover, \$35.95. AHS member price, \$28.00.

Here is a feast of thirty magnificent American gardens from all parts of the country to study and admire for their beauty, for harmony with their own geography and climate, and for the originality of their creators. Ranging in size from fifty square feet to five acres, they were selected for the scope and quality of their uniquely American designs.

A special pleasure is the charm and erudition of the text by Peter Loewer, the author of many other garden books, including Peter Loewer's Almanac and Gardens By Design.

In the introduction to this book, Loewer inveighs agains the popular notion that our whole American culture is a fast-food, fast-lane TV commercial, and that the American garden is made solely of the kitsch that pervades the national and ethical landscape: the ubiquitous flamingos, small spaces with statuary "too big for Versailles," the banality of suburban plantings, and often hideous color combinations, such as puce rhododendrons with orange azaleas. (Who would dare if they knew Peter Loewer was nigh?)

Happily, the author assures us, this is not the whole case. Witness this book. In their interviews with Loewer, the ownergardeners share how and why they made their gardens and developed their individual styles and philosophies of gardening, and there is not a flamingo among them. "How" was chiefly by going into the garden after breakfast and not looking up until dusk, forty to seventy hours a week. "Why," unanimously, was for the gratification of creating aesthetically pleasing living forms, special solitude and release from stress, and concern with preservation of the environment and vanishing plants. Worth it? Yes!

Look at Gladys Huyghe's "Painter's Garden" in Newport News, Virginia, and imagine sitting on her sunny brick terrace overlooking the river. Walk through Ruth Bancroft's cactus garden in Walnut Creek, California. At Ohme Gardens near Wen-



atchee, Washington, where incredible colors of sedum blanket the hillside, sit on a special bench and look up at rocks and Douglas firs or out across the valley to the Cascades. (This garden takes "over 130,000 gallons of water on an average summer night," which raises some concern.)

But look what you can do with familiar annuals and perennials, including 'Crofts Pink' bee balm, cleome, and dusty miller against a rock wall in Bucks County, Pennsylvania. Elegant, indeed, is the New York State garden of James and Janet Hester, especially under the snow; the "Eclectic Mix" of Cynthia Woodyard in Portland, Oregon, is luscious. Readers will all have their own favorites; Elsa Bakalar's colorful New Hampshire garden is closest to my own taste and experience.

Part Two of this lovely book, "Great Ideas for Your Garden," contains well-illustrated, innovative designs and suggested uses of ornamental grasses and special plants, sculpture, paths, and paving; an index, sources of supply, and a bibliography.

Many readers may think of American gardens they would wish to see included in a new list. Hopefully, Peter Loewer will expand his sights and give us a second volume. What more could we ask?

-Faith Jackson

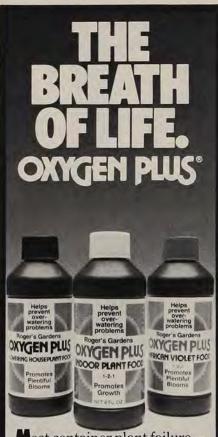
Vertical Gardening

By Caroline Boisset. Color photos and illustrations. Weidenfeld & Nicholson, New York. 1988. 143 pages. Publisher's price, hardcover, \$24.95. AHS member price, \$19.95.

My ideal garden is a private bower with pendulous branches and towering fronds that provide an air of mystery and envelop me as I curl up with a tall cool one and a good book; my ideal garden book is less a how-to than a magic carpet ride of dreams about "someday." This book was a brief trip to that future haven.

The author notes that a vertical garden offers much more than a screen from the highway or the neighbors. Even when a property is already enclosed by walls, vines and climbing roses can add interest to those walls. Trellises and window boxes can give the cramped suburbanite maximum beauty in a minimum of space. A pergola or wall painting can create illusions of space that isn't even there. And hedges and fences can vary climatic conditions to allow a wider range of plants on the same plot.

Boisset, a former assistant editor of *The Garden* magazine, the journal of the Royal Horticultural Society, begins appropri-



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BOOK REVIEWS

ately enough with "First Principles" of planning: choosing your style, commitment to maintenance, consideration of sun versus shade, the effect of color throughout the seasons, and "the art of seclusion"—how to shield one's small yard from prying eyes or establish the feeling of enclosure within a sprawling expanse.

Next she takes up enclosures in more detail, suggesting plants to serve as a hedge, creep up a pillar, or nestle in a rock wall. One particularly intriguing idea is to provide unseen walls through the dimension of scent. She then moves inside the garden, camouflaging ugly sheds and siding, dividing to conquer large spaces, building a roof of bloom with pergolas and arbors. Garden levels can be varied through hanging gardens and terraces, more unusual illusions can be created through murals and mirrors, and the dimension of sound can be added through falling water.

One flaw in this book may be that its photos are so dreamy and absorbing that they and their captions tend to distract from the text. Who can concentrate on warnings about toxic paint on a pergola when, beckoning from the same page, is a photo of the red 'Blaze' rose climbing over an arbor in a mountain-view garden?

For those who want to fly this magic carpet into reality, there is a short section on pruning climbers and building terraces, steps, and supports, plus full-color guides to help in choosing plants for sunny walls, shady walls, and nooks and crannies. Those who want a longer plant list and more detailed construction plans will have to look elsewhere. But Boisset's book takes an important and entrancing step in addressing this neglected dimension to gardening.

-Kathleen Fisher

The Art of Indoor Bonsai

By John Ainsworth. Photographs by Bob Callinor. Trafalgar Square Publishing, North Pomfret, Vermont. 1989. 128 pages. Publisher's price, bardcover, \$24.95. AHS member price, \$19.95.

An increasing number of people are living in town houses, condominiums, and apartments in congested areas where they have little opportunity to enjoy nature. But people interested in expressing their artful horticultural skills have found that they can, by growing bonsai, bring a piece of nature into their homes.

Cultivating trees and shrubs in the home environment can be a challenging hobby,

with the reward of incorporating a bit of greenery into the interior design. In *The Art of Indoor Bonsai*, John Ainsworth guides the hobbyist through the basics of growing tropical, subtropical, and warm temperate bonsai in the home.

The Art of Indoor Bonsai is divided into two parts: Part 1, Cultivation, Care and Training; and Part 2, A-Z Selection of Tropical, Sub-tropical and Tender Bonsai.

The background information, which includes history, styles, cultivation, and training, is informative, although weak on several points about which the reader should be aware. One, the author has failed to emphasize for those unfamiliar with bonsai that it is the styling of the plant's structure that makes a bonsai different from other forms of potted plants. Two, there is not enough information on the soil mixtures needed to provide proper moisture, aeration, and nutrients to the bonsai. In addition, Ainsworth, who lives in England, mentions some insecticides that are not available in the United States, and it is somewhat disconcerting at first that he uses the word "compost" in the same way that most of us in the United States would use the word "soil."

Part 2 is a good resource, written in a clear and detailed manner, for the care of thirty-five readily available species that can be used as indoor bonsai. Each species is described, and information on the training, culture, and origin of each provides a helpful guide for training the plant as a bonsai. This part would be particularly helpful to the beginning and intermediate bonsai grower, although there are many more types of plants that can be used as indoor bonsai.

All in all, *The Art of Indoor Bonsai* should serve as a useful guide to the beginner. The book is particularly good in presenting pictures of bonsai in their early years of training, which should help to build confidence in the novice.

-Robert F. Drechsler and Daniel Chiplis

To order, use the Book Order Form in the lower corner of page 37.

Faith Jackson, former book editor of the *Miami Herald*, is a Master Gardener who writes frequently about garden matters.

Kathleen Fisher is the senior assistant editor of American Horticulturist.

Robert F. Drechsler is curator, and Daniel Chiplis is assistant to the curator, of the National Bonsai Collection at the U.S. National Arboretum.

Sources

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The Alabama Snow Wreath

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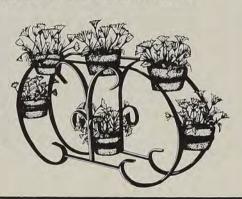
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Pronunciation Guide

The late Russell Page, who was British, used spellings and terminology that differ from those of American Horticulturist, so plants mentioned in his dream garden descriptions, page 24, are listed separately in this Guide.

Acer ginnala AY-ser gin-NAL-lah A. rubrum A. REW-brum Anemone alpina a-NEEM-o-nee al-PINE-ah A. alpina subsp. sulphurea

A. al-PINE-ah subsp. sul-FUR-re-a

A. apennina A. ah-pen-NEE-na

A. blanda A. BLAN-dah

A. canadensis A. can-ah-DEN-sis

A. caroliniana A. care-oh-lin-ee-AY-nah

A. coronaria A. core-oh-NAIR-ee-ah

A. crinita A. kry-NYE-tah

A. cylindrica A. si-LIN-dri-ka

A. deltoidea A. del-toe-EYE-dee-ah

A. × fulgens A. × FUL-ienz

A. hortensis A. hor-TEN-sis

A. hupehensis A. hu-pay-EN-sis

A. × hybrida A. × HIGH-brid-ah

A. japonica A. jah-PON-ih-kah

A. magellanica A. madge-el-LAN-i-ka

A. multifida A. mul-TIFF-i-dah

A. narcissiflora

A. nar-siss-i-FLOR-ah

A. nemorosa A. nem-o-ROS-ah

A. nemorosa var. robinsoniana

A. nem-o-ROS-ah var. ROH-bin-sown-

A. nuttalliana A. nah-TAL-ee-a-na

A. palmata A. pall-MAY-ta

A. patens A. PAY-tenz

A. pavonina A. pav-OH-nee-na

A. pulsatilla A. pul-sa-TILL-ah

A. quinquefolia

A. kwin-kwe-FOE-lee-ah

A. ranunculoides

A. rah-nun-kew-LOY-deez

A. riparia A. rih-PAIR-ee-a

A. rupicola A. roo-PICK-o-la

A. sylvestris A. sill-VESS-triss

A. vernalis A. ver-NAL-iss

A. virginiana A. vir-gin-ee-A-na

A. vitifolia A. vit-i-FOL-ee-ah

Celastrus scandens

sea-LAS-trus SKAN-denz

Cornus sericea Kor-nus ser-EE-see-ah

Echinacea purpurea

eck-in-AY-see-ah pur-pur-EE-ah

Erythronium propullens

air-ih-THROW-nee-um prop-pu-LENZ

Forsythia for-SITH-ee-ah

Fothergilla foe-tha-GILL-a

Helenium hell-EN-ee-um

Helianthus he-lee-AN-thuss

Heliopsis helianthoides

hell-ee-OP-sis hee-lee-an-THOID-eez



Anemone blanda

Hosta plantaginea

HOSS-tah plan-tadge-i-NEE-ah

H. sieboldiana H. see-bold-ee-AY-nah

Humulus lupulus

HEW-mew-lus LEW-pew-lus

Kerria CARE-ee-ah

Lavandula angustifolia

lah-VAN-doo-la an-gus-tih-FOE-lee-ah

L. dentata L. den-TAY-ta L. vera L. VARE-ah

Malva alcea var. fastigiata

MAL-vah AL-see-ah var. fas-tij-i-A-tah

Muscari comosum

mus-KAH-ree koe-MOE-sum

Neviusia alabamensis

nev-ee-YEW-see-a al-lah-BAM-en-sis

Phragmites communis

frag-MY-teez com-MOON-iss

Pinus densiflora PIE-nus den-sih-FLOOR-ah

Prunus nigra PRUNE-us NY-gra

Rhodotypos ro-do-TY-pos

Rudbeckia rude-BECK-ee-ah

Sanguinaria canadensis

sang-gwi-NAH-ree-a can-ah-DEN-sis

Santolina chamaecyparissus

san-toe-LEE-nah kam-ee-sip-air-ISS-us

Santolina virens S. VY-renz

Spiraea spy-REE-ah

Teucrium chamaedrys

teu-CREE-um kam-EE-dris

Thymus herba-barona

THY-mus (or TY-mus) HER-ba-bah-ROW-nah

T. praecox subsp. arcticus

T. PREE-coks subsp. ARK-tih-kus

T. quinquecostatus forma albiflorus

T. kwin-kwe-COST-tat-tus forma al-bih-FLOR-us

T. vulgaris T. vul-GAIR-is

Trillium nivale TRIL-lee-um ni-VAL-ee Vernonia ver-NON-ee-ah Vitis riparia VY-tus rih-PAIR-ee-a V. vinifera V. vy-NIF-er-ah

Because the botanical names below were taken directly from Russell Page's article, any changes and updates according to Hortus III have not been made.

Anchusa myosotidiflora

an-KEW-sa mv-o-so-TI-di-flor-a

Anemone appennina

a-NEEM-o-nee ah-pen-NEE-na

A. blanda A. BLAN-dah

A. fulgens A. FUL-jenz

Buddleia alternifolia

BOOD-lee-ah all-ter-nih-FOE-lee-ah Caltha palustris KAL-tha pah-LUSS-tris

Cineraria maritima

sin-er-AIR-ee-ah mah-RIT-i-mah

Clematis iackmanii

KLEM-ah-tiss/klem-AT-iss jack-MAN-ee-

Euphorbia wulfenii

yew-FOR-bee-ah wool-FEN-ee-eye

Francoa ramosa frang-KO-a rah-MO-sah

Galtonia candicans

gawl-TON-ee-a KAHN-di-kahnz Gentiana asclepiadea

gen-tee-AY-nah ess-klee-pee-AY-dee-ah

Hippophae rhamnoides

HIP-o-fee ram-no-EYE-deez

Iris kaempferi EYE-ris KEMP-fare-eye

I. laevigata I. lee-vih-GAY-tah

I. sibirica I. sigh-BEER-ih-ka

Jasminum polyanthum

jazz-MY-num po-lee-AN-thum

Lilium candidum

LIL-ee-um can-DEE-dum/CAN-di-dum

L. regale L. re-GAL-ee

Lysichiton camtschatcense

ly-sih-KY-ton kamt-shat-KEN-see

Phlox drummondii

flox drew-MOND-ee-eve

P. paniculata P. pa-nick-you-LAY-ta

Plumbago capensis

plume-BAY-go KAH-pen-sis

Primula florindae PRIM-ew-la flor-IN-dee

P. rosea P. ROSE-ee-ah

P. sikkimensis P. see-kim-EN-sis

Romneya coulteri

rom-NEE-a KOOL-ta-ree

Rosa centifolia

ROW-sah cent-i-FOL-ee-ah

R. gallica versicolor

R. GAL-i-ka ver-sih-KOL-er

R. nevada R. ne-VAH-da

Salvia superba SAL-vee-uh soo-PERB-uh Spiraea venusta spy-REE-ah ven-OO-stah

Veronica hulkeana

ver-ON-ih-kah hull-kee-AN-a



Moscow Botanical Garden

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The Alabama Snow Wreath



mong the most exquisite specimens at the Missouri Botanical Garden is an exuberant clump of the Alabama snow wreath (*Neviusia alabamensis*). During its peak flowering period in mid-to-late April, the shrub might be mistaken at a quick glance for a delicately flowered *Spiraea*. But a second glance reveals that the blossoms are more feathery than those of *Spiraea*—they are tiny apetalous snowflakes with brighter-than-white filaments. In this, Alabama snow wreath is reminiscent of *Fothergilla*, but its flowers are more delicate and are borne on arching wands.

Native to the Southeast, Neviusia is a

TOP: A close-up of the feathery, snow-white blossoms. ABOVE: The Neviusia alabamensis at the Missouri Botanical Garden. genus with just one species. It is a member of the rose family and is most closely related to the horticulturally familiar Asian, one-species genera *Kerria* (Japanese rose) and *Rhodotypos* (jetbead). The fact that its relatives live on the other side of the world hints that *Neviusia* may be an evolutionary relict. So does its present-day distribution, which mostly follows the edge of the Mississippi embayment of the Gulf of Mexico coastal plain in the South-central United States, an ancient rim long free of the glaciation and inundation that have left their marks on the vegetation of eastern North America.

Evidently extirpated from Missouri,

Neviusia now grows wild in four states. In Tennessee there are three known populations, all of them found in recent years. Alabama claims two confirmed occurrences, one of which is more or less the site of the original discovery of Neviusia, on bluffs overlooking the Black Warrior River near Tuscaloosa. It is suspected that the precise spot of the original discovery was blasted away some time ago; today, a second assault on the nearby snow wreaths comes from grazing goats, although the plants enjoy some protection by being perched on a shelf some twenty-five feet below the edge of the bluff. In Arkansas, Neviusia is thriving at three places, all associated with drainages-at the base of a bluff, along a creek, and in a newly-discovered stand on the banks of the Buffalo River. In northeastern Mississippi, one population persists above the Tennessee River.

Snow wreath is thus rare, and is a candidate for being listed as threatened or endangered pending further investigation by the U.S. Fish and Wildlife Service. However, the plant is already receiving considerable attention in its native states by various groups that want to see it preserved. Largely through the efforts of the Natural Heritage Commission (a partnership between the Nature Conservancy and the U.S. government), the wild populations are well documented and are protected to the extent that is presently possible.

The name Neviusia comes from a minor mistake made by the great nineteenth-century North American botanist Asa Grav, who believed the discoverer of the shrub to have been the Rev. R. D. Nevius. After Dr. Gray established the commemorative name, it turned out that, although the Rev. Nevius was a participant in the trip that yielded the find, the true discoverer was Professor W.S. Wyman, who was alone at the moment in question.

The Alabama snow wreath at the Missouri Botanical Garden originally came from the botanist Julian Steyermark, author of Flora Missouri, a standard reference book on the plants native to Missouri, who lived in Chicago and often visited the

botanical garden to do research. He had an Alabama snow wreath in his yard, and he also gave cuttings to the Morris Arboretum. It is unknown if the specimen at the Missouri Botanical Garden is directly from Stevermark's yard or from the Morris arboretum cuttings.

In cultivation, snow wreath is hardy far north of its natural range, having been cultivated in St. Louis, Boston, and Chicago. Its natural substrates are diverse: sandstone, sandy loam, limestone, and shale. The Standard Cyclopedia of Horticulture suggests loamy, well-drained soil, which agrees with our experience. It is unusual that this plant prefers alkaline soil conditions, because most plants in the rose family prefer slightly acidic soil. Shade is its preferred location; in our Woodland Garden it is in mottled shade, and has grown to a height of five to six feet with a width of about ten feet.

Propagation is from softwood cuttings, and there is a natural tendency for layering at the tips of the arching branches. Alternatively, solo specimens set seed, and seed works for propagation. In caring for the snow wreath, two cautions ought be be borne in mind. First, if not pruned carefully, the shrub takes on a wild, shaggy look; second, we have read of flowers in some cultivated specimens failing to develop the bright whiteness that we have experienced and that characterizes most descriptions.

All in all, the Alabama snow wreath offers beauty and is relatively carefree. It is easily propagated and adapts well to cultivation; graceful arches, feathery blossoms, medium texture, and a robust habit make it an attractive choice for the landscape or garden. As American gardeners learn about native plants, the snow wreath's popularity could grow, and its limited availability today would doubtless increase to meet gardeners' needs.

-George Rogers and Peggy Wilmes

Botanist George Rogers and horticulturist Peggy Wilmes of the Missouri Botanical Garden in St. Louis collaborated on this

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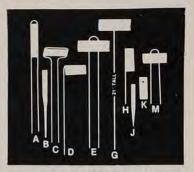




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Letters

This new column allows members to express their opinions to us and to each other, so let us hear from you. Letters will be selected for publication, and we ask that they not exceed 225 words. All are subject to editing for style and length.

Toward Better Gardens

To blame the state of garden design on International Style architecture ("Softening the Bauhaus Style," December 1988) is simply nonsense, just as crediting Philip Johnson for breaking the mold is nonsense. Post-modernism had already begun, and Johnson merely followed along once again. But if Ms. Mathewson thinks that Postmodernism, with its cutesy quotations (often misquotations) of historical elements out of context, is the solution to our design ills, I'm afraid that her own designs are even worse than I suspect. After all, the pittosporum hedge that she objected to (correctly, I think) is traditional, not Bauhaus; its use would be Post-modern. And the photo of her "solution" seems only to substitute slapdash busy-ness for sterility.

It seems to me that we must arrive at some sort of American landscape styles. But notice that I say styles, in the plural. Ms. Mathewson in San Francisco can use plant material that simply won't survive here. By the same token, her terrain is simply unavailable to, say, the garden designer in coastal Alabama, who also can't grow my plants, which need winter dormancy and won't tolerate his summers. So if Ms. Mathewson is worried about the influence of the Bauhaus, she's spending her energies on the wrong things. She should be looking around her at the way in which life is lived and at the materials available to her.

-Alan Ostrom Sherman, Connecticut

The unusually well thought out and written piece by Kathryn Mathewson ("Softening the Bauhaus Style") on The Design Page of your December 1988 issue is very much worth extending into future issues.

There is most definitely a struggling movement underway to create (and encourage the creation of) beautiful gardens designed to the likes and needs of the owner and to the natural characteristics of the site rather than derived by copying past practices elsewhere, or as advised in an unrelated book. There is and will be considerable controversy accompanying this young trend. Let this controversy be brought to the fore for the sake of the ultimate objective—many, many more beautiful gardens in ever increasing variety for satisfaction and enjoyment.

Gardeners should be grateful for Ms. Mathewson's contribution to a worth-while cause.

 Constance and Jim Cross Cutchogue, New York

Blooms Break the Rules

I am distressed to see in the December 1988 issue of your magazine an article that includes the need of Christmas cactus for a daily stretch of darkness to set buds.

I have one old plant grown from a cutting from another one that grew fifty years ago, as well as several of the more recent varieties. To be sure, the newer ones bloom more easily, but even the old one flowers in a room that is never completely dark. What these plants need is cool temperature, and a withholding of water in September helps.

In my previous residence I tried the dark bit with no success, but here the room temperature never exceeds 70° F and usually goes to the 50s at night.

For most other apartment dwellers, I guess, coolness is harder to achieve than darkness.

-Elisabeth H. Belfer New York, New York

Your plants are performing contrary to the information we have on the Christmas cactus. Although many other factors may come into play such as water, fertilizer, and disease, all of our references tell us that a Christmas cactus will not bloom unless it has the combination of short days and cool nights. It is standard practice in the nursery industry to induce flowering for Christmas by shortening the daylight (most often by covering the plants with black cloth) and lowering the night temperature.

If other members have had the same success without darkening as you have, we would like to know about it.



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