

American Horticulturist

A Publication of the American Horticultural Society

June 1990

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In Search of the American Garden
A Little Gem in Kansas





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historic gardens, including the Manial Palace Gardens in Cairo and the botanical garden on Lord Horatio Herbert Kitchener Island at Aswan. Program leaders are Carolyn Marsh Lindsay and Bob Lindsay. Mrs. Lindsay is a member of the AHS Board and the current AHS president.

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April 16-21, 1991 **AHS Annual Meeting in Birmingham**

Enjoy the beauty of Birmingham, Alabama, during the American Horticultural Society's 1991 Annual Meeting. Meeting tours will focus on Birmingham's finest public and private gardens and gardening classes and clinics will be held at the Birmingham Botanic Garden. Post-meeting tours will feature fabulous gardens of the South.

American Horticulturist

Volume 69, Number 6

June 1990

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JUNE'S COVER

Photographed by Jessie Harris

In this month's issue, three writers look at the diverse American landscape, its varied climate, and array of native and "tough" immigrant plants for a clue to defining *the* American garden. Here, fleabane, lupines, and Indian paintbrush color the slopes of Rendezvous Mountain in Wyoming's Teton Mountains.

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Commentary

What a time to be alive! This has to be the "Year of the Gardener." Imagine having our very own President George Bush unveil a national tree planting initiative as part of his budget proposal to Congress for fiscal year 1991. The \$630 million initiative, named "America the Beautiful," calls in part for planting, improving, and preserving a billion trees per year. Thirty million trees are to be planted by volunteers in urban areas. The program would provide technical and financial assistance for the planting and maintenance of these community trees.



I was in Tortola, British Virgin Islands, when the announcement came. I thought someone had misread the zeros. Millions of dollars devoted to trees is an exciting program! I needed to read it with my own eyes.

Well, my friends, what do we do? First, if you haven't already done it, thank the President, and let every member of Congress know how thrilled we are with the news. Let them know that they have our total support. Smile when they tell you "new" truths about trees that we gardeners have known for years. Resist the temptation to tell them that of course trees will cool our urban heat islands and reduce energy consumption, and that every dog and two-year-old child knows that it is cooler under a tree!

Next, how can your American Horticultural Society help? You may have thought that this news "leaked" to us last summer as we were planning this year's Williamsburg Garden Symposium. We needed to know the best trees to plant and there was Bill Flemer, "Mr. Tree" himself, right there to tell us. Jim van Sweden showed us examples of the great strides that cities have made in creating "user-friendly" spaces.

A portion of our Annual Meeting will focus on Seattle's famous "Freeway Park." It is right downtown just a few blocks from our hotel. The huge size and flourishing plants are spectacular, but the sight of the park cantilevered *over* the freeway will just blow your mind! We will hear how it all got accomplished and talk to Betty Miller, the great lady who specified the plants.

The people who attend our meetings are all great sources of success stories. They love to share the details necessary to get the job done. Timing and what not to do, shared by fellow gardeners, are invaluable. We hope you will join us. AHS makes a conscious effort to achieve a balanced geographical rotation for the site of our Annual Meetings in order to focus on special horticultural resources in the various regions of our beautiful country, and to take advantage of major new developments in American horticulture whenever possible. We also hope to encourage members to attend every several years without undue financial burden.

Your entire Board of Directors and I are anxious to see you all, to hear your latest triumphs, and to learn what you would like your AHS to do, as we experience some of the most beautiful scenery in the world.

Wait until President Bush hears that the gardeners of America are already looking forward to sharing their knowledge to make his program a reality!

Carolyn Marsh Lindsay
AHS President

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Letters

TYING GROUPS TOGETHER

As a former member of the Board and a very interested member of the American Horticultural Society, I am extremely cognizant of the goals and the direction of AHS. I must tell you that you are doing an excellent job of publishing *American Horticulturist*. I am so pleased to see the magazine improve edition by edition. It has become meaty, full of information and good articles that are of interest to a wide public. I believe every horticultural organization needs to have a publication that is worthy to be read, that one anticipates, that is working to build information not only for the lay gardener but for those who wish to go a dimension beyond.

Your article on "A Noah's Ark for Endangered Plants" was absolutely excellent, and the article on "Proven Performers" — a series by the plant authorities from plant societies — was a wonderful contribution to horticulture as well as to the magazine. I look forward to other articles of that nature. I hope in the future AHS can work even more closely with other organizations, tying all these groups together and representing as a whole the direction of horticulture and conservation in our country.

Janet Poor
Glencoe, Illinois

Janet Poor is chairman of the board of the Chicago Botanic Garden. As a clearing-house of information for all of American horticulture, we are striving to bring more attention to national and regional plant societies, botanic gardens, and other horticultural organizations through features on the groups themselves and news items on their activities. We hope to forge closer ties with all of them!

MORE ON MORRISON

Congratulations on your article on B. Y. Morrison in the February issue! As a long-time daffodil devotee and a long-past president of the American Daffodil Society (I followed George Lee who was the editor of your Daffodil Handbook in 1966), I was a great admirer of B. Y. We were fortunate to have the daffodil handbook dedicated to him at its publication and to have him

as a speaker at our annual convention a few years before he died. I was always amused at the way he chided the garden club ladies who strove to get blue ribbons at the daffodil shows!

I used to send notes on his green note cards with the block printed designs and am delighted that you have some available.

The charcoal drawing is great!

Wells Knierim
Cleveland, Ohio

Your article on my uncle Ben Morrison in the February *American Horticulturist* is most interesting and covers his career quite thoroughly. His personal life was equally complicated. Ben was the oldest of three children of Lisle and Isabel Fechtig Morrison and after 1937, a great deal of his time and energy — and I suspect a good deal of money — were spent on the care of his brother, Louis Keith Morrison, who had suffered a coronary thrombosis. Without his support I doubt that my mother could have managed my father at all. Ben took my father into his home and provided a therapist for many months. And my father at that time was not an easy man to deal with.

Along with his charm for adults, you should have added that young people also enjoyed Ben. I spent a good many happy hours with him "helping" in his garden some distance down the hill from the residence he shared with his parents.

I am delighted to know that his work is still recognized and valued.

Elizabeth M. Shea
Pensacola, Florida

CONCERN FOR THE TROPICS

I was particularly pleased that you were able to include the sidebar article on "A Sister Garden" with Marcia Bonta's piece on the University of California Botanical Garden in your February issue. The Juniata Valley Audubon Society here in central Pennsylvania is trying to build support for the Wilson Botanical Garden featured in that sidebar, and it is urging nature organizations, garden clubs, and anyone concerned about international environmental issues to join our "Support a Costa Rican Garden" program.



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Readers of *American Horticulturist* who share our concerns for tropical horticultural issues and want to learn more about the excellent work of the garden should contact me (P.O. Box 68, Tyrone, PA 16686, [814] 684-3113) or write directly to the Wilson Botanical Garden, Apartado 35, San Vito, Coto Brus, Costa Rica. Supporters will receive the English-language quarterly "Amicus Newsletter," published by the garden's staff.

Bruce Bonta
Tyrone, Pennsylvania

CLEMATIS (AGAIN!)

In regard to the debate about the pronunciation of "clematis" in the February letters column: a few years ago I read a little poem that I memorized—more or less. Its literary merit may be very much in doubt, but its point is succinct:

Because it grows on lattice,
The hoi polloi say clem-AT-is;
But Webster won't desist
Until they say CLEM-a-tis.

I've never pronounced it incorrectly since.
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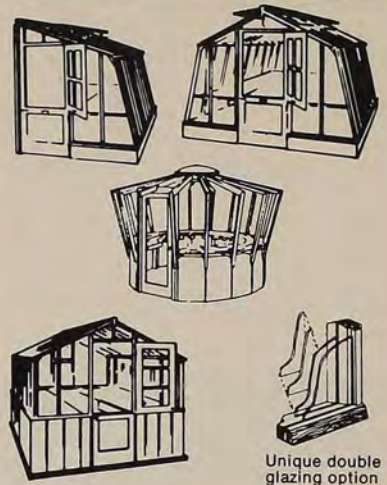
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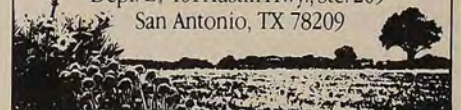
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Book Reviews

AN OAK SPRING SYLVA: A Selection of the Rare Books on Trees in the Oak Spring Garden Library

Sandra Raphael. Yale University Press, New Haven, Connecticut, 1989. 147 pages. Color drawings. Publisher's price, hardcover: \$40.00. AHS member price: \$33.95.

What was the first American tree to amaze the gardeners of Europe? Do you want to know the details of the first book devoted to oak trees? This is the book garden bibliophiles have been waiting for. Sandra Raphael guides us on a unique tour of forty-six books and prints devoted to trees in the Oak Spring Garden Library collected by Rachel Lambert (Mrs. Paul) Mellon on an estate in Upperville, Virginia.

The book's design, paper, printing, and binding attest to the care and devotion expended on this collection. Printed on acid-free paper with twenty-two color and numerous black-and-white photographs, *An Oak Spring Sylva* provides a history of trees in a well-conceived plan.



Divided into four sections—Trees, American Trees, Individual Trees, and Planting—each of the sections is then arranged in chronological order. A bibliographic description of the title is followed by pagination, binding style, and number of plates. A short narrative outlines how a book received its title, unusual circum-

stances in its production, and people associated with the work. Details about many of the books include valuable observations on the illustrations. Artists, engravers, and printers all receive their due.

In the first section we share a Napoleonic snub. The first four volumes of *Nouveau Duhamel*, printed between 1800 and 1819, were dedicated to Napoleon's first wife, Josephine. But it was Emperor Francis I of Austria, the father of his second wife, Marie-Louise, to whom the Little Corporal gave a set following their marriage in 1810. And the set in the Oak Spring Garden Library is the very set!

The first four titles in "American Trees" were published in Europe and trace the keen interest Europeans had in trees from the New World. Christopher Gray's *Catalogue* lists those trees and shrubs that acclimated to the climate of England. The plants are those collected by Mark Catesby when he lived in America. New plants of America's interior—post oak (*Quercus stellata*), Illinois hickory (*Carya illinoensis*), and the American horse chestnut (*Aesculus octandra*)—are described in the first tree book published in America. *Arbustrum Americanus: The American Grove* is an alphabetical catalog of forest trees and shrubs of the United States. The demand for knowledge of American trees was so great that both French and German editions were published.

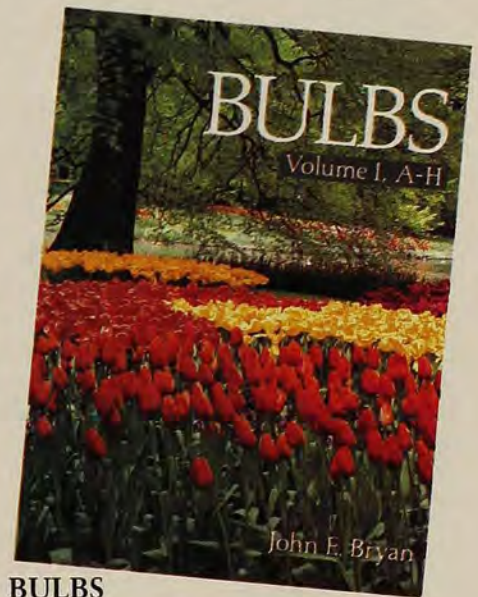
The third section contains a sampling of books devoted to a particular type of tree. Willows, oaks, dogwoods, acacias, and even mulberry trees are represented. The number of books devoted to the mulberry tree was truly amazing. Americans experimented for more than 200 years trying to produce silk in this country only to learn that until 1830, they had the wrong tree.

Planting, the final section, illustrates the various methods used between 1669 and 1828 to grow, train, plant, and transplant trees. John Evelyn's *Sylva or Discourse of Forest Trees* contains instructions for removing stumps. Several titles provide diagrams of great engines for removing large specimens while others are practical essays on planting large tracts of land to trees.

Anyone interested in trees, gardens, or the history of books will find this volume exciting. It serves as a model for collecting

books about trees, touches us with the importance of history, and whets our appetite for the other volumes—on fruit, flowers, garden design, and other horticultural topics—still to come in this series.

Keith Crotz



BULBS

John E. Bryan. Timber Press, Portland, Oregon, 1989. Two volumes, 451 pages. Color photographs. Publisher's price, hardcover (both volumes, not sold separately): \$120.00 AHS member price: \$101.95.

These two volumes took ten years to prepare, and they are extensive. Volume I has eight chapters covering basic principles related to all flower "bulbs." It includes historical aspects, nomenclature, propagation, cultivation, uses in the landscape, forcing, and pests. It also covers the genera starting with *Achimenes* and ending with *Hypoxis*. Volume II starts with *Ipheion* and concludes with *Zygadenus*. The volume has ten appendices covering such topics as common names, heights, colors, hardiness, and cut flowers. There is also a glossary and bibliography.

There are 300 color plates in clusters throughout the volume. Unfortunately, they are not located adjacent to the respective genera description. Thus, one must search for the individual photos. In addition, the genus text does not give a page number or indication of whether a photo is in the



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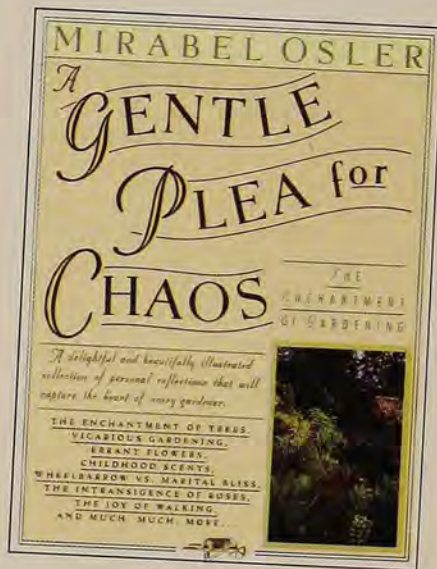
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book. This is a major shortcoming of the volumes. The photos are focused on specific genera and species. They do not cover a wide range of cultivars, e.g., tulips or narcissus. There are, of course, thousands of these being marketed.

Nevertheless, these volumes represent an enormous undertaking and provide an overview of the diversity of flowering bulbs. To the best of my knowledge, there is no other single source available that covers this information. I feel that John Bryan has achieved his objective of writing a comprehensive treatise on "bulbs."

The question is: Are these volumes for the average gardener? I would say no. These volumes were intended for the bulb specialist, professional writer, educator, and, of course, libraries. There are other general gardening books on bulbs that are reasonably priced and readily available, and those are still the best sources for the average home gardener.

August A. DeHertogh



A GENTLE PLEA FOR CHAOS

Mirabel Osler. Simon and Schuster, New York, 1989. 176 pages. Color photographs. Publisher's price, hardcover: \$22.95. AHS member price: \$19.50.

Those who aspire to become garden writers may want to avoid this book: they will eat their hearts out. But for anyone who finds that the ultimate reading experience is the "click" of recognition in a mutual experience, the nodding of the head at a long-held observation crystalized on the page: it doesn't get much better than this.

This is an instance where the author's British base is a non-issue. Among this col-

lection of essays there were a few unfamiliar common names, and it seemed odd to hear anyone waxing poetic over that ball-dropping pest, the American sweet gum tree. But the subtitle is "The Enchantment of Gardening," and Osler is seeking to change *how* we plant, not *what* we plant. She wants to see more sensuality and less orderliness; more time to marvel at the kingfisher's return to the pond and less time dead-heading the cranesbills.

Among the targets of her wit—in addition to lawns ("I equate making lawns with washing up. You needn't be told twice.") and the editors of certain gardening publications ("The author mentions a cauliflower, so there has to be a photograph of one displayed on linen . . .")—is a group of gardeners she calls the Penstemon Ladies: "Pettifogging their way from clump to clump, their eyes seeing subtleties and refinements that had passed me by completely. Where I had been looking at a heavenly rampage of mottled and freckled flowers in a herbaceous border, they had been looking at a conundrum. 'Is that penstemon 'King George' or 'Schoenholzeria'? 'Oh, it must be 'Evelyn', surely. Would one of them at any moment mutter fitfully about that winey-blue beauty known as 'Sour Grapes'? I moved forward hopefully. Discussion followed, animated and intense, and like a foreigner I couldn't grasp the language."

She is pungent, but never peevish. Despite some strongly worded plant prejudices—she thinks gladioli are too raucous to look at home elsewhere than on the backseat of a sportscar—Osler is exceedingly tolerant and generous of spirit. The incident of the Penstemon Ladies serves to illustrate the diversity of gardeners and gardening; despite her pleas for "floral an-

archy," she struggles to absorb and admire the dimensions and formality of Versailles.

Osler claims self-effacingly not to know the names of her plants, so that one is astonished, on a second browse-through, to see that she has named hundreds. Yet her thirst for knowledge is wide-ranging and contagious. Her homage to historic plant collectors reconnects our suburban flower beds to that lineage of adventurers; her paeans to other garden writers and botanical illustrators beckon one to the library.

But while the reader may learn some new facts and discover some new plants, this is a book to pick up for rejuvenation on those days when gardening is what Osler describes as "masochistic perversity" and "pure tedious hell," because, after all, "There can be no other occupation like gardening in which, if you were to creep up behind someone at their work, you would find them smiling." You are likely to be caught with that same expression while reading *A Gentle Plea for Chaos*.

Kathleen Fisher

Keith Crotz owns and operates American Botanist, Booksellers, a Chillicothe, Illinois, firm specializing in rare and out-of-print books on horticulture.

August A. DeHertogh is a professor in the Department of Horticultural Science at North Carolina State University who recently received two major awards for his contributions to flower bulb research and teaching.

Kathleen Fisher is editor of American Horticulturist.

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Story by Peter Loewer
Illustrations by Jean Jenkins

MOVING A GARDEN

We planned the move so well. Weeks before that fatal day, we contracted a moving firm, debated how many plants would risk the journey from Cochection Center, New York (a cold Zone 5), to Asheville, North Carolina (a happy Zone 7), and asked for a delivery of many, many boxes. My wife Jean drew a plan of our new home including both floors plus the existent (but in disrepair) seven-by-seven-foot potting shed, the once garage and now spare room (we call it the stone room), and the contracted-for greenhouse.

For weeks we consulted about these plans. Jean made paper cutouts of the furniture we planned to take along and we pushed the little models from one end of the graph paper to the other, taking pages of notes as we did so.

I did the same with the garden. My wife's aunt and uncle, who lived in Asheville, sent me drawings of what could be seen of the garden around our new home. In September 1989 I went down to North Carolina and made copious notes about any possible bare spots that might be ready to receive plants from up north.

Space would be limited. The new garden was only one acre and already planted with a host of shrubs, wildflowers, and unusual perennials that the last owner had collected over a period of twenty years. But it was so neglected that in September, it resembled the perennial border around the Munster home; the only thing missing was a perpetual dark cloud overhead.

In addition to business records, household artifacts, two cats, and a seventy-pound German shorthair, our inventory encompassed 2,000 books including over 500 devoted to botany and garden writing of this century and the last. Add to this a greenhouse full of plants that did not take kindly to exposure to cold weather and the chosen plants from the old perennial border, a list that fluctuated up and down depending on both the time of day I read it and just how tired I was.

The Horror! The Horror!

Picking the Plants to Move

Outside in our old garden, I mused over possible choices and marked the plants I wished to move with yellow twist-ties left over from the boxes and boxes of plastic trash bags we consumed during the weeks preceding the move. Before the movers arrived, I planned to bag some twenty-five plants—the chosen few.

How to choose? There were hundreds of plants in our old garden, many of them raised from seed obtained from the various rock garden societies and the seed exchanges of the Hardy Plant Society and our own American Horticultural Society. The selection was catholic and included many ornamental grasses yet to hit the big time. How do you single out the winners?

Anything I could repropagate from seed had space efficiency in its favor. I had started in late summer to collect seeds and by October's end, had amassed over 150 paper packets, carefully labeled as to common and botanical name, place of origin, and any notes to myself about cultural needs.

No matter how it hurt, I decided against taking any mature plants that could be replaced at a future date. This meant that

the *Rosa moyesii* I grew from seed, which had flowered the previous summer of '89, although it produced no hips, would stay behind. The *Acanthus mollis* that I bought in a weak moment back in '82—a moment when I talked myself into believing that the Catskills were warming up—and by dint of mulching and continual fussing, kept alive and actually prodded into flowering twice, would also stay. The quince tree would be left as would all of the scree bed inhabitants, including a charming dwarf Japanese maple of uncertain ancestry whose roots plunged so deep it would be impossible to dig up, especially in November.

I also left plants that I realized were too large to safely transport without the benefit of specialists. That meant bidding farewell to my fifteen-year-old weeping birch (*Betula pendula* 'Youngii') and my beautiful weeping white pine (*Pinus strobus* 'Pendula'), a tree I bought as a young cutting and which had produced its first cones the previous summer.

Winter Approaches

It gets cold in the Catskills in November. In fact, the first flush of winter is felt in late August or early September when the night air that flows down the mountainsides is already as chill as the breath of the average ghost.

"Don't worry about the cold," my Carolina uncle said. "It never gets too cold before December here."

The movers planned on a giant truck for our household belongings and a smaller truck to carry the plants—both greenhouse and outdoor—and the piles of pots and other miscellaneous equipment that I had collected over the past twenty years.

"Don't worry about the move," said the Prime Mover, a gentleman with twelve years in the moving business. "As long as you move before Thanksgiving, the weather here should be fine and," he paused to give a snappy salute to the sky above, "it never gets that cold in North Carolina before January."





I thought about starting the big dig before Halloween. But there was a book to finish, endless choices to be made about the packing, my wife was still working at the local library, the deadline for the next *Quill & Trowel*—the newsletter of the Garden Writers Association of America—was only two weeks after the move . . . all the demands of modern life that eat up time with the passion of a food processor that has taken hold of your tie.

The Day of the Move

The movers arrived for the packing of the trucks early on the morning of Thursday, November 16. Everything that could be put in a box was put in a box. Our living room resembled the final, warehouse scene in "Raiders of the Lost Ark."

Now most of November had been beautiful with chilly nights and pleasant, cool days. But that morning dawned with temperatures in the high 50s, high humidity, and a sky thick with slow-motion clouds belying a wind that began at 30 mph and gave no sign of slowing.

"Not too good," said the Master Mover. "Rain's going to start soon. But I'll move the big truck as close to the house as possible and we'll trundle everything out through the garage."

When the truck was finally parked it effectively blocked off my immediate entrance to the garden. I either had to climb over the ramp that went from the garage floor to the five-foot-high truckbed or walk all the way around the house. I should note that our old house was originally a country hotel and consists of three houses joined together, making this a trip of some 230 feet each way.

The rain came. It fell in drops and dollops, with some collective waterballs as large as quail eggs. Then it hailed, and the wind blew harder. I could almost spy the Reverend Davidson and Sadie Thompson at one end of the garden. By mid-morning we learned that tornado warnings were

posted for the area. The temperature fell as quickly as the stock market on blue Mondays.

My first job was to dig up a small section of a large clump of a particular *Miscanthus* grass that originally came from a garden in southern Pennsylvania. Since it grew one to two feet higher than any of those available from nurseries, I deemed it important. But every time I reached for the black plastic that was to hold the roots, the roll blew away. Newspapers brought for packing flew. Labels flew. My felt-tip marker actually leapt into the air. I was drenched and sticky with mud.

After twenty minutes of struggle, the grass roots were inside the second moving van. I went indoors and changed clothes and put those I had worn into the dryer.

The wind blew harder and lightning ripped across the sky.

The movers were wet. The boxes were wet. Soon I was wet again.

By eleven o'clock, I had effectively bagged nine more plants with dozens more to go.

After changing clothes again, I went for the unregistered cultivar of a dwarf hemlock that bore frosty white tips on the new growth every year, which a good gardener friend had given me.

This particular dig required a shovel. As I dug, the rain fell harder and soon the hole was filling with water and the plastic wrappings were now two counties away. My boots were full and my hands were solid muck. I had started this dig at noon and by one, the hemlock was in the truck. I went inside to dry off and change clothes again. At two o'clock a twenty-foot piece of the aluminum soffit on the attic roof of the largest house was picked up by the wind and began to blow back and forth with a noise like the trumpet of doom. Held by one nail, it threatened to fall on the greenhouse below.

By three I had the help of the local roofer and we nailed back the soffit. Soon it would be dark but the wind still blew and the

rains still fell. I dried off again.

By four, I had successfully wrapped sixteen plants. Using a flashlight, I walked forlornly through the garden searching the ground and my memory for the plant I knew I would want once the moving was over. The greenhouse inhabitants had yet to be packed up and moved to the waiting truck. They included an eight-foot-high *Cordyline australis* that I grew from a seedling obtained in 1973 (it resembled a Miami palm tree in a hurricane, toppling over repeatedly until safely inside the truck), and various other pots both large and small of plants with too many sentimental associations to be left behind.

By six o'clock, with the help of the movers and a scrap of illumination from the light over the garage door, both the greenhouse plants and the perennials were safely aboard. The Prime Mover and two helpers drove away with the intention of stopping overnight somewhere in Virginia. They would next see us Saturday morning at the new house. My wife and I, the two cats and the dog reentered the empty house, listening to the roar of the now declining wind as we prepared to arise at four in the morning for our drive to North Carolina.

The Movers Arrive

The morning of the 19th was clear with welcome warmth. We made the drive in twelve and a half hours, in time for a light supper before we bedded down on borrowed cots.

Before we could begin to make our plants feel at home in their new surroundings, there were a couple of hitches. Construction had not begun on our greenhouse because the City of Asheville Zoning Officer said the setback for the structure was short by five feet. I was scheduled to appeal my case at City Hall the following Monday afternoon: not, I felt, an auspicious beginning to a new life. And the potting shed that I had intended to use for many of the plants had been glossed over by the construction crew working on the house and was nothing but a small sinkhole, smelling of damp, with a dark green fiberglass roof that was home to a small ant colony.

It's one thing to plan a move with pieces of paper but quite another to deal with eighty boxes of books set to go inside and twenty boxes of plants for the out.

And the night before had been unseasonably cold. The thermometer sank to 18 degrees in Asheville and the next morning when we unloaded the plant truck, I found

out what were cheeky plants when it came to cold and what were not.

The heirloom night-blooming cereus was burned on most of its stems and will be long in recovering; the orchid cactus fared just a bit better, but won't bloom until next year. The cyclamen were limp but they eventually sat up again; most of my specimen *Kalanchoe uniflora* fell apart in limp shreds and the unknown wild plants from Madagascar that I grew from seed would never see the light of day again. My favorite anthurium was pulp and the once sophisticated calla lily had all the charm of a dozen two-day-old McDonald buns. All told, thirteen prized plants were lost.

Those that had survived were pushed into the seven-by-seven-foot potting shed, for the weather reports were predicting that the worst winter weather for years was coming up. I kept the room warm with a kerosene heater—something called gardener's luck told me to bring it along—hung on chains from the one roof support since there was no space on the floor below; that was littered from corner to corner with plants.

On the outside I was confronted with seven boxes of balled-and-plasticed plants.

"Unseasonable cold," everyone said.

"Unseasonable cold," I grumbled, as I set out to dig holes with frozen hands that held frozen tools. It literally took days to complete the job and my hope was that by spring, I would not have forgotten where everything had been tucked.

The greenhouse was finished in December and the potting shed emptied of its inhabitants as the weather began warming in January.

Today in mid-February, I finished planting exactly sixty-four little pots of seeds. Tomorrow I will do more. The camellia is in bloom and the winter honeysuckle (*Lonicera fragrantissima*) wafts its perfume amid the grove of mountain rhododendron (*Rhododendron catawbiense*) down at the edge of Kenilworth Lake.

But be it government decree or eminent domain, I will never move again. They'll have to put me in a large pot, wrap it in excelsior, and ship me out—screaming!

Peter Loewer is the author of A Year of Flowers. His last article for American Horticulturist, in February 1989, was "Trials of a Zone 5 Gardener with a Zone 10 Dream." He is now quite content to settle three zones shy of that ideal.

BEFORE YOU PACK. . . .

Contemplating a move?

If you can't be dissuaded by Peter Loewer's grim experience from trying to take your garden and/or greenhouse with you, he offers some tips that might make relocating your own plants a trifle more pleasant.

GENERAL RECOMMENDATIONS

1. Start cuttings of plants too large to move easily.
2. Where species and season allow it, gather seeds for annuals and perennials.
3. Except for sentimental reasons, never move a plant that can easily be replaced in the future.
4. Label everything with care using waterproof ink.
5. If moving to a colder climate, make sure that plants left in a truck or car overnight are kept warm.

WITH POTTED PLANTS

1. Roll up potted plants in newspaper just like florists roll up bouquets, then pack them upright in cardboard book boxes. Use plenty of crushed paper for packing. Eschew plastic pellets! Paper works better and is easier to get rid of after the move.
2. If you have enough notice, start repotting rootbound plants a year ahead, to cut down on the stress of moving.

WITH GARDEN PLANTS

1. Early spring is the best time to move plants; fall is OK if the move is to a warmer climate.
2. When digging up perennials, include

plenty of soil and wrap the plants in plastic. Various sized plastic garbage bags work well.

3. Plants need an ample supply of water before they are moved, so if rainfall is short, begin an irrigation program.

4. If moving trees, start root pruning the year before the move.

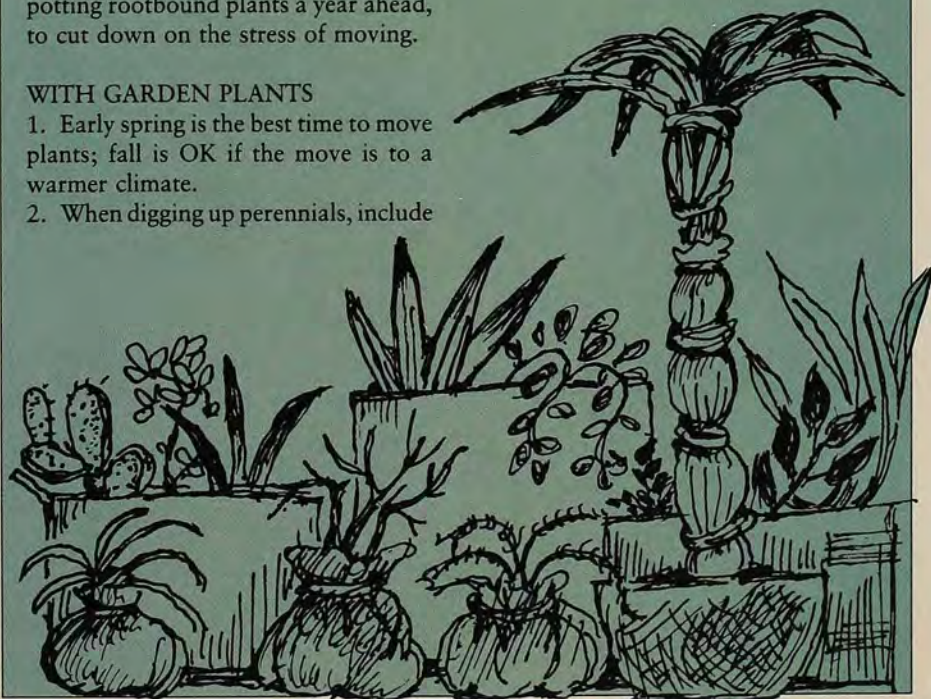
5. Deciduous trees should be moved when dormant.

6. Conifers need three weeks to a month to settle in before the rigors of a northern winter, so be sure and mulch well if time is short.

7. If forced to move in summer, ball and burlap trees and shrubs during the previous spring and keep plants in a shady spot, well watered until the move.

8. In the plant's new home, prepare a bed of good, friable soil where new roots can develop easily.

9. After you transplant, follow a careful watering routine.





GARDENING WHERE WE LIVE

BY ANN LOVEJOY

Gardens everywhere begin in dreams. Practical or romantic, urban or rural, each gardener has a vision for each plot, whatever the scale. As seasons pass and gardens grow, few of our schemes fulfill the goals that gave them birth. Though most gardeners get as much pleasure from the process of garden making as from the results, some are discouraged when their efforts don't match that enticing inner vision. Often the problem is simply one of patience; a new garden won't feel substantial and settled for perhaps five years, and needs eight or ten years of steady growth to look mature. More serious troubles arise when gardeners in Alabama or Minnesota want to replicate Sissinghurst. Here, the difficulty is twofold: first, no copy or emulation ever has the flavor or impact of the original. Secondly, America is not England. Before you can make wonderful gardens, you've got to know your territory.

Say "English garden" and images of billowing borders fill the inner eye. Say "American garden" and the picture becomes jumbled, confused. Just what is an American garden? In truth, we might well exercise our imaginations with greater freedom than we generally do, for American gardening could be as varied as America itself. Limiting our palettes to English border plants is as myopic and arbitrary as deciding to grow only prairie grass and

rudbeckias. Horticulturally, we are in our teens, still discovering and defining ourselves. This can be a delightful experience, especially when it leads us to relish our national diversity. America is a big and complex country; rather than seeking to codify a single American school of garden making, we can rejoice in the many American styles, celebrating the emerging strengths and character of each region in turn.

Since success is most likely when the dream garden approximates the possible, truly regional garden books could offer us satisfying images to replace the improbable. Gardening where we live does not mean that we can't draw inspiration from any place but our own back yard, but it does require us to learn more about our particular territory. Gardening wakes us up in all sorts of ways, making us aware of seasonal changes, of weather patterns and microclimates, of differences in soils and water. Knowing the territory also means recognizing the bounty of the local flora. No matter what won't grow where you live, there is plenty that will. Even our weeds can give us clues: where knotweeds thrive, so may more garden-worthy poly-

Those living on a boggy site can take advantage of it by planting Japanese irises (Iris ensata), an import that has adapted well to American growing conditions.





gonums. If our lawns are choked with moss, we might as well remove the grass entirely, or relegate it to a more promising site. In its place, thick carpets of moss, now encouraged, may be interwoven with hostas and hellebores, ferns and ivies, rhododendrons and Carolina allspice (*Calycanthus floridus*). Should the grass wither when summers bakes the ground dry, yuccas and rock roses (*Cistus* spp.), California fuchsias (*Zauschneria californica*), poppies, and many herbs will thrive. Nicola Ferguson's wonderful book, *Right Plant, Right Place*, is most helpful for gardeners faced with varying conditions; even though it is English in origin, many of the plants mentioned are American natives, or have hardy, attractive counterparts among our native flora.

Walking through local woods and fields will teach us a good deal about the plants that will thrive for us. Visits in any season will reveal early rising perennials that could mask fading bulb foliage, sturdy midsummer bloomers, sure sources of splendid fall color, plants with winter beauty of berry or bark. In most of the country, indigenous plants have been joined by enterprising newcomers that naturalize with ease. Sometimes this entrepreneurial spirit can be harmful, as when imported *Lythrum* crowds out less invasive native species. More often the interlopers are innocuous and give us important clues as to which plant families enjoy our region. Moreover, observing natural plant relationships and combinations can be as instructive as visiting gardens and arboreta.

There are multiple options to pursue in our search for specific regional information. Private gardens are seldom publicly accessible in this country, though entree to numerous gardens often accompanies a membership in garden clubs or plant societies. While much needs to be done nationally, there are already a few outstanding regional gardens that are open to the public. At the North Carolina State University Arboretum at Raleigh, Edith Eddleman has developed extensive display gardens to demonstrate the possibilities presented by hundreds of native plants, some in splendid isolation, others grouped with exotics from across the world. Parks departments and water companies all over the country are promoting gardening with native plants through instructional classes and demonstration gardens. USDA Cooperative Extension Service Master Gardener programs are often excellent places to find out about local plants and condi-

tions. Lots of community colleges offer courses in native plant identification, often with class field trips. Native plant societies abound; they are a terrific resource in regions where conventional border plants can't handle local conditions.

Any such investigation has several rewards: it is tremendous fun in itself; it gives us the company of like-minded people; and it can enrich our gardens enormously. Those who fear that native plants will make the garden dull and frumpy will be reassured almost at once; some American natives are spectacular, and many others that appear drab when starved are transformed by decent garden conditions. America is rich in wonderful plants; literally hundreds of English border plants are expatriates from these shores. Continental finishing school left some of them too delicate to return to their native soil, but quite often their heartier country cousins will fill their garden niches with aplomb. Salvias and solidagos, asters and artemisias, all boast native species and garden varieties that will succeed anywhere in the United States. At first, we may regard these plants as substitutes for

more tender counterparts, but as we gain confidence and understanding, we value them for their own qualities.

Once our plant palette is expanded to include the local flora, we can begin to play with variations on regional themes. In one spot we may choose to mirror a combination frequently found in field or wood; perhaps wild cherry, fat redbud, and spring beauty (*Claytonia*); or asters of mauve and rose, running sweet fern (*Comptonia peregrina*), its fall coat the color of cinnamon toast, and white snakeweed (*Eupatorium rugosum*). In another place, we may alter the original group by exchanging the species plants for hybrids, supplement it with imported cousins, or reflect it obliquely by using completely different plants of the same colors. As repeated patterns build throughout the gar-

Below: The swollen bladderwort (Utricularia inflata) is an American native that thrives in ponds and wet places. Right: Rock roses (Cistus spp.), of Mediterranean origin, will thrive where lawns wither.





den, colors and relationships echo and shift into new pictures that refer to each other even as they change through the seasons.

When we seek out our native plants in their natural habitats, we can also observe the way plants grow together in nature; trees and large shrubs sheltering smaller shrubs and perennials, the whole laced together by creeping ground covers punctuated with bulbs and low-growing annuals. Employed in our gardens, these lessons from the wild help to unite unruly collections of plants. Arrayed in naturalistic patterns, the plants happily mimic the healthy, harmonious relationships found in nature. Well-placed plants form floral communities that work together, living gardens kept in bounds as much by natural law as by a busy hand.

Gardening where we live means that we take advantage of what nature offers us, not copy it wholesale; slavish imitations of nature will be no more successful than those pseudo-Sissinghursts. For one thing, gardening is by definition interference with nature, and despite the flagrant untruths of the poets, nature unassisted rarely achieves what most of us would consider a garden. Here, too, we can draw inspiration and concepts from a model, transposing plants and architectural elements freely to suit our personal aesthetic, giving preference to local materials. In the Pacific Northwest, this may mean fences of raw timber; arches of whole, crotched trees; a treillage of bark-covered branches—a rough-hewn style that, if well conceived and carried out, results in elegant funk. In New Mexico, it might translate into walls of adobe and patios of glazed tile, while in New Hampshire, flat flagstones of native granite and fences made from field stones would be appropriate. Again, one need not be limited to a strict palette, but in gardening, as in architecture, an individual example that is free of trendiness and well related to its regional setting will age better than another made to fit into the artificial environment of an immediate neighborhood, which quickly becomes dated and out of fashion.

This—the design stage—is where too many of us falter, hampered more by fear of transgressing the mysterious, implacable laws of Good Taste than by our inexperience. Take courage, inform yourself thoroughly and well, and dare to try; over

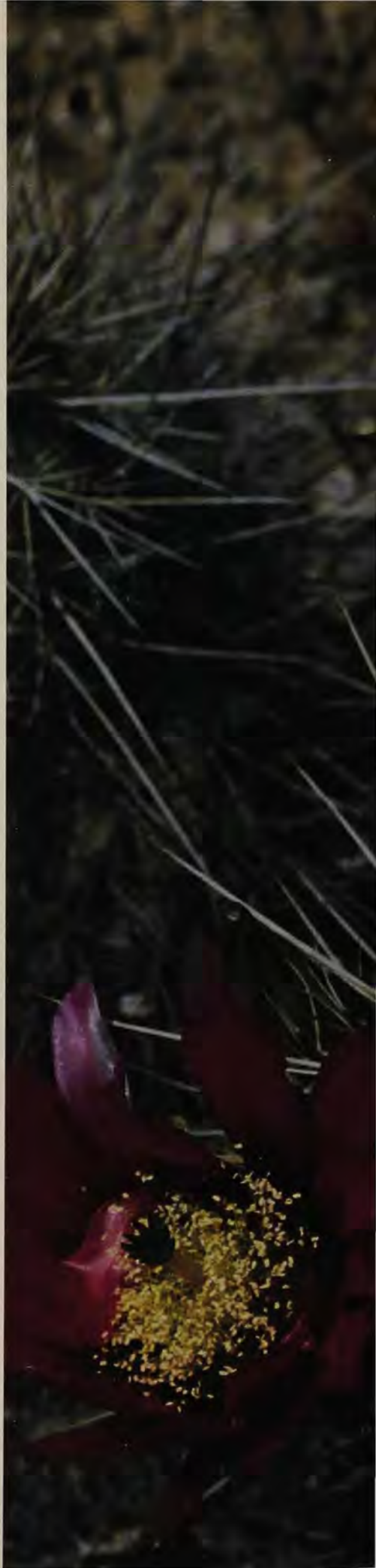
The Englemann hedgehog cactus (Echinocereus englemannii) can be found in Arizona's Sonoran Desert.

time, and through trial and error, the garden of your inner eye will form itself under your hands. As your taste changes and experience clarifies your desires, the garden will follow your lead. Never let a lack of formal training keep you from arranging your garden according to your individual light. Garden mistakes are easily rectified, and plants are by and large willing workers, both flexible and forgiving. Gardeners grow long-sighted, planting trees for a future they may never see. Time is the gardener's friend; there is no hurry about making a garden, for the process, rather than the product, is the point.

Gardening where you live means more than using native plants and materials, more than echoing regional landscape elements; it means making a garden that changes with your life and tastes, showing your current fancies and interests. Professionally designed gardens may be pleasing, yet they are almost never personal; the very best gardens in the world are all the children of a personal dream. Your ideal garden may overflow with blossoms, a floral extravaganza for half the year, restful and quiet the other half. I may prefer a cool, sheltered retreat filled with a tapestry of foliage, vines trailing from every tree, exotic perfumes heavy on the air. Another may long for lilacs and daylilies, rambling roses on arching white arbors, red peonies nodding in a trim, grassy yard enclosed by a white picket fence. No matter what is trendy, our individual tastes and personal plant loves should shape our own gardens more than pressures of fashion or the dreary dictates of "good design." Any original, however eclectic, has more life and character than the most tasteful copy.

When we garden where we live, our gardens become distinct and individual in the process, faithful representations of our thoughts and loves. When our gardens suit our needs, offering us places to work and to rest, to play and to dream, we enjoy them to the fullest through every season. As we grow secure in our knowledge of plants, sure of the rightness of our personal choices, we will be making new and lasting contributions to the regional schools of American gardening—gardeners all across the country united in making gardens where we live.

Ann Lovejoy is a contributing editor of Horticulture magazine and author of a soon-to-be-released book, The Border in Bloom, from which this article is excerpted. She gardens in Seattle.







GARDENS IN AMERICA

BY MIRABEL OSLER

Americans envy the British their climate and their well-established gardening traditions. They spend fortunes fruitlessly trying to emulate the look of English country gardens. Here is a look from the other side of the Atlantic.

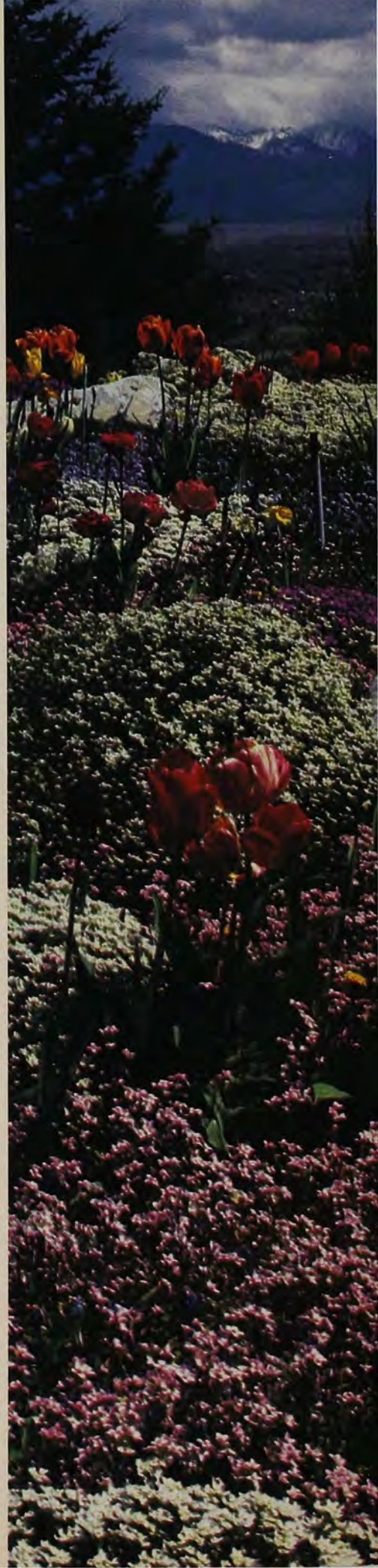
I know nothing about American gardens, but I love to imagine what they are like. To us, on our little congested island, almost sinking under the weight of gardens, the idea of that space, remoteness and limitless horizon, where it is possible to walk over one uninhabited hill and find another just the same, is fairly mind-blowing. Thoughts of gardening then take on a different resonance.

I have been addicted to westerns for years, not for their prescribed formula of the good guys and bad guys, but because behind all their cavorting, often superbly photographed, is the most beautiful landscape imaginable. Those ravines and cloud shadows across prairies; those black hills, menacing and remote, those distant mountains with snowy summits; swamps, creeks and gulches are words so irresistibly evocative I like to savour their potency, though I have little chance of ever seeing such places. High pastures, bone-dry river beds and contorted trees, misshapen forever by prevailing winds blowing constantly from God knows where. Think of it! An unimagined land-mass stretching boundless to the oceans.

“Land-mass”—what a heady word. Those of you who do not live on an island can have no idea of that sense of freedom when you set foot at Calais, aware that there is no watery restraint between you and Vladivostok. Little do the French appreciate that Calais is the gateway to emancipation. Fortunate Danes, Portuguese and Walloons. Envidable Americans, with frozen wastes and sweltering forests; with rivers like arteries passing through state after state. As for their gardens—how they vex me. I’ve tried to find out about them from our small local town library, but with no success. There is not one single book on American gardens. “Well, we’ve never been asked,” explained the librarian. Isn’t it time then, that we had a little cross-fertilization?

In our country, limited by climate and congestion, to me the idea of American gardens remains undefined. The extremes of garden design and what is possible to grow there, is fascinating to English eyes

Tulips, iberis, and sempervirens growing in a private rock garden in the Rocky Mountains in Kalispell, Montana.





conditioned by roses. Given the diversity of nationalities in America, sources for inspiration must have come from five continents. Who gardens say, in Butte, Montana? What gems of wonder lie undiscovered in Meridian, Mississippi? Aren't there unacknowledged marvels in Bismarck, North Dakota; in Maine and California? And that state with the most beautiful name, Pennsylvania (a word whose first syllable should be uttered on an indrawn breath—while sylvania is released like a sigh), has, I'm positive, places worth leaving home for.

One of the most bizarre traditions that immediately strikes someone from England, brought up on privacy, is the American front garden. Where we have walls, fences or hedges defining our territorial frontiers, in small American towns they appear to have nothing. Where we clearly know whose leaves are ruining the lawn, or whose right it is to pick an overhanging sprig of lilac, over there there are no definitions. Where did the open-plan tradition originate? And doesn't this system presuppose that every house owner is pleasantly co-operative towards his neighbour?

Who mows what? Is there no animosity over shadows? What happens, for instance, when one person decides to plant a coniferous tree; when loose petals of overblown blossom float across invisible boundaries? And are you obliged to greet your neighbour as a *force majeure* that you meet eyeball-to-eyeball across the undefined sward?

Yet the effect of seeing a green flow of grass which unites each house one to another gives a restful appearance to the street. Trees and bushes are there, but not the individual expression from flower-beds.

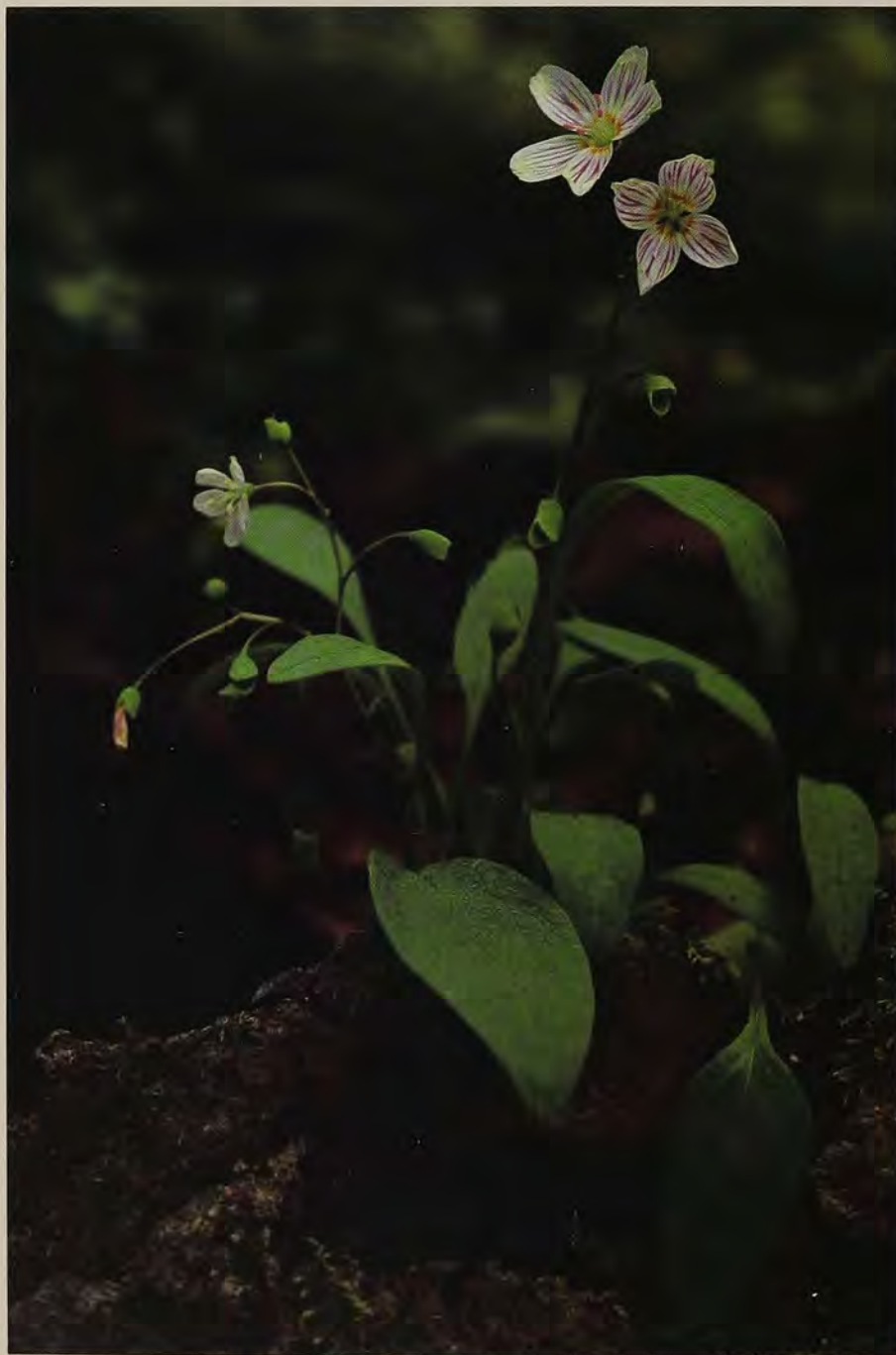
At the back of the house, obviously it is different. Here is a description of a garden in Iowa, taken from Jonathan Raban's account of his journey down the Mississippi in *Old Glory*:

... I followed him behind the bar and into a scruffy little kitchen where he switched on a raft of lights which flooded the yard beyond.

"Look," said Mr. Frick, showing me out through the door. Even now, his garden was still an embroidered quilt of summer colours. Plants in knots were arranged in steep pyramids, in banks of deep green ferns, in white, wrought-iron pagodas and hanging baskets. He had squashed what looked to me like a complete Chelsea flowershow into the space of a living room: slender herb margarets, livid begonias, fuchsias, chrysanthemums, primulas, geraniums ... Tiny gravelled walks trailed in and out of the beds of flowers. The centrepiece was a miniature waterfall. Mr. Frick switched it on, and a little river came bubbling through the ferns, over rocks of coloured crystal and splashed into a lily-padded pool. In the corner of the yard was a rose bower, the blooms of pink and crimson looking bloody in the floodlight. A signboard with carved rustic lettering was suspended over the top of the bower on silver chains: it said "I Never Promised You A Rose Garden."

One of the attributes of American gardens that is alien to us, is the way in which they can be taken into the house, or, conversely, the sitting and eating rooms can be part of the garden. From looking at pictures I see that many of these designs use pebbles, boulders, gravel, cement and driftwood, while plants in pots are used

Left: The American woodland offers many delicate wildflowers that translate well to shady gardens, such as spring beauty (Claytonia caroliniana.) Right: Lupines (Lupinus polyphyllus) fill a farm field near Nashville.





for twining up dividing screens. In Penelope Hobhouse's book, *Garden Style*, she describes a small garden in New York where pots of grasses and bamboos, as well as flowering plants, are used "... like flower arranging; pictures are constantly built up and then changed; the overriding aim is to create a green oasis as a contrast to the concrete city desert."

In the same book is a lovely photograph of the Magnolia Plantation in South Carolina. The still dark waters reflect the straight lines of the "live oaks," with their roots rising like sinews to hold the trunks soaring high above the swamp. Are there still to be found legacies in the gardens of the south from all that available labour in other centuries? Are there fine gardens laid out around fine houses in the midst of fields of tobacco? Is Rosedown in Louisiana a ravishing place of monumental trees, azaleas, camellias and sweet olives? Did traders on the Mississippi make spectacular productions between the sugar-cane and cotton plantations? Perhaps the Missouri Botanical Garden in St. Louis is a fantasy place, with desert houses full of night-flowering blooms and grotesque exotics. Cypress swamps, magnolia gardens and banyan trees; bayou and savannah—what foreign words to evoke a wild extravagance of sensuality, way beyond the quiescence of sweet williams.

As for the "butterfly pools" in Charleston, imagination takes off. Are they migrating flecks of blue, drawn by an irresistible plant grown only in Charleston? Do the butterflies waver and surge and move like the sea in their breeding season? Elsewhere what colours are to be seen in the Longwood Gardens of Pennsylvania, among the rolling hills?

There's so much more, but I shall never know. There are, fortunately, wonderful American writers that do penetrate my sitting-room. That witty and abrasive writer Henry Mitchell does slap down my pretensions to try for the impossible. Succinctly he tells us that one bulb may be enough, or that there really are alternatives to "a million blades of grass shorn uniformly." And I have taken to heart his advice to "not go hog wild" over peonies,

Above: Meadow beauty (*Rhexia*) is one of many beautiful American natives just beginning to become available in the trade. Right: An alpine sunflower or "old man of the mountain" (*Hymenoxys grandiflora*) brightens a rocky hillside in the Grand Tetons.



much as I adore their plushy faces and sturdy stems.

Another much beloved book is Eleanor Perenyi's *Green Thoughts*. She has a wonderful chapter on blues. Not on moods, but on flowers. "I love blue more than any other color. I am inordinately attracted to any blue substance: to minerals like turquoise and lapis lazuli, to sapphires and aquamarines; to cobalt skies and blue-black seas; Moslem tiles—and to a blue flower whether or not it has any other merit." Then off she goes beguiling us with her words and descriptions, her enthusiasm for and commitment to all the blue things to

be grown in a garden. When she comes to platycodons I have to turn to my garden encyclopaedia, for shamefacedly I've never heard of them. They are balloon flowers and look from the photograph the most exquisite deep blue with papery-veined petals. The balloon-shaped buds open into saucer-shaped flowers.

In the book Mrs. Perenyi comments: "That Americans aren't a race of gardeners is evident enough from the range of tools offered in most stores." Maybe. Even so I'm not put off. I long to see the variety of their gardens through eyes that for years have been focused on those in England.





ETHICAL GARDENERS, BEAUTIFUL PLANTS

BY JACQUELINE HERITEAU

In a garden, you don't get what you deserve," says Dr. H. Marc Cathey, director of the U.S. National Arboretum. "You get what survives."

If this was true in the past, it is much more so today. Changes in our environment—the carbon dioxide build-up in our atmosphere, changing weather patterns, a dwindling supply of unpolluted groundwater, garbage cruising the seas for a parking space, shrinking topsoil, and fouled air—make it harder for many plants to survive. Many of those same changes also make it unethical for us to use chemicals to stretch the boundaries of that survival.

In seeking fresh solutions, gardeners look to nature, to the principles that drive the

Members of the Asclepias genus require little fuss and attract butterflies that will help pollinate other plants. Right: The swamp milkweed, Asclepias incarnata.

planet. Dr. Cathey calls these principles "the new ethic" in American gardening. Others might call it a "new naturalism": an informed, or sophisticated naturalism that promotes healthy soil and healthy plants and is beneficial to environments near and far.

Champions of the new naturalism address it in various ways. "The other side of the butterfly" is Elvin McDonald's phrase for an approach that promotes healthy gardens with only a last resort to chemicals. McDonald is director of special projects at the Brooklyn Botanic Garden. His show-and-tell lectures now usually include references to the importance of leaving some of the garden for the beautiful and beneficial three Bs—butterflies, bees (including some wasps), and birds. They pollinate, they rejuvenate, they plant. Above all, they gobble insects that we don't much want.

To encourage these allies, McDonald





says, we must feed them by planting flowers and shrubs they like. Don't spray, leave stalks and seedheads to ripen, rake leaves into drifts and leave them to overwinter, serving as a home to fat wriggly worms that till the soil and feed our birds.

James van Sweden and Wolfgang Oehme, landscape designers based in Washington, D.C., have found nationwide recognition for naturalism in "the new American garden." Their trademark is a meadowlike combination of ornamental grasses, native trees and shrubs, and masses of flowering bulbs and easy-care perennials.

In spring, a carpet of naturalized bulbs flowers in spaces opened up by the annual shearing of the ornamental grasses. In summer, black-eyed Susan, Russian sage, and other perennials that require no fertilizer or fuss bloom among the now half-grown grasses. In fall, sweeps of sedum turn russet and the trees show orange and red. In winter, the wild winds dance among the tall grasses. Thus both design and maintenance promote healthy ecological balances and provide texture and color in all four seasons.

The aesthetics of the new naturalism are addressed beautifully by West Coast writer Ann Lovejoy in her argument on page 16

for "Gardening Where We Live." Ann urges gardeners to, in essence, fulfill their dreams by enhancing their garden's natural inclinations and using lots of healthy, native selections. They should submit to the site's own inclinations, giving moss its head where it is determined to take over the lawn, perhaps weaving it with ornamental shade lovers.

Native plant societies are as plentiful as native plants, she notes, and abound in soul mates ready to share knowledge of local gardening imperatives, "a terrific resource in regions where conventional border plants can't handle conditions."

The need to encourage diversity in our planting is a common "new naturalism" theme. Dr. Cathey explains why.

"In ages past," he says, "plants growing in the wild maintained ecological balances by adapting to climatic change. Some plant species 'migrated' with the winds and the birds to regions suited to their needs. Some seeds of plants that survived change grew into species adapted to the new conditions. And some species vanished, making way for the new.

"By replacing jungle, wetlands, and prairie with ranch and farm, city and road, we have limited plants' opportunities to

adapt to environmental changes. The price of this interruption of the natural cycle is that we now must take over the development and select plants adapted to projected climate changes."

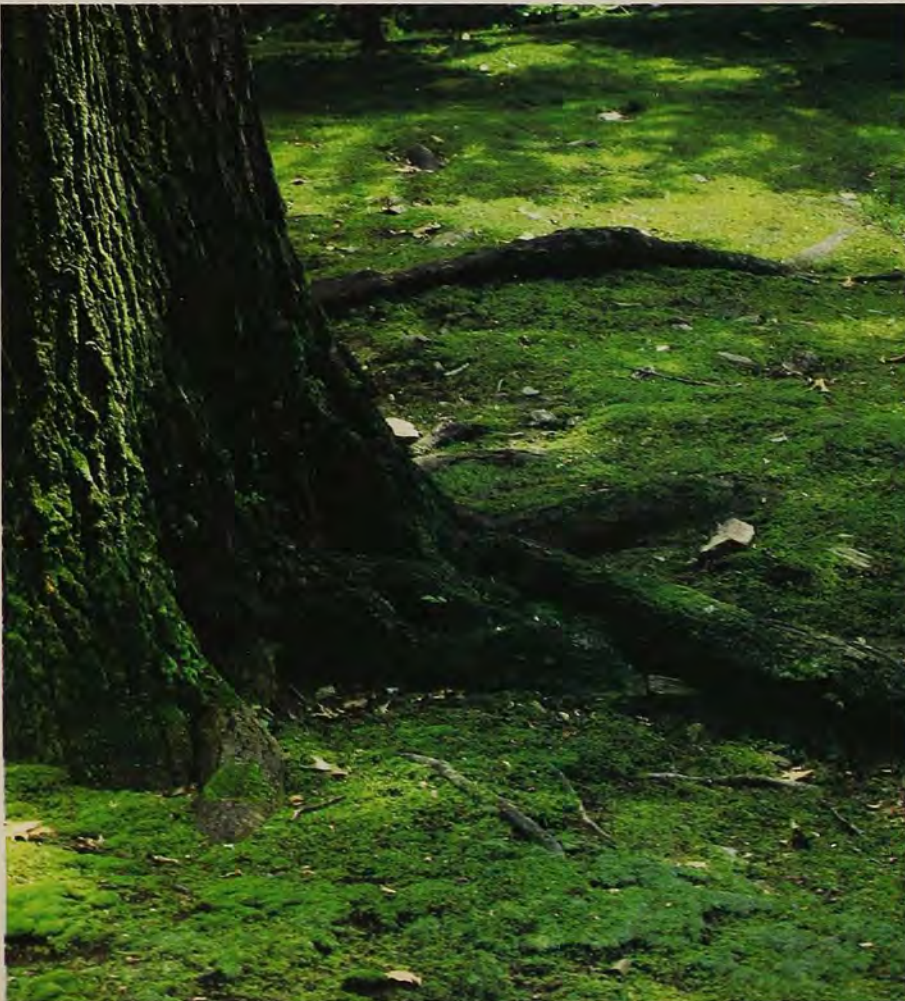
In embracing a new garden ethic, he says, we must seek "tough plants for tough times." Tough can also be beautiful, and many of these tough plants are already in the trade. A survey of the nation's most distinguished horticulturists and growers identified some 1,700 outstanding and established garden plants that they consider able to flourish in today's climate and environment with little or no assistance from the gardener or chemicals. Many of them attract one or more of McDonald's "three Bs" or contribute to the environment in other ways, such as erosion control.

Among them are many of the more than 200 pest- and disease-resistant ornamentals that have been introduced by the National Arboretum. Hundreds more from there and other sources are under development, on their way to making our gardens "naturally" healthy and easy to maintain.

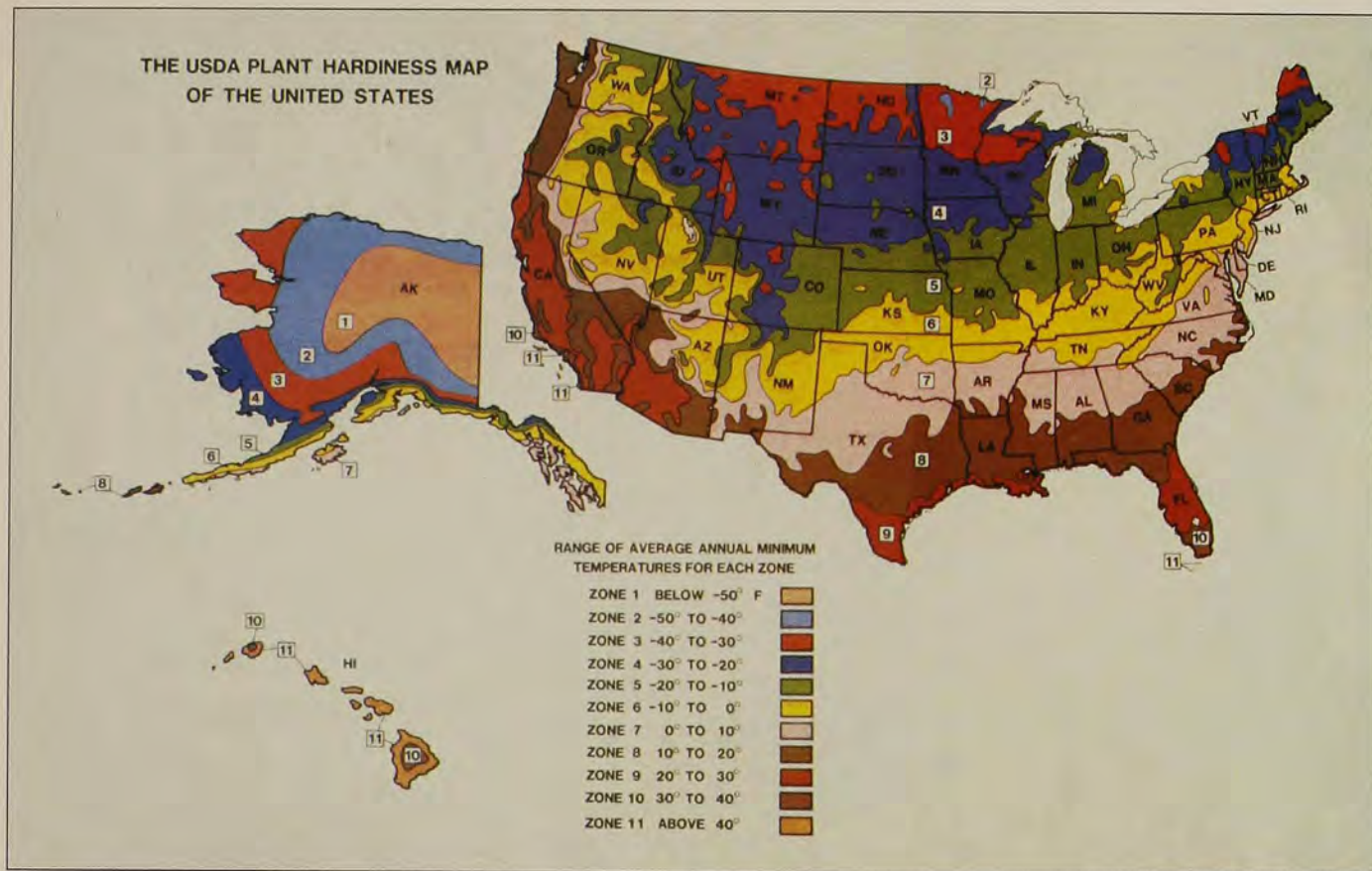
By using such "tough plants," Dr. Cathey maintains, the home gardener joins scientists and breeders in helping nature with the process that has been thwarted by agriculture and urbanization. His suggestions for helping both the new garden ethic and our own home gardens to flourish:

Left: If our yards won't support lawn grass, moss can be an attractive, low-chemical alternative.

Below: A tough carpeter, Polygonum affine 'Dimity' ('Superbum') is a native of Nepal.



THE USDA PLANT HARDINESS MAP
OF THE UNITED STATES



Choose plants most likely to thrive in your local weather conditions. If you've been puzzled by reports that the weather is warming while your plants are freezing, be assured that your plants are right. This was the conclusion of data gathered for fifteen years and more from 14,500 weather stations from Alaska to Mexico, and including Canada and Hawaii.

The data was gathered for the new U.S. Department of Agriculture Plant Hardiness Map, the first revision of that map in twenty-five years. Produced by Meteorological Evaluation Services in Amityville, New York, it shows that some twenty-three states are registering cooler temperatures than shown on the last map. Another eight states show the cold zones dipping farther south, or warm zones declining. Hawaii shows areas of frost in its mountains for the first time. Although twelve states show similar weather and five appear warmer, this map reveals many more microclimates, especially in the cool, mountainous regions.

Insist on plants proven stable through generations. Choose responsible local nurseries and garden centers. Keep new, untried mutants in separate test gardens, away from your main plantings. Stick to established, resistant plants, especially when

buying trees, shrubs, vines, and woody ground covers. Buy only those that thrive in your region; but do plant a tree this year!

Demand reliability. Your garden can be a chemical-free zone! Set out only plants billed as pest- and disease-resistant.

Avoid excessive fertilizing. Too much nitrogen is getting into our rivers and lakes, upsetting the ecological balances that keep them pure and fresh.

Use plants' real names. Ask for plants by botanical name. Botanical names describe known performance. Common names change from place to place, and cultivar names from breeder to breeder in many cases.

Support industry code names. Plants are becoming more national and international. New plant names appear every season, but the names often fail to tell who these newcomers are so that their real needs may be unknown. Some turn out to be offspring of plants with problems.

A "Nursery Crops Coding System" has recently been introduced by the American Association of Nurserymen as a sort of "pedigree" for plants. The system is intended to encourage the identification, recognition, and production of healthy materials and discourage the multiplication

of plants with problems that invite pollution. It's a simple system of six to eight letters—the first letters of the genus, species, variety, or cultivar names of the plant.

Not all nurserymen have yet completely worked the code into their inventory and labeling systems. But if gardeners use the code, it will further encourage its spread, and give the industry a clear message that American gardeners are backing the new ethic for American gardens.

Washington, D.C., free-lance writer Jacqueline Heriteau is the author of *The National Arboretum Book of Outstanding Garden Plants*, on which most of this material is based. The AHS Book Program is offering the \$39.95 book to members at a special discount price of \$29.95. The new USDA Plant Hardiness Zone Map appears as endpapers to the book. A highly detailed, four-foot-square version of the map is being printed at the U.S. Government Printing Office. To order send a check or money order for \$6.50 to Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402 or call (202) 783-3238. Order by Stock #001-000-04550-4.

The Birth of BOTANICA

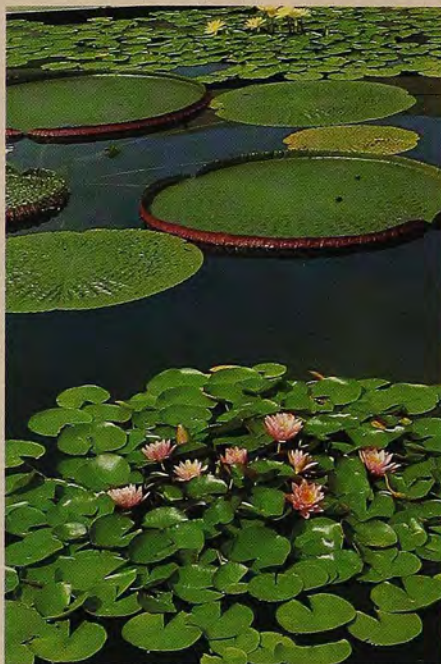
“A place of great beauty is emerging in the sand hills of Sim Park’s southeast corner,” proclaimed the pages of *The Wichita Eagle-Beacon*. “In time, it will be one of the things for which people come to Wichita, a Midwestern attraction to be seen nowhere else between Minneapolis and Dallas.”

The editorial appeared in September 1985 on ground-breaking day for Botanica, The Wichita Gardens, America’s newest small municipal botanical garden. It was indeed a resplendent affair, with scores of dignitaries and gardening enthusiasts turning the requisite symbolic spadeful of soil: in this case, the soil of a practice golfing green being sacrificed for building footings.

Across the road on the higher ground of the Sim Park Golf Course, a golf cart drew to a stop. Two golfers emerged and scanned the ceremony. They shook their heads slowly in dismay, leaving little doubt concerning their opinion of the desecration of a good putting green for “flowers.”

The groundbreaking was a landmark stride forward in the city’s botanical cultural life, and it had been a long time aborning. There were a few in the city, like the golfers, who saw no need for it. There would be some disagreements among supporters about how it should be done, and there would be things that, had they to do them over again, might be done differently.

But the words of the *Eagle* editorial have been prophetic. In just the first year after its opening in May 1987, the garden registered visitors from fifty states and twenty-nine foreign countries. In the three years since, more than 250,000 visitors have been counted. Botanica has become an integral part of the community, including its public elementary classrooms, and is having an



*Who says a
botanical garden has to be
big? Since it opened
only three years ago, this
nine-and-a-half acre Wichita
garden has touched
its community in dozens
of ways...and taught skeptics
a few things about what
will grow in Kansas.*

by Frank Good

impact on the way people garden in this fickle climate.

Botanica was an idea ripe for fruition. For years, a grassroots group of garden clubs had been wanting to create a center for their activities. At the same time, the Wichita Park Department had visions of a municipal botanical garden. Eventually, the park department offered a bona fide proposal to the city commissioners for a \$1 million administrative and meeting center to be budgeted over three years. But it was still touch-and-go for its supporters, because approval of the first third of the million would not necessarily obligate commissioners in successive years. Garden club members and others lobbied diligently each year to influence a favorable vote, and there was much jubilant celebration when the final third of the money was allocated; detractors, meanwhile, lamented the waste of government money that could have gone to social programs.

The facility was made an arm of the Wichita Park Board, a semi-autonomous municipal agency, with a legal agreement making a citizens’ group, Botanica, Inc., the operator. A fifty-one member Botanica Board of Trustees, whose members include park department personnel, nurserymen, bankers, professional horticulturists, and amateur gardeners, supervises the building’s use and plans the gardens and their maintenance.

Botanica was to be built on nine and a half acres almost within walking distance of the business center of Kansas’ largest

Left: A popular attraction at Botanica are the aquatic garden’s huge Victoria lily-pads, pictured here with Nymphaea fabioli, a hardy water lily. Right: A shady refuge adjacent to the Parriott Terrace Garden.



city. To design it, the trustees chose two Wichita-based professionals: architect Dwight Bonham and landscape architect Tom Montgomery.

Intertwined with the design of the new garden was a nostalgic bit of history, which is unapparent to visitors until pointed out by garden tour guides.

In 1903, a mere thirty-three years after the city was incorporated, the Arkansas Valley Interurban rail line was organized to connect the burgeoning prairie center with outlying communities. One of the stops for the interurban was at the Sim Park Golf Course clubhouse on the northwest edge of the youthful cow town. The "trolleys in the country" are now long gone, and a new clubhouse has been built in a more favored site. But planners agreed not to raze the old clubhouse/station stop. With insight and sensitivity, they incorporated the old stone structure in the botanical showplace's new \$1 million building, which houses administrative offices, the library, gift shop, meeting room, small kitchen, greenhouse, and an auditorium that seats 540 persons.

It was a neat planning touch, and it came with a bonus: a large hackberry, Eastern red cedars, and mulberry trees growing around the structure. These trees help provide a surprisingly mature appearance to the three-year-old gardens.

Bonham and Montgomery also tried to preserve the natural terrain and native plants growing on the periphery. These included coral berry, Indian currant, Virginia creeper, and even a wild grape vine. The terrain—sand dunes sculpted by stiff Kansas winds and the nearby Arkansas River—was left unaltered, but made more habitable for plants with recycled yard wastes supplied by the street department.

This preservation was commendable, given that the designers had so little acreage to work with and had to make every inch count. "We wanted to get in as many different things as we could," Montgomery said, "but that meant we would have to make all the gardens small and closely related in design, so that one area would blend into the next." Thus the more formal and rectangular gardens, such as the Shakespearean Garden, were situated next to the main building. Far away in the northwest corner, a dune lent itself to the informal feel of native grasses and the pavilion that serves as an overlook. A depressed area outside the main meeting room formed a natural amphitheater, and serves as a place where events being staged in-



The subtle hues of the Shakespearean garden are brightened by a mound of impatiens. Such vibrant colors are a big drawing card for visitors.

doors can be extended to the outdoors. To the west, a fully exposed slope, because it would create a hotspot for plants, was reserved for the Xeriscape garden added last season.

"We felt strongly that water is an important part of a garden," Montgomery says, so a low area that seemed unlikely to ever drain well became Botanica's aquatic garden.

Two months before its grand opening, the board of trustees hired Donald R. Buma as Botanica's executive director. Buma came to Wichita from Longwood Gardens in Kennett Square, Pennsylvania, where he was an assistant department head and grounds supervisor. It took him only a few days to discover fully what a difference exists between the plush atmosphere of Longwood, with its budget of \$14 million a year, and the modest \$400,000 annual resources of Botanica. Of that total, a third comes from the city, and the rest from gate admissions, building rentals, gift shop sales, memberships, and donations.

Large, well-endowed, and long-established botanical gardens like Longwood can show exhaustive collections of rare plants. Botanica's limited area dictates a different role, says Buma. "It's a display

garden, as contrasted to an intensive botanical collection. We display plants in landscape settings that we hope will widen the homeowners' horizon as related to the plants they can grow and how they should grow them."

The names of many Botanica gardens and features attest to its ties with the community and its reliance on private support. Those already built include the Hanna H. Jabara Entry Garden, the Shakespearean Garden, the Margie Button Memorial Fountain, the Martha W. Parriott Terrace Garden, the reflecting pool, the Fred C. Schnitzler Juniper Collection, the Xeriscape Demonstration Garden, the Bank IV Centennial Pavilions, the rockery, the woodland walk, greenhouse, Linda M. Stewart Perennial Evaluation Garden, and the Jessie Wooldridge Brosius Rose Garden, and the aquatic collection in the garden's one-third-acre pond.

Contemplated, and awaiting funding, are an outdoor butterfly garden, an indoor butterfly sanctuary and conservatory, a home demonstration flower garden, and an oriental garden. Montgomery said he hopes to add a pinetum on a gentle slope near where the adjacent water department has a sludge pit, to take advantage of conditions ideal for conifers and also to screen the view of the water treatment plant. "Some people have wanted their money back when they see that the garden isn't completely finished," said Montgomery.



"But that's what keeps a lot of people coming back; they want to see what's new."

Buma says a lot of jokes are made about the "obligatory" oriental garden, which will contrast sharply with the traditional kitchen gardens of this area. There has been little Asian influence on the landscape here, where the Asian population is almost non-existent. Botanica's will be a Chinese, rather than a Japanese garden, in honor of Wichita's sister city, Kaifeng. "People like an oriental garden, and that's why many gardens have added them," says Buma. "There are design elements in oriental gardens that are very attractive to visitors."

Another drawing card for getting large numbers of visitors through the admission gates is continuous, vibrant color. Those numbers are important both for the direct support they represent, through admissions and purchases in the gift shop, and because it is important for the garden to maintain a visible presence in the community. "We have to be visible—that's something that some gardens don't like to think about," says Buma. "But along with being a botanical garden, we're an attraction. We're competing with baseball games, the zoo"—which has its own botanical garden—"and with a theme water park for that discretionary dollar. The esoteric collections will always draw some people, but the more Botanica appeals to a greater number of people, the more money we'll

have to operate with."

One way that Botanica increases its visibility is through horticultural education, both for its 2,000 members and the general public. Lectures on gardening basics are offered as evening events. Lunchtime lectures, which are well-attended because of the garden's proximity to downtown, cover more narrowly focused themes, ranging from herb vinegars to pest identification.

Beginning with the 1989-90 school year, all 3,000 third-graders in the Wichita Public Schools began coming to Botanica for an experience in the garden. Projects have included dissecting seeds and making leaf prints with sunlight and blueprint paper. The curriculum, which was developed cooperatively by Botanica and school system staff, calls for pre- and post-visit discussions.

Another educational effort, which should have an impact on the community both aesthetically and ecologically, is a Xeriscape certificate program. Although Kansas was once identified as part of the Great American Desert, this state is known today as the breadbasket of the nation because in most years, its fertile soil produces more wheat than any other state in the union. Nevertheless, there's a thread of verity in the early-day label. Average rainfall in Wichita is thirty inches per year. As in many Western states, there's fierce, intense scrambling for what water resources there are.

To teach homeowners and gardening professionals to use water more prudently and frugally, the Xeriscape program is offering a series of courses on soil, irrigation, and selection of low-water-use plants. As is the case throughout the country, enthusiasm for Xeriscaping waxes and wanes, depending on whether the growing season

brings another drought or the water shortage seems like yesterday's worry.

The library is another source of horticultural education. To encourage greater use, it recently changed its policy to allow members to check out books rather than merely browsing.

Already, Botanica is experiencing some healthy growing pains. The use rate of the facilities is approximately 70 percent. Buma said lack of funds prevents more efficient use. "We have to run rentals to boost income, rather than having education courses," he explained. Ironically, the very attractiveness of the facility and its surroundings also hampers its effective use. There's a huge demand for non-horticultural uses. So now, less than four years after its completion, the building is inadequate. Sorely needed are more classrooms and offices, a lecture hall, and an activity center (one with a tile floor that children can dribble soil and water on).

A push is on to gain funds for a \$600,000 addition (with \$300,000 more for furniture and equipment), which, among other pluses, would take the desk of the development director out of the library.

Don Buma also found a vast difference between the size of Longwood's staff—190 full-time employees, 100 part-timers, and 40 students—and Botanica's staff of twelve full-time and one part-time position. In the office he has a development director, volunteer coordinator, gift shop manager, education coordinator, facilities coordinator, an administrative assistant, and an office aide. In the garden are a supervisor, three full-time gardeners, and a part-time gardener.

So how does the prodigious amount of work get done? Volunteers.

"The volunteer program makes Botan-

Out of the Mouths of Botanikids

At the ornamental fountain in the central lobby of Botanica's administration building, two young lads were eyeing the copper sculpture of two geese amid cattails. "What's that?" one of them asked his companion.

The other, presuming knowledge beyond his years, replied: "Those geese are sitting in the middle of a wheat field. The tall things are hot dogs on sticks."

In the Shakespearean Garden, a bust of The Bard faces the main entryway. One of two youngsters observing the likeness was heard to ask the other: "Who is that?"

"It says that's Shakespeare," said the second.

"Who's Shakespeare?"

"I don't know. Must have been a gardener."

The AABGA: *Getting New Public Gardens Off to a Good Start*



Aspirants in Botanica's annual photo contest position themselves for their best shot.

Thinking of starting a botanical garden in your own community? One of the services provided by the American Association of Botanical Gardens and Arboreta (AABGA), the professional association for public gardens, is helping new gardens get started. There are many aspects to such a project, but here are a few suggestions from the AABGA for individuals or groups interested in creating a public garden.

Ask yourself these questions: At what stage of development is your garden or your plan for a garden? What is the size and scope of your plan? Do you want your garden to be a local resource for the community with an educational focus, or should it be a tourist attraction, a major display garden, or resource for a college? Who will be the governing authority: trustees from a private foundation, a parks and recreation department, or a university committee?

Visit other gardens and talk to their staffs about how their gardens got started. Learn about their funding sources, recommendations for designers and consultants, and what they would do differently if they were starting over again. Public gardens in your region are particularly valuable resources.

Contact the AABGA. It offers a network of public garden professionals who are happy to share their knowledge and experience. The AABGA Resource

Center is a good source for technical information. Its library includes loan packets of sample lease agreements for new municipal gardens, feasibility studies for botanical gardens, papers on college and university gardens, and master plans of other new gardens.

Besides Botanica, there are several other new gardens well worth the visit. The Rhododendron Species Foundation garden on the grounds of the Weyerhaeuser Company headquarters in Tacoma, Washington, combines the natural setting of an open woodland with more than 500 species of rhododendron. The formal gardens, wildflower collections, and meadows of Chanticleer, an early twentieth century Main Line estate in Wayne, Pennsylvania, will soon be open to public tours. The Crosby Arboretum in Hattiesburg, Mississippi, opened its diverse collection of native plants to the public in 1984. North Carolina is home to two excellent new university arboreta: North Carolina Arboretum of the University of North Carolina, outside Asheville, and the North Carolina State University Arboretum in Raleigh.

For guidance in starting a public garden, or more information on the AABGA and its services, write or call the AABGA offices at 786 Church Road, Wayne, PA 19087, (215) 688-1120.

*Elizabeth Sullivan
AABGA*

ica possible," Buma says emphatically. "Without the volunteers there would be no Botanica as we know it. Volunteers work in the gardens and help put up the displays. They staff the admissions desk, conduct garden tours, work in the gift shop, put out mailings, and staff the library.

"Without them we'd be in big trouble. Last year there were more than 200 volunteers. They worked over 14,000 hours here. That's the equivalent of seven full-time employees.

Not surprisingly, many are garden club members and their friends, and most are between 40 and 70 years old. At one time the staff dreamed of trying to recruit younger volunteers by establishing a program that would offer an alternative to singles bars. But even volunteer programs need seed money, so the idea remains on the drawing board.

A support group, Friends of Botanica, raises funds for equipment through lectures and a pre-Christmas flower festival. Another money maker—the instant success of which was a pleasant surprise to a number of skeptics—is the gift shop, which grosses \$60,000 a year. Since it's staffed by volunteers, the overhead is low and all profit is funneled into the gardens. Though only a little more than 500 square feet in area, its collection of books, jewelry, ceramics, and shirts with the Botanica logo make it a high-traffic area and few have the willpower to pass it by.

A popular item is the annual Botanica poster, chosen by competition. Unframed posters are given to new members, and have been a persuasive recruiting device. They're also reproduced as notecards.

Those who are artists with a lens instead of a brush participate in the yearly photography competition for donated prizes. All photos must be taken on the Botanica grounds. Last year, there were 131 entries.

Other arts are represented as well: Botanica serves as a stage for piano recitals, dance companies, university choral groups, and jazz combos.

But in the end, Botanica is flowers. That's what visitors come to see and, one likes to believe, each takes a lasting image of those flowers home. "One of the first things I heard was 'Nothing will grow in Kansas,'" recalls Don Buma. "Here we have an opportunity to show just how many plants will actually thrive here."

Frank Good is garden columnist for the Wichita Eagle-Beacon. The Botanica library is named in his honor.



Carolina lupines (Thermopsis caroliniana) in Botanica's Shakespearean Garden.

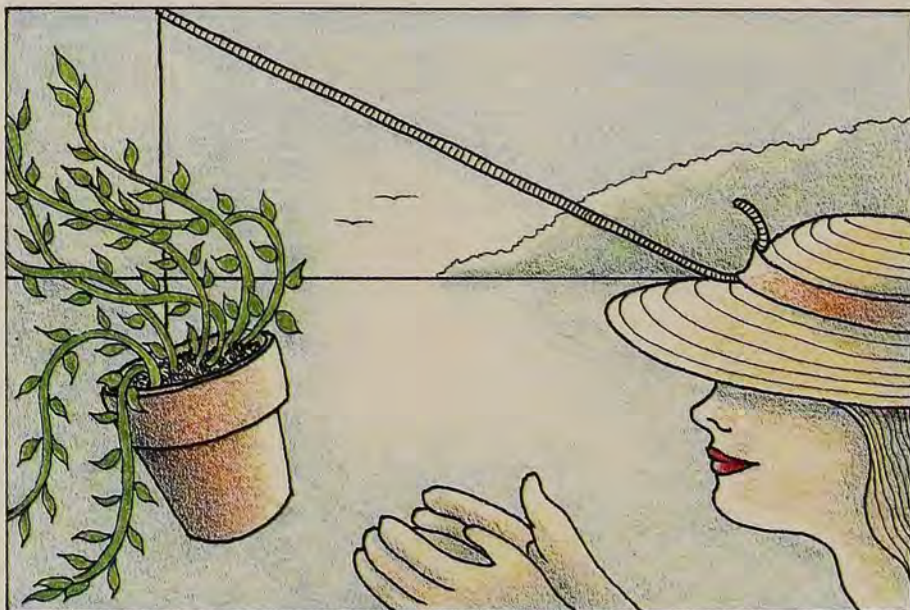
Stalking Your Elusive Dream Plant

How many times have you searched for the one plant that promises to transform your common back yard into the Garden of Eden, only to find that local nurseries haven't heard of it, don't carry it, and don't know who does? Yet you know it exists because you read about it in a slick garden magazine; the article tantalized you with promises of spring flowers and beautiful fall berries. You were hooked, but couldn't find a supplier.

Through helping members of the American Horticultural Society who have found themselves in such a plight, I discovered a number of invaluable sources and ways to find the elusive "carrot on the stick."

One such gem is the *Andersen Horticultural Library's Source List of Plants and Seeds*, published by the Andersen Horticultural Library at the Minnesota Landscape Arboretum. Compiled from nursery catalogs dated fall 1988 to spring 1989, this paperback lists wholesale and retail sources for over 40,000 commercially available plants in North America. The plants are listed by botanical name but for those not well-versed in Latin, there is another list of common names with the corresponding botanical names. This includes almost every species, cultivar, hybrid, and variety you can imagine plus uncommon species of common plants. Nursery addresses and phone numbers are given so that plantseekers can request their catalogs or just call in an order.

To assist those who are interested in a broad category of plants, such as daylilies, rather than a particular cultivar or species, I turn to *Gardening by Mail* by Barbara J. Barton. Her book is a great source book for plants, products, gardening magazines, associations, reference books, and horticultural libraries. Nursery sources are listed by the type of plant—such as bulbs, geraniums, or greenhouse/tropical plants—which is a great way to discover the lesser-



known nurseries. Under each company's listing is more information about the stock it carries and its catalog or price list.

For a font of information on sources of plants as well as their care, you can turn to the national plant societies or their chapters. I have often called the American Rose Society for rose sources—they can locate one in a matter of minutes. When I wanted to find information on an ivy source I called the American Ivy Society. There are over 200 plant societies representing a vast range of sizes and sophistication. Some have extensive source banks and slide collections, several publications and a whole host of handouts; others operate out of an officer's home, but nevertheless are the gateway to a network of extremely knowledgeable people. I have always found these fellow gardeners happy to help and pass on their years of experience.

When you find a knowledgeably run nursery, don't overlook it as a source of a plant just because what you're seeking isn't listed in the nursery's catalog. They may only have a few or they may have stocked it after the catalog came out, or they may

know of another nursery that does carry the plant you're after. Owners in particular can provide fruitful leads to unusual plants. Many times they can explain why you are having such a hard time locating what you want.

If you do find the plant only to discover that it cannot be shipped to your state, don't despair. The nursery is complying with your state agriculture department's quarantine laws, usually because the particular plant is known to harbor a disease or pest that could threaten a major crop, nursery ornamental, or an indigenous plant. Often the mail-order nursery isn't shipping the plant because it does not have the resources to fumigate the plants and have them inspected. If this plant is an "absolute must have" for your garden, contact the nursery owner and your state department of agriculture for the specifics on the quarantine law. It may require only a one-time pesticide treatment to allow the plant in the state.

Some of your searches may lead you to a foreign source, probably a specialty mail-order catalog. Ordering plants and seeds

from Canadian nurseries is relatively simple because of the excellent relationship between our two countries and the fact that few plants on either side pose significant disease problems for the other. To compensate for the different value of American and Canadian dollars, Canadian companies may issue refunds, or keep the extra money, citing more expense and work involved in shipping to the United States.

Ordering from other countries may or may not be difficult depending upon where your horticultural desires lead you. Plants, as opposed to seeds, pose more of a problem due to their potential for harboring diseases and insects. But if you see what you want in a foreign catalog, don't be afraid to ask for it. The company will tell you if it can be shipped to you. You generally shouldn't have any difficulty obtaining seeds: simply fill out the order form and enclose an international money order.

Traveling and bringing plants in from a foreign country yourself is another matter. You are responsible for adhering to American regulations, the foreign country's regulations, and international agreements, such as the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) where they apply. Regulations are complex; the entry status of products differs by the type of item, intended use, origin, and destination. For example, seeds of most flowers, shrubs, trees, and vegetables are allowed but seeds of coconuts, cotton, black currants, and coffee

berries are not. Most flower bulbs are allowed but gladiolus bulbs from Africa, Italy, Malta, and Portugal are prohibited. There are restrictions pertaining to bonsais and some other types of live plants; all plants in soil are prohibited.

Keeping up to date with the latest "can" and "cannot" can be impossible, so be forewarned and obtain a permit before your trip. Write to the USDA's Animal and Plant Health Inspection Service (APHIS) for a permit to bring plants into the country. APHIS will mail you a packet of information before your trip detailing procedures, quarantines, and forms to be aware of. This permit does not guarantee entry of your plants, but it does provide the USDA officials with the necessary paperwork and it does inform you before your trip so you don't waste time and money.

Upon returning, it is necessary to fill out a customs declaration form. Airline attendants collect the forms and signal the USDA agents at the terminal to come to the customs area to inspect your plants.

Paul Sullivan, plant protection and quarantine officer at John F. Kennedy Airport in New York, sees hundreds of different kinds of plants a day. Most do not present a problem, but agents are strict. "Absolutely no soil is allowed," warns Sullivan, because it can harbor nematodes. However, perlite, peat moss, sawdust, and wood shavings are all permissible.

Sullivan says that occasionally a commercial airline will bring in a cargo of cut

flowers harboring a potentially harmful organism. Such flowers are sent to a lab where experts identify the pest. If the pest is already established in the United States, the flowers can pass through. If not, they are either fumigated or destroyed.

Paul Aden, a professional plant hunter, recently completed a trip to Japan. "Don't try bringing in anything associated with the food industry: no fruit, no grain," Aden warns. "It has to be strictly ornamental." Because procedures and quarantines involved in bringing plants into the country are so complex, he advises against it unless you have a permit or are professionally collecting. Professional plant hunters often have horticultural organizations, such as the U.S. National Arboretum, receive the plants they collect overseas. Although they must still fill out all the same forms and obtain the necessary permits, shipping to a major garden's address lends their collecting "authenticity" and eases bringing the collection home.

Obtaining that elusive plant can be frustrating and time-consuming. But when you finally find it and plant it in your garden, it can be as satisfying as fitting the last piece in a puzzle. Briefly satisfying, anyway, until you discover that there is still a piece missing. . . .

Peggy Lytton is a former assistant editor of American Horticulturist and former director of AHS's Gardener's Information Service.

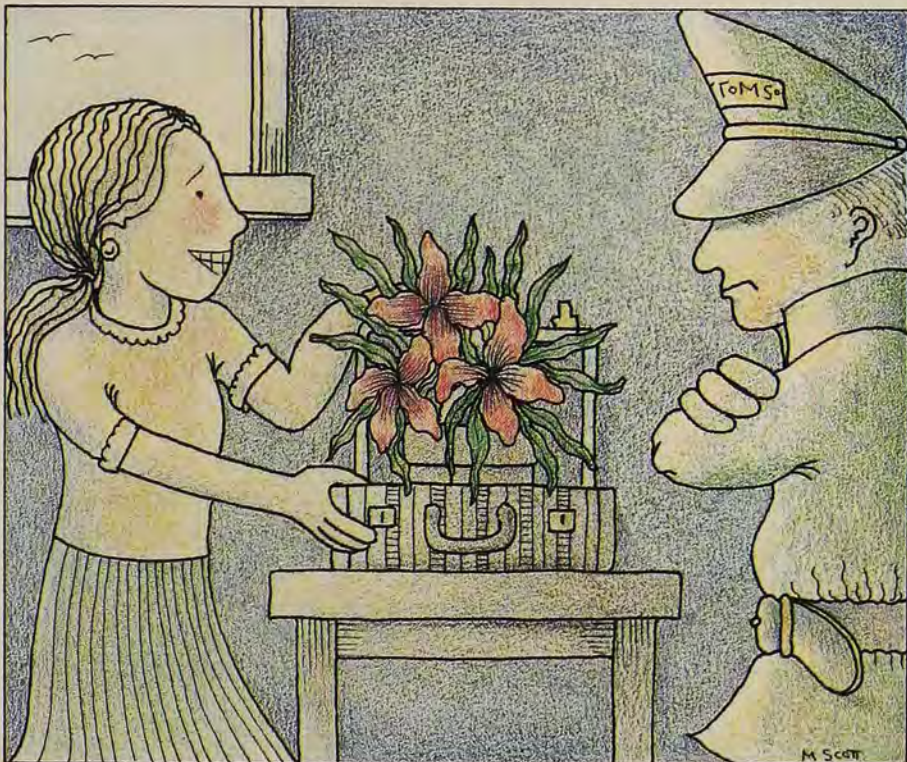
SOURCES:

To obtain the *Andersen Horticultural Library's Source List of Plants and Seeds* send \$29.95 to the Andersen Horticultural Library, Minnesota Landscape Arboretum, 3675 Arboretum Drive, Box 39, Chanhassen, MN 55317.

Gardening by Mail, published by Tusker Press, can be obtained through the AHS Book Service. It retails for \$15.95; AHS member price is \$9.57 (order no. HOU505).

For a list of plant societies, please send a stamped, self-addressed envelope to Gardener's Information Service, American Horticultural Society, 7931 East Boulevard Drive, Alexandria, VA 22308.

To obtain a permit for bringing plants into the United States, write to USDA-APHIS, 6505 Bellcrest Road, Hyattsville, MD 20782, Attention: Permit Unit.



CORYDALIS

High Praise, Low Availability

Mention *Corydalis* to knowledgeable gardeners and there is instant praise. Mention them to the staff of your local garden center or to national mail-order nurseries and you will probably get a blank stare or its long-distance equivalent.

In short, this is a case of some wonderful plants that are almost impossible to find.

Corydalis is a genus that would puzzle many a horticulture student. Among its 300 species are tubers, herbaceous perennials, biennials, and annuals. Their native territory spans all of the Northern hemisphere and South Africa.

Given this diversity, it isn't surprising that the height of the species varies from four inches to four feet. They are members of the Fumariaceae family—and thus cousins to bleeding hearts and other *Dicentra*s—and many have elegant blue-green foliage.

What all these plants do have in common are cone-shaped flowers with only one spur. The flowers come in pinks, yellows, white, blues, and even, in the case of our native *C. sempervirens*, purple-pink with yellow tips.

Though long known and grown, *Corydalis* species have never been major attractions in a garden scene. This is somewhat puzzling because most of the plants are both attractive and easy to care for.

Two American species, *C. aurea* and *C. sempervirens*, have been described in wildflower books, but I have yet to come across one reference to them in a garden. *C. aurea* was described by W. B. McDougall and Herma Baggley in their 1956 book *The Plants of Yellowstone National Park* as “a low-spreading herb . . . with numerous yellow, irregular flowers.” It sounds like a perfect candidate for the front of a sunny border—if only someone would collect seed and offer it in the trade.

C. sempervirens appears in the literature



Corydalis sempervirens: habit, above, and detail, right.

more often. Although Donald Wyman dismisses it curtly as “Not a very good ornamental” in his *Gardening Encyclopedia*, Mrs. William Starr Dana gives it a more favorable description in her 1893 classic, *How to Know the Wild Flowers*:

“From rocky clefts in the early summer woods springs the pale corydalis, its graceful foliage dim with a whitish bloom, and its delicate rosy yellow-tipped flowers betraying, by their odd, flat corollas, their kinship with the Dutchman's breeches . . . Thoreau assigns them to the middle of May and says they are ‘rarely met with,’ which statement does not coincide with the experience of those who find the rocky woodlands each summer abundantly decorated with their fragile clusters.”

This is a native plant that shade gardeners might want to track down. According to H. W. Rickett's *The Odyssey Book of American Wildflowers*, it “grows in rocky woods, usually in the shade . . .

from May to September.”

Two species popular with British gardeners are *C. cashmeriana* and *C. ochroleuca*. The latter bears a white flower and is naturalized throughout central and western Europe. It would probably be suitable for many American gardens. “All forms of fumitory are worth collecting,” writes British garden columnist Robin Lane Fox, “especially the pale cream-flowered *C. ochroleuca* and they soon start seeding themselves.”

Beth Chatto says in *The Green Tapestry* that she grows this plant in her reservoir garden, where “As the waves of Narcissus and deep blue Siberica recede,” their leaves are partially buried in fast-growing, fragile-looking *Corydalis ochroleuca*.

C. cashmeriana, hailing from the Himalayas, is one of the most beautiful—and challenging—of the species. Its flowers are a brilliant greenish blue and its stems are red. *The Color Dictionary of Flowers and Plants* says it is one of the most “sensational of all alpine plants.”

This plant thrives in Scotland and, according to Ruth Clausen and Nicolas Ekstrom's *Perennials for American Gardens*, would probably be suitable in our Pacific Northwest. The English can't resist trying to make a go of it. Transplanted American Lanning Roper described its color as “unforgettable” and growing it as a real challenge, even to the most experienced. Gardeners at the Royal Park at Windsor managed to coach a respectable showing by planting it in a peat wall.

Here in Princeton, New Jersey, I have personal acquaintance with three *Corydalis* species and cannot praise them highly enough. *C. bulbosa*, *C. cheilanthifolia*, and *C. lutea* illustrate well the diversity of the genus—their only common trait is that they are all about twelve inches tall—as well as its beauty and ease of care.

All three can be grown in sun or woodland shade. Good drainage is a must. The





Corydalis lutea

very best situation would be a humusy soil in partial sun. While garden literature indicates that *Corydalis* species are most happy among rocks, they seem perfectly content without them in my garden.

Of the three, *C. cheilanthifolia* or fern-leaf corydalis is the most difficult to find. It is native to central China and was probably introduced to this country fifty years ago when Henry Francis du Pont brought it to Winterthur, his magnificent Delaware estate. There it has thrived and spread.

As its popular name implies, this plant has a warm green, fernlike foliage. In early April, a thick, spikelike stem, heavily clustered with yellow flowers, emerges from the spray of green leaves, making it one of the first herbaceous perennials to greet the new garden year.

The flowers last no more than three weeks, but the foliage remains lush and attractive through the summer. In the fall, it behaves erratically, with some turning an extremely lovely yellow and the rest deciding to stay evergreen for the winter. I suspect that location has something to do with this performance: in my garden, it's the plants in heavier shade and a more

SOURCES

CORYDALIS BULBOSA

Rice Creek Gardens, 1315 66th Avenue, N.E., Minneapolis, MN 55432, catalog free.

CORYDALIS LUTEA

Andre Viette Farm & Nursery, Rt. 1, Box 16, Fishersville, VA 22939, catalog \$2.

Lamb Nursery, East 101 Sharp Avenue, Spokane, WA 99202, catalog free.

Logee's Greenhouses, 55 North Street, Danielson, CT 06239, catalog \$3.

CORYDALIS SOLIDA

Bundles of Bulbs, 112 Greenspring Valley Road, Owing Mills, MD 21117, catalog free.

protected situation that tend to stay green.

The plant is so rare that references to its hardiness are difficult to find. Its performance at Winterthur, where it has survived lows of minus 16° F, and Princeton, where it has sailed through humid days in the high 90's, indicates that it should be

satisfactory for much of the country.

C. bulbosa, sometimes dubbed purple fumewort, is grown in several Princeton gardens and is supposed to be hardy to minus 20° F. It is the kind of little treasure that seeds itself and is passed lovingly among gardening friends. Since it blooms in mid-April, it fits well into areas that receive spring sun but summer shade. The leaves go dormant by late May.

Often listed as *C. solida*, *C. bulbosa* is an old-fashioned flower, having been among the more popular plants in American gardens a century ago, according to garden historian Ann Leighton. Its blue-green foliage bears an elegant resemblance to that of the flat-leaf parsley and forms lovely mounds. Above these hover swarms of lavender pink flowers, looking like a convention of winged fairies enjoying the first growth of spring.

Henry Francis du Pont also grew this species at Winterthur. He planted a double-flowered version, often listed as *C. densiflora*, around the base of winter hazel species (*Corylopis pauciflora*, *platypetala*, and *spicata*). In early spring, the trees are covered with yellow-green flowers and the ground shimmers with the delicate lavender pink blossoms of the corydalis.

C. lutea, a European native with the prosaic common name of yellow corydalis, is the most popular of the species and the most readily available in the trade. Its blue-green foliage can be found in gardens across most of the country, from shady nooks in the Boston area to sunny spots in southern California. Though it is supposed to like alkaline soil, it does well in my Princeton garden, where the industry-polluted rain-fall assures that the soil is acidic.

I would recommend this plant for its foliage alone. It resembles that found on thalictrums: blue-green, elegant, and just perfect for the front of a border. But then beginning in May, bright yellow flowers begin to appear on the tips of gossamer stems that peek from between the leaves. And those flowers keep on coming right into fall, lasting into November one year, and always into October in my garden.

Yellow corydalis is a plant that requires neither fertilizer nor pesticide, that blooms for almost half the year, and that does well in either sun or shade, and that is truly elegant: definitely a plant that should be in more gardens!

Patricia A. Taylor is the author of Easy Care Perennials.

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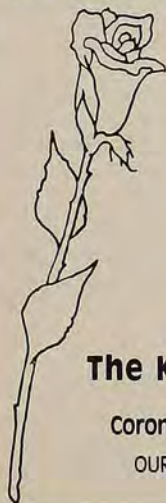
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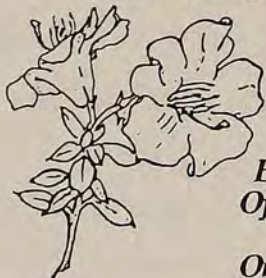
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Asclepias a-SKLEE-pee-us
A. incarnata A. in-kar-NAH-tah
Betula pendula BET-ew-la PEN-dew-la
Calycanthus floridus
 ka-lee-KANTH-us FLO-ri-dus
Carya illinoensis
 KA-ree-a ill-ih-noy-NEN-sis
Cistus SIS-tus
Claytonia klay-TOE-nee-a
C. caroliniana C. ka-ro-lin-ee-AH-na
Comptonia peregrina
 komp-TON-ee-a pe-re-GREE-na
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 kor-di-LY-ne aw-STRAIL-is
Corydalis aurea ko-RI-da-lis AW-ree-a
C. bulbosa C. bul-BO-sa
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 ko-ril-OP-sis paw-si-FLOR-ah
C. platypetala C. plat-ih-PET-ah-la
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