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June 1993

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American Horticulturist

Volume 72, Number 6

June 1993

ARTICLES

American Roots in British Soil

by *Joan Hockaday* 14

England's much emulated borders would be sadly lacking without American native plants. Our array of flora, from spring ephemerals to trees with colorful fall foliage, has been coveted from the first years of colonization to the present day.

English Roses—Jolly Good?

by *Rayford Reddell* 26

Initial skepticism about David Austin's imports gave way to admiration.

Just Dandelions

by *Marcia Bonta* 33

This common lawn invader has a vast and complicated family tree.

The Moonlight Garden

by *Peter Loewer* 37

From blood on the moon to honeymoon, there's magic in the garden after dark.

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JUNE'S COVER

Photographed by Robert Galyean

The plump, pink blooms of 'Gertrude Jekyll' are characteristic of the English rose, which combines the fragrance and delicate pastels of old roses with the sturdiness and reblooming ability of modern varieties. Hybridizer David Austin created English roses to reconcile the best of both worlds and, beginning on page 26, California rosarian Rayford Reddell casts a cool eye on how they fare in the United States.

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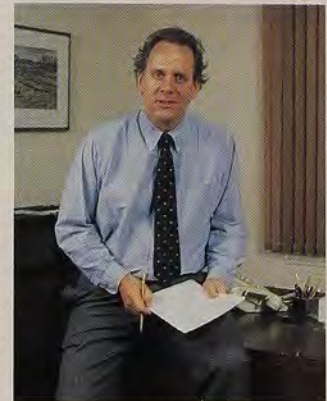
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COMMENTARY

It is spring, when a young gardener's fancy turns to bedding plants and sowing seeds. June is also the perfect time for releasing the tropical foliage plants from their winter quarters to the fresh breezes and sunshine of the deck, patio, or just outside the front door. The mind begins to play its seasonal tricks on the new gardener, allowing desires to increase in volume and intensity. I assume that it does so in order to leave us in a state by mid-summer where we have an enormous garden planted, regardless of our ability to maintain it. However, we enjoy these fleeting moments of horticultural richness before the combined forces of distraction, pestilence, and frustration begin to wear down both garden and gardener, the former to a more manageable size, the latter to a more sustainable energy level.



The answer to this boom and bust approach is the creation of a plan. Admittedly, planning takes much of the fun out of gardening. Remember, however, that the notion of unadulterated fun is an illusion. Furthermore, if you plan for the unexpected, leaving gaps here and there or leaving an entire section for last-minute, chaotic overflow, you will get what you deserve: a garden that has a proper balance of order, whimsy, and neglect.

The influential art critic Bernard Berenson advised artists who aspired to greatness to "vary the line." Emphasize one part of your garden each year. Or indulge your taste for one group of plants by reading about them and learning them extremely well through visits to gardens and nurseries. Then, when you plant your garden, your love will have been sated, and your tendency to go overboard muted—or rather, you will have gone overboard with a limited group of plants.

For all of those whose spring plans have been inspired by admiration of the British gardening style, this month's magazine turns the perspective around—the envy the British feel for our wealth of natives and their admiration of American-introduced varieties. Nothing could be more appropriate to June than moonlight and roses, and other articles in this issue look at both of those topics, as well as one about which most of us are far less romantic—dandelions.

Make sure that teachers in your area, from kindergarten through eighth grade, know about our National Children's Symposium, coming up August 12 to 14 at the 4-H Center in Chevy Chase, Maryland. We'll have almost seventy speakers and presenters on topics ranging from using the garden as a living classroom for interdisciplinary education, to building collaborative relationships between schools, public gardens, businesses, and community groups, to developing horticultural programs for children with special needs. It will include a tour of wonderful new children's gardens at our River Farm headquarters. We urge you to come and join us in a great summer celebration of horticulture. See you there!

—George C. Ball Jr., AHS President



LETTERS

Sycamores and More

I enjoyed B. C. Cherry's etymological discourse on the sycamore (February), but it is not complete. Referring to the genus *Morus* does not fully explain the origin of "sycamore." *Sycon* is Greek for fig, while *sycomoron* is Greek for mulberry. With a touch of Latin it becomes *sycomorus*.

The Europeans did not have to wait "a few centuries" to find another sycamore in the American wilderness. They already had their own—*Platanus orientalis*, the oriental plane—in southeast Europe and Asia Minor. Both it and the American plane, *P. occidentalis*, were named by Linnaeus.

In regard to the article on *Ailanthus*, which I enjoyed very much, there is another member of the Simaroubaceae that can be grown as far north as the Arnold Arboretum. *Picrasma quassioides* (*P. ailanthoides*) is more graceful than *Ailanthus*, is slower growing, has great fall color, and is listed for sale by Woodlanders.

Your February issue was superb, but I don't understand the pronunciation guide regarding "campanula" and "pseudoplatanus." Your rendition is contrary to what is in four other references. Could they all be wrong? *Nickolas Nickou, MD
Branford, Connecticut*

No, we were asleep at the wheel. The correct pronunciations should be kam-PAN-yew-luh and soo-doe-PLAT-an-us. While these should have been easy, some other pronunciations—particularly in regard to long versus short vowels—are more challenging, since most current references are British. The American Horticultural Society would like to develop a consistent and thorough guide for this side of the Atlantic. Other comments or suggestions should be addressed to Chris Bright, assistant editor, at the AHS address.

More Sycamores

As a westerner, I cannot let the "three sycamores" letter go by. One of our most beautiful and beloved trees in California is *Platanus racemosa*. We have "London plane trees" too, but our California sycamore is very

special. California artists are fond of our sycamore because of its wonderful shape. I don't know the similar Arizona sycamore, *P. racemosa* var. *wrightii*, but it sounds wonderful, too. *Priscilla Roth Feigen
Palo Alto, California*

Not So Heavenly

I read with interest Richard Peigler's article "A Defense of *Ailanthus*." There is a large male tree-of-heaven growing in our neighbor's yard not ten feet from our property, but it is not the flowers' unpleasant odor to which I object.

Every year from May through August, thousands of tiny shoots sprout from the tree's root system, which reaches twenty feet into our back yard. At least once a week I remove these sprouts from my vegetable and flower gardens and mow them down in my lawn. (Like the tree itself, they grow incredibly quickly.) But when they are destroyed, the roots simply produce more.

Our neighbors' yard is edged in eight-to-twelve-foot *Ailanthus*. Removing one sapling causes several more to sprout from the roots. And the common name of Chinese sumac is no doubt due to the wood's strong scent, which permeates the air and skin whenever a branch is broken.

Ailanthus is a tree whose form and tenacious growth habit might make it suitable for some locations (surrounded by concrete?). However, the very characteristics that allow it to withstand drought and pollution also make it nearly impossible to contain. *Anne M. Brennan
York, Pennsylvania*

Drip During Droughts

I share Robert Kourik's enthusiasm for drip irrigation ("Drip Rationale," February), but I question his recommendation of having the system on for small periods daily. During severe droughts here in Pennsylvania in 1988 and 1991 people on municipal water supplies were not allowed to water their yards.

If you watered less often, but for longer periods, the water would soak farther into the soil and *Continued on page 42*

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OFFSHOOTS



What Breeders Can't Know

By Sara Stein

Let me introduce you to my autumn cherry, *Prunus subhirtella* 'Autumnalis', best described as a missing tooth in the gears of time. I fell for it because it blooms in spring and then again in fall. But the autumn blooming is of buds set during summer that in normal cherries would remain shut tight until the following spring. On this ill-timed variety, buds that open in fall aren't pollinated; others swell only to be killed by frost. Those that remain for spring are few. The bottom line is less than a handful of cherries for the birds. What a disappointment for all involved—including the sexually frustrated cherry tree.

Ill timing may not be all that ails the autumn cherry. Integrated with the temporal scheme by which relationships between plants and animals normally unfold are signaling systems that advertise the opportunity. Thus the pollinating skunk cabbage wafts a stinky signal to its flies, the ripe red strawberry arrests the eyes of passing mice, vines flag down early flocking birds with

red or yellow semaphores, and the evening primrose opens at nightfall its petals pale and brilliant as the moon to summon nocturnal moths.

I don't know who bred the autumn cherry, but friends of mine achieved a similar feat with azaleas. They started with a breeding stock of late-blooming azaleas, pollinated freely among them, harvested the resulting seeds, grew them by the thousands, selected those that bloomed latest, and continued to cross late bloomers with late bloomers until the offspring flowered weeks later than previous generations. They then chose those of an aesthetic quality that, to breeders and their customers, seemed worthy of a name.

This is evolution in the fast track: it took a mere ten years. The breeders, by giving a reproductive advantage to individuals they preferred, guided the direction in which a lineage changed over time.

Other animals, too, have preferences. By choosing to drink from flowers that offer the greatest nectar rewards, bees pollinate those plants more often than they do stingier individuals. Birds select for timely nutrition and easy harvesting, squirrels for

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compact packaging and keeping qualities, and every other animal for what, in its own esthetic scheme of things, bestows the equivalent of a name on those plants with which it develops a relationship.

In natural selection, many other forces are at work. The plant pays a cost in energy to offer nectar, and there is a point at which the cost would be debilitating: the plant would be unable to grow sufficient foliage, manufacture sufficient chemicals to deter herbivores, or supply in its seeds enough nourishment for its embryos. A glut of nectar in each flower might lessen the number visited by bees and decrease the percentage of flowers pollinated. Climate, soil chemistry, attack by herbivores and parasites, competition from other plants, and many other subtle forces continually mold the characteristics of each lineage.

The plant, too, is a selector. It may favor the bee whose proboscis is the most efficient length to reach its nectar store, or the bird that visits regularly during fruiting season to eat its berries and plant its seeds. The selected in turn influence the course of each other's destiny: it is not far-fetched to ask whether squirrels by planting oak seeds and birds by relieving oaks of loopers don't each help to make the other possible. One certainly can say that plant breeders tinker with rather a larger toy than they suspect when they express their preferences.

I bought a group of those late-blooming azaleas so patiently evolved through the efforts of my friends. Here are questions that neither they nor I can answer: are the pastel colors that are so lovely to my eyes equally attractive to their pollinators? Are the petals, seen with a bee's ultraviolet vision, marked with the nectar guides by which flowers direct insects to their reward? How much nectar does the plant produce, at what concentration and composition of sugars, and at what time of day? What is the protein, starch, and vitamin content of the flowers' pollen? How much pollen is there in each flower? Is the petal landing platform strong enough to support the harvester's weight? Is the blossom shaped for efficient harvesting?

There are many other questions one might ask regarding any plant bred as an ornamental, about such traits as chemical defenses that, by their absence, might favor the reproductive success of pests and diseases, or the plant's ability to form nutritional alliances with beneficial microorganisms in the soil, or the nature and quality of food rewards that might be offered to its seed dispersers. Or even about the plant's behavior: I think, for example, of common violets.

Violet flowers move. They twist their

petals, lay them flat, hang their heads, lift them. Each position advertises the location of the flower's nectar to a different sort of insect arriving from below or above, and provides it with the most convenient landing platform. Violets also produce a secret flower that stays shut, digs into the ground, and fertilizes itself. Ripe seeds are propelled far enough from the mother plant to avoid competition, but not so far that they land in unsuitable terrain. In case some better spot lies beyond ballistic range, violets bead their seeds with fat unneeded by their embryos but nourishing to ants. Ants carry violet seeds to their nests, eat the fat as we would eat an olive, and discard the pit in the rubbish heap where they also dump their dung, their dead, and the rich remains of rotting meals.

How, in developing an "improved" violet, could a breeder monitor in all his experimental offspring the complexities of this behavioral repertoire? Plant breeders easily read the headlines of their subject's genetic encyclopedia—such blatant pronouncements as flower size and color—but can't see the fine print of subtle adaptations, or the effects that alterations in the text might have on other creatures or on the whole environment. Nor can they be expected: there is no plant in all the world for which scientists can claim to have unraveled all its multifarious connections.

Yet if wild rose blossoms are pink, single, and bloom in June; if wild rose hips are red, small, and hang on the canes all winter, then planting large-hipped everblooming yellow doubles is bound to sabotage someone's expectations. Since a hybrid may look the part but carry hidden defects, I favor species. And since the genetic encyclopedia plants carry was written in the historical context of their native land, I try to buy Americans.

I tell this to myself as much as anyone: When the planting bug bites—when the supermarket puts chrysanthemums on sale, when a friend offers clumps of pachysandra, when tea roses are in bloom at garden centers, when books on English gardens catch the eye, when the latest style is an exotic grass, when Arbor Day reminds one of one's environmental duties—think before scratching the planting itch.

I won't chop down my autumn cherry, but neither will I mourn it when it dies, nor will I replace it with a plant so stupid as to blossom out of season.

From the book Noah's Garden: Restoring the Ecology of Our Own Back Yards by Sara Stein, published by Houghton Mifflin Company, Boston. Copyright © 1993 by Sara Stein. Reprinted by permission.

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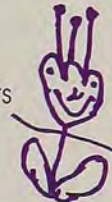
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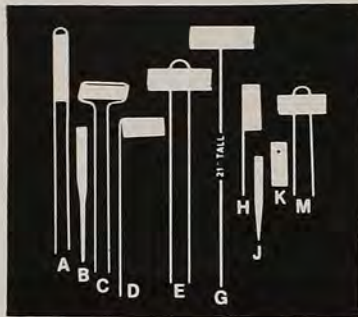
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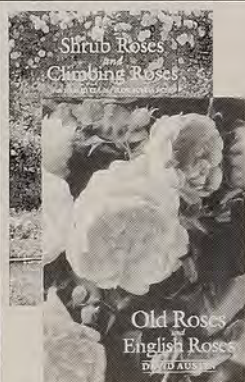
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BOOK REVIEWS

Noah's Garden

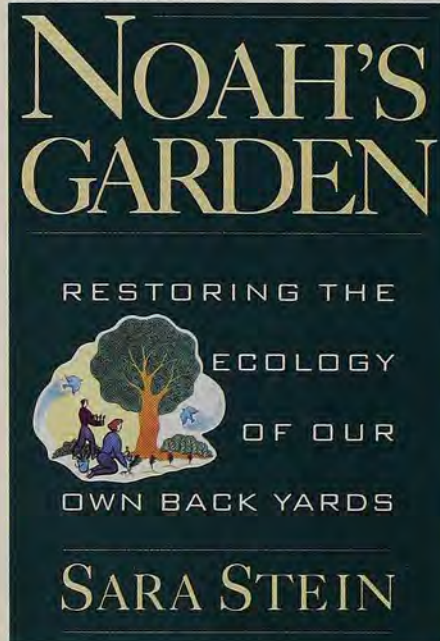
Sara Stein. Houghton Mifflin Company, New York, 1993. 288 pages. 5 3/4" x 8 1/2". Black-and-white illustrations. Publisher's price: hardcover, \$21.95. AHS member price: \$18.65.

There are other books about *how* to garden for wildlife. Most contain some useful if ploddingly presented information. *Noah's Garden: Restoring the Ecology of Our Own Back Yards* is in a category of its own. Sara Stein sweeps us into her own process of "unbecoming a gardener" and tells us *why* we should garden for wildlife—not just for butterflies and songbirds, but for snakes and salamanders, fireflies and snails, mice and microorganisms—with words both heart-wrenching and wry.

In *My Weeds*, Stein's previous book for gardeners (she has also written science books for children), her experiences motivated her to explore the physiology of plants. But in that early gardening, she says, she made many mistakes. "We didn't consider, when we cut down a stand of milkweed, how many butterflies it fed."

When the family of pheasants disappeared from her family's five acres, when the frog songs fell silent, it was time to hit the books again. "Anyone wishing to restore a lot must go through this pattering through the literature, this wandering about, this bafflement and bright surprise as when I found a nannyberry (*Viburnum lentago*) where I had least expected it: under my nose, right beside the driveway, passed daily for fifteen years without my recognition. Nothing in ordinary gardening is so exciting."

Reading Mrs. William Starr Dana's writings from the 1890s, Stein became increasingly disturbed by descriptions of meadow lilies she had never seen and bobolinks she had never heard. But the resources to help the missing return were not so easy to find. One delicious section details her inquiries to the New York State Department of Environmental Conservation about bringing newts and tadpoles back to her pond. The pamphlet the agency sent advised killing



aquatic plants, mowing adjacent grass, and trapping muskrats before restocking her "game pond."

She observes that while her town has a tree ordinance, it forbids the removal of large, alien Norway maples, which shade the ground to the exclusion of other plant life, and allows removal of the native saplings that will be the next generation of woods and the understory shrubs that give animals both food and shelter. "Not towns but only individuals can approach their land with intimate concern and understanding," she concludes.


Stein rejects many of the standbys of the fledgling "organic" gardener. Deluxe double-digging, she suggests, buries two feet underground the topsoil creatures that do an excellent job of rototilling on their own. *Bacillus thuringiensis* (Bt), a bacterium whose encapsulated spores are sold as a selective, natural insecticide, may be of biological origin, but it is a soil organism with no known relationship to insects. "Researchers still have no notion of what Bt crystals are intended for in nature."

And while Stein says she generally chooses species over cultivated plants and

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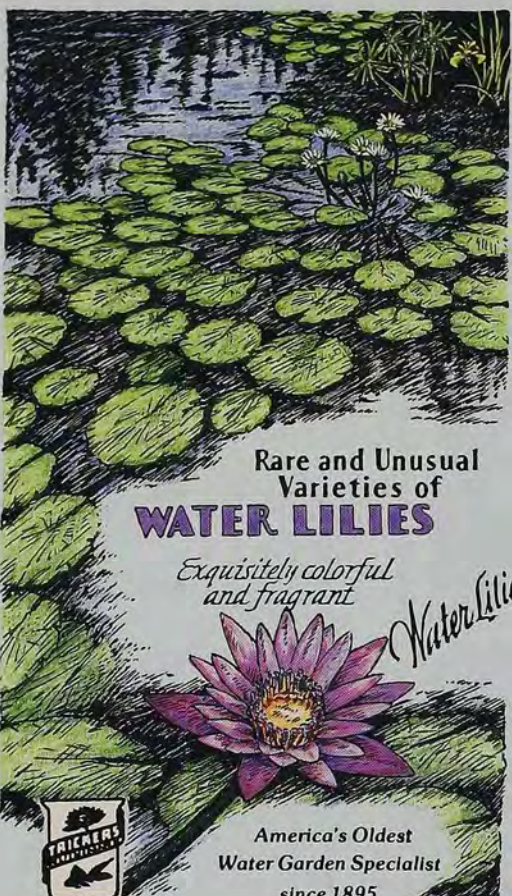


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natives over exotics, "I'm shy of ideologies that, like gardening itself, may by their intensity and expertise narrow the gate that amateurs can enter."

She is hard to pigeonhole, and her book is even harder to put down. Gardeners are fortunate that such a prose master happened to join our ranks. Some of us, reluctant to step off that "familiar checkerboard of lawns," will cling to manicured shrubs and sterile borders. She acknowledges that not everyone has five acres and neighbors must cooperate—one with a wetland, another with a meadow—if we are to create an ark big enough for everyone. But many will want to follow this Pied Piper in planting berries and luring beasts to the brave new world she envisions.

—Kathleen Fisher

Kathleen Fisher is the editor of American Horticulturist.

Penelope Hobhouse's Gardening Through the Ages

Penelope Hobhouse. Simon and Schuster, New York, 1992. 336 pages. 10½" × 10¼". Color and black-and-white photographs and illustrations. Publisher's price, hardcover: \$50. AHS member price: \$45.

Anyone who wants a comprehensive overview of garden design from the beginning of recorded history to the present day should read this book, or at least thumb through its 223 colored plates and 107 black-and-white illustrations. Although she covers much the same ground as earlier works on the subject, Penelope Hobhouse creates in this book a unique balance between design and horticulture.

Previous works have been either totally oriented towards design or so heavily horticultural that design has been given short shrift. But this book gives both an illustrated history of garden styles and an account of how plants have affected them.

Hobhouse starts with the gardens of ancient Egypt, then describes those of Islam, the Medieval period, and the Italian Renaissance. An entire chapter is devoted to the botanists, plantsmen, and gardeners of the Renaissance. The development of French formality is considered next, then comes gardening in the eighteenth and nineteenth centuries, mainly in England. A separate chapter details the development of North American gardening and the book concludes with a look at twentieth-century gardening, focusing on horticulture as a means of plant conservation. One serious omission is the lack of information on the gardens of the Orient and their plants.

Whenever I read a book like this I immediately turn to the chapter on North

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America to see how the author deals with our garden design and horticultural heritage. The subject is a crucial test for this book, since the publisher is ardently seeking an American market. Hobhouse, who is English, handles the topic well. In an introductory section she talks about various influences on colonial gardening—including the Spanish, which many overlook. She moves on to the gardens of Philadelphia, which she covers in just one long paragraph, and continues with Mount Vernon and Monticello, the classic examples of the South. The theme of the book—the relationship of plant choice to design—re-emerges in a long section on plant collecting and exchange and plant novelties. The gardens of the Andrew Jackson Downing era and the nineteenth century follow, then those of the West. She has several pages, with superb color plates, on such plant collectors as John Custis of Williamsburg, and John and William Bartram and their first botanical garden in Philadelphia.

Hobhouse is to be commended especially for bringing new images to a subject that has been written about extensively during the past quarter-century. Because illustrations of the earliest gardens are scarce, the book's first part of necessity uses the same illustrations that appear in previous discussions of that topic. But she sought new images—and used them to good advantage—throughout the remainder of the text. Most of these are in color, and they provide a welcome relief from the overused line drawings of Gerard's *Herbal*.
—Rudy J. Favretti

Rudy J. Favretti, formerly a professor of landscape architecture at the University of Connecticut, is a consultant in landscape and garden preservation and restoration.

American Wildflower Florilegium

Jean Andrews. University of North Texas Press, Denton, Texas, 1992. 125 pages. 9 1/4" x 12". Color illustrations. Publisher's price, hardcover: \$50. AHS member price: \$45.

Youth has its passions, but aging has its own rewards, Jean Andrews writes in her introduction to *American Wildflower Florilegium*. And "seeing things you never had time to see—like wildflowers" is one of those rewards. "Beginning with the blue-bonnet," she continues, "each flower I discovered led to another until the urge to share my new love with others by painting them led me to this book." Andrews' botanical illustrations of fifty-two of her favorite wildflowers are the heart of *American Wildflower Florilegium*. Each

full-page painting is a unique composite of buds, blooms, seed pods, fruits, roots, and leaves. The illustrations of the spiderlily, pink evening primrose, coast trillium, and rose mallow are especially nice.

But *American Wildflower Florilegium* is more than just a book of pretty pictures. Profiles of each wildflower include common and scientific names, family, origin, range, descriptions of the plant and flower, habitat, pollinators, methods of propagation, history, and etymology. The history sections contain some fascinating tidbits of information. For instance, the fragrant water lily, which is also called alligator bonnet, was thought to counteract witchcraft; the pigments in corn poppy flowers are used to color medicines and wine; *Commelina*, the genus name for the day flower, honors the three Commelin brothers—the two prominent blue petals honor Johan and Caspar, who published several botanical works; the stunted, almost invisible petal represents a third brother who didn't contribute to the field of botany.

Andrews writes about a rancher friend who offered her "a bedraggled little bouquet of blossoms strangling in his rough-browned hand, then looked at me with eyes spent squinting in the Texas sun and said gruffly but softly, 'I never saw the flowers until I knew you.'" *American Wildflower Florilegium* is a wonderful way to see the flowers. —Mary Beth Wiesner

Mary Beth Wiesner is managing editor of *American Horticulturist*.

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Colonial Collecting

*Some U.S. gardeners are just discovering our native plants.
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Mention Great Britain to most keen American gardeners and images of grand estates, fabulous borders, sweeping lawns, and flawless plantsmanship come to mind. Whether the British really are better at design, at digging in the dirt, and at finding the right plant for the right place is a matter of debate. But whose plants are those filling the long borders?

The British Isles hold surprisingly few native plants worthy of cultivation. "We drew the short straw when plants were dished out," laments John Bond, keeper of the gardens at Windsor Great Park. "A field in Greece has more plants than we've got."

The British Isles have only three native conifers—a yew (*Taxus baccata*), a juniper (*Juniperus communis*), and the Scots pine (*Pinus sylvestris*). The original supply of broadleaved trees is similarly meager. The maples and ashes are represented by one species each, the oaks two, poplars three.

In comparison, North America claims at least thirteen maple species, sixteen tree-sized ash natives, fifty-eight oak species (exclusive of Mexico, which has 150 of its own), thirteen poplars, and thirty-five pines.

The British, therefore, are keenly aware of plant origins. By the 1600s, the lords of each manor and their head gardeners were vying with one another for the latest introductions, first from the continent, then from Africa, the Americas, and Asia. As the seventeenth century drew to a close, the Church of England got into the act when the Bishop of London sent emissaries to the colonies in search of both souls and plants. Each new acquisition came to the isles

BY JOAN HOCKADAY



The Franklin tree, discovered by Philadelphia farmer John Bartram, has not been seen in the wild since 1803. The original of this drawing by his son William is at the Natural History Museum in London. Right: America's sweet gum, introduced to the British Isles in the seventeenth century, remains a favorite tree there. This is among many images of New World flora drawn by English plant collector Mark Catesby.

with fanfare and careful documentation.

American, Chinese, and Japanese plants have filled in the island landscape, with American representatives "very much at the fore," according to Bond. "Certainly American trees form a forceful presence in our landscape." In fall our trees sometimes fail to color as well in that northern, gray landscape as they do in our own. Our conifers are no longer the rage that they were in the Victorian era. But our native maples, sweet gum, and tulip trees remain favorites. And even though the source of today's ornamentals is likely to be a tissue culture laboratory rather than a transatlantic freighter, British gardeners remain enamored with our native plants.

However, these plants are not used in anything akin to an American design style, to the extent that the British perceive us as having any particular style. Today most British design their gardens with plants, rather than drawn plans. With several notable exceptions—the late Lanning Roper and current landscape gurus John Brookes and David Stevens come to mind—design takes a back seat to plantsmanship. The British take great pride in muddling through on their own. Even the Duchess of Devonshire bragged during a recent National Trust lecture that Chatsworth tourists mistake her for her gardener.

Although they encompass a much smaller area, the British Isles, like the United States, exhibit some regional variation in garden style. In Scotland, northern weather patterns dictate a choice of hardier plants, so that rock gardens and low-growing al-pines are extremely popular. Scotland's relationship with England has not always



Lactuca

Sida acuta

Top: Tulip trees were collected by John Tradescant the Younger. Center: The sweet gum's fall color has assured its popularity in once tree-starved Britain. Bottom: Stewartia malacodendron was a significant discovery of Mark Catesby, who collected seeds for the Bishop of London.



HAL HOROWITZ/PHOTO/NAIS



PAMELA HARPER



ELVIN MCDONALD

been congenial, and its gardens tend to be more continental in design. The French have been especially influential, resulting in formal touches such as parterres.

The Welsh gardener is more likely to use the land for traditional farming than for growing ornamentals. One will see few formal gardens in Wales although Bodnant in the north and Erddig near the English border are two notable exceptions.

Ireland is a three-hour ferry ride from England and the Irish garden, as portrayed by Paddy Bowe, author of *The Gardens of Ireland*, is "like the Irish themselves, just a little bit wild." The Irish gardener obeys few rules; gorse and sundry garden escapes seed themselves about, aided by the abundant wind and rain.

Today, three London gardens serve as living testament to the early plant hunting expeditions to the Americas: the Tradescant Trust Garden, across the Thames from Parliament; the Chelsea Physic Garden in a serene residential setting a mile or so west, and the Bishop Compton garden at Fulham Palace.

The tiny churchyard garden that serves as a memorial to seventeenth-century plant hunters John Tradescant and his son is the newest of the three, but represents the earliest explorations and shows visitors the style and substance prevailing before and during our early colonial period. Tradescant the Elder amassed artifacts and new plants from European expeditions; his son sought plants from the New World. Both are buried here at St. Mary-at-Lambeth, near the site of their famous garden. The Marchioness of Salisbury, whose ancestors at Hatfield House employed the elder Tradescant as gardener and plant hunter, designed the garden that serves as a memorial to them. Plants the father and son collected are interspersed with other popular plants of that period.

The Virginia spiderwort, which Swedish botanist Linnaeus named *Tradescantia virginiana* to honor the elder Tradescant in 1753, is well-represented in this period garden. Among the plants verified as introductions by Tradescant the Younger are the red maple (*Acer rubrum*), the tulip tree (*Liriodendron tulipifera*), the trumpet honeysuckle (*Lonicera sempervirens*), and the sensitive plant (*Mimosa sensitiva*). After Tradescant introduced the tulip tree, diarist John Evelyn once wrote of it: "I wish we had more of them. But they are difficult to elevate at first." Today, the tree has been successfully



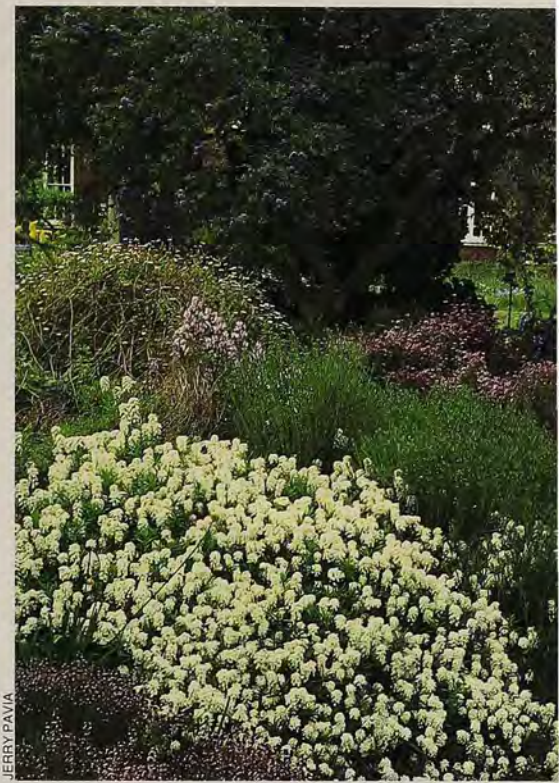
ELVIN MCDONALD

"elevated" throughout the British Isles.

The Chelsea Physic Garden, upriver, is a lush relic from the days when plants were collected for their usefulness, rather than their beauty. Established in 1673 by the Worshipful Society of Apothecaries of London for the education of its members and their apprentices, it was led for almost fifty years by Philip Miller, whose *Gardeners' Dictionary* went through sixteen editions. Miller benefitted from the collecting efforts of John Bartram, a Philadelphia farmer and self-taught botanist. Over a forty-year period in the eighteenth century, Bartram introduced more than 100 species of American plants to England. His most famous discovery was the Franklin tree (*Franklinia alatamaha*), which has not been seen in the wild since 1803.

His son William continued to collect seed after his father's death, until the Revolutionary War interrupted the flow of plants to the mother country. William Bartram's dramatic drawings of American plants and wildlife are preserved in the Natural History Museum's botany library in London.

In his famous reference work, Miller carefully recorded his observations on each new plant and offspring, but he didn't always credit the plant's collector. Other re-



JERRY PAVIA

Left: The Tradescant Trust Garden honors father and son plant collectors. Above: In the Chelsea Physic Garden the American native *Ceanothus* (background) mingles with imports from elsewhere such as thrifths (*Armeria* spp.).

cords from that period, however, show that John Bartram introduced the skunk cabbage, sugar maple, witch hazel, climbing bittersweet, southern white cedar, rosebay, and wild and swamp azaleas.

“Presumably sent by Bartram,” Dr. John Hendley Barnhart wrote in a special Bartram issue of *Bartonia* in the 1930s, were mountain laurel (*Kalmia latifolia*), three viburnums, false alder (*Ilex verticillata*), steeple bush (*Spiraea tomentosa*), and river birch (*Betula nigra*). Bartram is also credited with reintroducing the shooting-star (*Dodecatheon* spp.) after previously introduced plants died out in England.

Farther upriver and west of London in Fulham lies the old walled garden of Henry Compton, Bishop of London in the late seventeenth and early eighteenth centuries. Compton’s ecclesiastical jurisdiction included Virginia, from which naturalist and botanist Rev. John Banister brought back such American natives as purple coneflower (*Echinacea purpurea*), sweet bay (*Magnolia virginiana*), and, like Bartram, swamp azalea (*Rhododendron viscosum*).

English plant collector Mark Catesby sent the bishop seeds from the American South, one of the most significant of which was *Stewartia malacodendron*. Eventually,

the Fulham Palace garden held arguably the finest collection of American native plants in England. Sadly, trees and ornamentals were not to the succeeding bishop’s taste, and the collection fell into either decline or the hands of Fulham nurserymen. Today the local government council oversees the property and efforts are afoot to restore the palace grounds.

These three gardens show just how much American plants influenced English gardens two hundred and more years ago. An “American woodland garden” planned beside the American ambassador’s residence in Regents Park will demonstrate the influence our plants continue to exert today.

Alongside the London mansion that millionairess Barbara Hutton donated to the American government, embassy gardener Stephen Crisp, a former student at Longwood Gardens in Pennsylvania, will sweep away an unused portion of the current twelve-acre garden to showcase trees and herbaceous woodlanders native to the states—*Magnolia grandiflora*, hawthorns, and hollies, underplanted with trilliums and spiderworts.

Sales of American natives and American-introduced cultivars, remain strong, says Robert Hillier of Hillier Nursery, who

represents the fourth generation of Hillier plantsmen. His father, Sir Harold Hillier, amassed an extensive collection of foreign trees and shrubs, on view near their world-renowned nursery in Hampshire, and the *Hillier’s Manual of Trees and Shrubs* is a “must” reference for British gardeners. Our sweet gum, introduced in the seventeenth century, is still one of Hillier’s best American sellers. The tulip tree is another especially sought-after tree, and magnolias, oaks, and maples remain popular.

The Hillier’s manual documents the country of origin and date of introduction for each species it lists. More than thirty of our oaks are available through Hillier’s, which holds the British national collection of oaks from around the world.

There are now more than 550 such national collections of genera. Being a national collection holder is an honor British gardeners strive to achieve. Whether they are professionals or keen amateurs, they possess encyclopedic knowledge of American species and cultivars available in the British Isles.

Alan Pullen of Surrey, who tends one of England’s five dogwood collections, suggests that an American cultivar name is often the key to commercial success. He



LEFT, TOP: PAMELA HARPER; LEFT, BOTTOM: DAVID CAVAGNARO; RIGHT: ROB SIMPSON

Top: Our swamp azalea was collected by several early explorers. **Above:** Tradescantia, the genus name for spiderwort, honors John Tradescant the Elder, although it was his son who explored the New World. **Right:** Mountain laurel was briefly popular overseas before azaleas and rhododendrons became the rage, but is still preserved in two national plant collections in Britain.

believes that the cultivars *Cornus florida* 'Cherokee Chief', 'White Cloud', and 'Cherokee Princess' should do well because of name association alone.

Pullen also holds the British national collection of cultivars of our mountain laurel (*Kalmia latifolia*), one of two *Kalmia* collections in the British Isles. Until recently, however, the variety of kalmias available in the trade there has been somewhat limited. *K. latifolia* 'Clementine Churchill' is an old—some say merely sentimental—standby, bred from Arnold Arboretum stock at Sheffield Park near Churchill's beloved Chartwell.

As for herbaceous American plants, the British would love to have more of our trilliums. "We always covet the trilliums. We only see relatively few and not always choice forms," says Tony Lord. With Chris Philip, Lord was co-author of the indispensable *Plant Finder*, now in its sixth edition, which attempts to list every plant available in Britain.

While Lord, who previously advised the National Trust on plantings, has nothing against the non-natives from the States—such as hostas and daylilies bred from oriental natives—what he really wants are new forms of American flora. "I wish the breeders would work on your native phlox," he says. "There's so much potential there."

American natives, especially midsummer and fall bloomers, are the backbone of British borders. Goldenrod occupies positions of stature unequalled across the Atlantic. Asters—to which the *Plant Finder* devotes five whole pages—lupines, penstemons, co-

reopsis, ceanothus, sunflowers, and even the promiscuous columbine collaborate to make the famous British border.

The challenge of a new or unusual plant is almost too much for devoted British gardeners to bear. Our lewisia, the tiny alpine named for Capt. Meriwether Lewis of the Lewis and Clark expedition, merits three British national collections. Bitterroot (*Lewisia rediviva*), the Montana state flower, is highly esteemed and a consistent prize winner.

John Armand, an importer of many American bulb plants, predicts that fritillaries—affectionately called "frits"—and calochortus have "the biggest, brightest future" in England, partly because they are a challenge to grow. *Fritillaria biflora* 'Martha Roderick' is a personal favorite of his, because of his association with California bulb expert Wayne Roderick.

From their earliest interest in our trees and shrubs to today's passion for American alpine or rare natives, British gardeners continue to seek out foreign plants—and foreign friendships—to round out their superb collections. While their garden plants originated elsewhere their intense horticultural curiosity and concern for conservation are worthy of export in the twentieth century.

Joan Hockaday, author of The Gardens of San Francisco, recently returned to California after two and a half years in London. She would like to thank the Lindley Library staff in London, and Fairfield, Connecticut, Garden Club President Barbie Bartlett for help with this feature.

From Aster to Vancouveria

American plants both common and unusual rank high with Britain's top gardeners.

BY JOAN HOCKADAY

Today's British gardeners have a wide choice of both American natives and American-raised forms of plants from other continents. With the Germans now breeding New England asters, the Americans breeding Japanese hostas, and the British breeding roses of dual parentage, the ancestry of "American" plants has become as complex as our people's.

But some plants—trilliums, sunflowers, phlox, asters, the tulip tree, and even the common sassafras—are, like baseball and hot dogs, first and always American to the British. A survey of well-known English gardeners—authors, nursery owners, keepers of public gardens—revealed some overlap and some surprises among their favorite imports from our shores.

Tony Lord, co-author of the *Plant Finder*, which lists every plant available in the British Isles, admires our trilliums as well as the tiny ground cover vancouverias. High on his list for the border are lupines, spiderworts, erigerons, and, for late color, penstemons.

Penelope Hobhouse, whose latest book is *Gardening Through the Ages*, admires *Aster divaricatus*, the white wood aster of Eastern dry woods, and *Phlox* 'Chattahoochee'.

Mirabel Osler, author of *A Gentle Plea for Chaos*, calls phlox "a godsend to every gardener . . . a steadfast species for our summer gardens."

Those who have seen our natives growing on their home grounds conjure up even more vivid images. "I was lucky enough to



DAVID CAVIGNARO

New England asters and goldenrod hold places of honor in the English border.

get up to the Appalachians to see *Trillium grandiflorum* in bloom. A wonderful sight!" recalls John Bond, keeper of the gardens in Windsor Great Park.

Roy Lancaster

Plant hunter Roy Lancaster has probably been seen as many foreign plants in their native habitats as any Englishman in the twentieth century. Also a prolific book and magazine author and television personality, Lancaster is happiest sleeping under the stars, reveling in the scent of trees, and his campouts and discoveries in America are recalled with relish.

For instance, there was the day he visited the Mount St. Helen's area with his then-12-year-old son and saw the skunk cabbages (*Lysichiton americanum*) in bloom.

"There in this wet woodland we saw masses of this *Lysichiton* in flower. Ah! My son and myself piled out of the car and ran into this boggy wood, immediately got wet, sank in to our ankles, but I was taking photograph after photograph and trying to balance on a log, Tom Sawyer-style.

"When we came out of the bog onto dry land, my son shouted, 'Hey Dad, come look at this!' In the drier soil was a wake robin, *Trillium ovatum*, the coast trillium, in flower. I was so thrilled! And he found the skeleton of a moose. Growing out of the eye socket of the skull was a trillium."

Tracked down in the crush of visitors at last year's Chelsea Flower Show, Lancaster obligingly sat down in the shade of the press tent to talk about the skunk cabbage and other favorite American plants.

He calls another wake robin, *T. grandifolium*, "the most delightful, beautiful, freshest-looking woodland flower." In his own garden, the plant, with its three-petaled white flowers, doesn't grow as well as he would wish, "but it's one of my favorites—one I'd be happy to have on a desert island." Unlike Bond, he has never seen this one in its native setting. "It's my ambition one day to visit New England or somewhere in the East, and to visit a woodland carpeted with the wake robin—beautiful name."

Another favorite that has eluded him in the wild is the umbrella plant (*Peltiphyllum peltatum*, now *Darmara peltata*), although he says this perennial saxifrage is fairly common in British gardens. He likes it both for its dual-season appeal—pink spring flowers and umbrella-shaped leaves that turn beautiful colors in autumn, and for the story of its introduction into Europe by a



DAVID CAVAGNARO

bearded Bohemian with an iron hook in place of his left hand.

In the 1800s, collecting North American plants was by turns tedious and dangerous. Benedict Roezl of Prague, who collected primarily orchids, was one of the few explorers to die peacefully in his own bed back home in Europe. But he was said to have been held up by bandits at least fifteen times.

"On the last occasion," says Lancaster, "he was in such an emaciated condition. The bandits saw him standing there with his clothes in shreds, clutching presumably a great big bundle of orchids and other plants he had collected. They were going to cut his throat, which was the normal practice. But the bandit chief reasoned with his men that surely such a man standing there in the condition he was with a great heap of weeds must be mad. And mad people were under special protection. So remember next time you're out looking for orchids to look mad, and make sure you have a tattered dress and a bundle of weeds. You'll be all right."

At the Founders Redwood Grove in Dyerville, California, Lancaster recently observed "acres and acres" of the sword fern (*Polystichum lonchitis*) uncurling its fronds "like watch springs—that struck a chord with me." The combination of sword ferns and redwoods, he says, "spells primeval, full stop."

Among trees, one of his favorites is the tulip tree (*Liriodendron tulipifera*), which was introduced into the elaborate "country

Clockwise from top: Perennial plantsmen Alan and Adrian Bloom; John Bond, keeper of the Crown Estate's Windsor Great Park; author and plant hunter Roy Lancaster.



ED BARBER



SUE LANCASTER



COURTESY OF JOHN BOND



DAVID CAVAGNARO



MICHAEL S. THOMPSON

gentleman's" estates that flourished in Britain in the eighteenth century. "I love its history; I love its leaves," he says. "I always wondered why I heard Americans referring to it as the tulip poplar. I couldn't think of anything more unlike a poplar. But that's before I went to America and saw them in the wild, growing like poplars so fast and dense and straight."

Another lingering memory of our country is of walking among bristlecone pines (*Pinus aristata*) in the High Sierras. "That day to me was magic. There were these wonderful pines growing happily on the dry slopes blasted by the sun almost since time began." He gave one of his own pines away and planted another in his mother-in-law's garden 200 miles away in Shropshire. The only bristlecone pine in the area, it is now bearing cones and local papers send photographers to record its progress. "It's quite a celebrated tree."

During seventeen years working at the Hillier Arboretum and Nursery, Lancaster says he tried in vain to convince more British gardeners to plant the Washington thorn (*Crataegus phaenopyrum*), a southeastern U.S. relative of the common English hedgerow thorn. Customers would reply, "Oh, I don't want a thorn—I use that as a hedge." There are hundreds of hawthorns, he says, but the American representative has "great character, a little bit of maplelike leaf delicately held, beautiful flowers, nice fruits, good autumn color—not too big a tree—it has a lot going for it."

Our West Coast vine maple, *Acer circinatum*, is well-represented in his quarter-acre garden, and the red maple (*A. rubrum*) is absent due only to its enormous size. He admires the entire genus for year-round appeal. "Flower isn't everything. Flower is but a brief piece of time in a gardener's life, in a gardener's year. To stake all or nothing on flower is not necessarily a good thing."

Adrian Bloom

Blooms of Bressingham is more than an ornamental nursery in the Norfolk countryside. At last count, founder Alan Bloom had introduced 170 perennials for temperate gardens. These are among a collection of unmatched beauty and diversity on display in the nursery and his own adjacent garden, both open seven days a week.

Today the nursery is managed by his son Adrian. American plants such as heucheras, bleeding-hearts, erigerons, and heleniums are among those they have used to develop new forms, eventually resold through nurseries in their native land.

Adrian Bloom, who has a streak of white hair like his famous father, took a moment to reflect on plants from America while setting up his packed plant stand at the 1992 Chelsea Flower Show. The show's opening, which was only twenty-four hours away, would see the release of *Blooms of Bressingham Garden Plants*, which he and his father had been working on for five years. Like the Bressingham seasonal catalog, the book is full of Amer-

Far left: Hillier's alumnus and garden consultant Dennis Woodland is proud that he can grow Trillium ovatum, a West Coast native. Middle: Author Mirabel Osler calls phlox "a godsend to every gardener." Here a luna moth visits Phlox subulata. Above: Roy Lancaster fondly recalls seeing skunk cabbage in bloom near Mount St. Helen's.

ican plants well-established abroad. "There are so many . . ." Bloom exclaimed as he thumbed through the book.

Sentimental favorites came first. Understandably, he's fond of three perennials of American parentage Alan Bloom named for his children: a bleeding-heart, *Dicentra formosa* 'Adrian Bloom'; a coneflower, *Echinacea purpurea* 'Robert Bloom'; and \times *Heucherella alba* 'Bridget Bloom'.

"My sister is a bigeneric cross. If that's the sort of thing you'd ever want your sister to be, I'm not sure!" Bloom laughed. His own namesake is much like the *Dicentra formosa* 'Luxuriant' sold in the States, but with foliage that is more blue-green. The purple coneflower named for Robert is "an outstanding variety, with purple-red rays falling from the central cone."

Among herbaceous ornamentals, *Coreopsis verticillata* is another good American native, he said, producing "some wonderful varieties."

Woody ornamentals bred at the U.S. National Arboretum also get good marks from Bloom. *Viburnum sargentii* 'Onondaga' is an old favorite of his. The newer viburnum cultivar 'Eskimo' hasn't yet produced enough of its white blooms to be shown at Chelsea, but he's betting on its future success.

American dogwoods are of special interest for the bloom they give as England's long gray winters draw to an end. Although many are unreliably floriferous in the British Isles, Bloom is especially fond of

two cultivars—*Cornus florida* 'Rainbow' and *C.* 'Eddie's White Wonder', a cross between the East coast native *C. florida* and the West Coast's *C. nuttallii*—because of their fall foliage.

John Bond

Last spring, when the gardens in the Crown Estate's Windsor Great Park were reaching their peak, keeper John Bond took time for a drive through them to talk about his favorite American plants. Bond's father was head gardener at Bodnant in Wales, and he followed in this "hands-on" gardening tradition.

Bond has an Orson Welles voice, a serious demeanor, a rapid-fire delivery, and an encyclopedic knowledge of plant origin and parentage. Like many British gardeners, he harbors a fondness for the American sweet gum (*Liquidambar styraciflua*), primarily for its varied, long-lasting autumn color. "You really do get your money's worth," he says. "So many things are fleeting, lovely as they are, but sweet gum gives you many weeks of good color. Lovely in the wild and superb in our gardens."

The selection of good forms available in Britain assures interesting offspring. One selection, 'Lane Roberts', is known not only for its fine form but also for the circumstances of its introduction. "The late Sir Harold Hillier sold a plant to a Dr. Lane Roberts as a seedling," Bond relates. "He then realized it was a superb form and begged some scions, grafted it, and named

*Below: Dogwoods don't always flower well in England, but Adrian Bloom likes *Cornus florida* 'Rainbow' for its fall foliage. Middle: John Bond says false Solomon's-seal is worth growing for scent alone. Right: Bond admires our trout lily for its mottled foliage and April flowers.*



LEFT: JERRY PAVIA; RIGHT: GREGORY CRISEI; PHOTO/NATS

it after the person who bought it from him.”

While we are far richer than the British in fall color, summer color in a woodland garden is a bonus on either side of the Atlantic. This makes *Stewartia malacodendron*, whose large white, mauve-centered flowers appear in July in Britain, sought out for cultivation. Although well-represented in gardens, this native of our southern coastal plains is somewhat elusive in the wild. “Something about its being rare appeals to me, too,” says Bond. Introduced into Britain in the eighteenth century, it won a Royal Horticultural Society award of merit in the 1930s.

The Windsor Great Park is filled with handsome gray forms of the American swamp azalea, *Rhododendron viscosum*, which last year bloomed in May, a few weeks earlier than normal. “It’s a very variable species. There are numerous subspecies and varieties,” says Bond, “but I like the form with the gray foliage. A lovely plant, with a superb scent.”

Also outstanding for its aroma is false Solomon’s-seal, *Smilacina racemosa*. “It’s a wonderful woodlander—nice foliage as it’s rising, very pretty flowers, and if you’re lucky—and we often are lucky—very pretty speckled fruits.” The plant needs moisture to thrive, however. “Not too dry,” Bond advises home gardeners.

Another woodland favorite is the trout lily (*Erythronium revolutum*). These Northwest natives can be tricky for other parts of the United States, but the Windsor

gardeners have a fair share of white and clear pink trout lilies, as well as more familiar yellow forms. “I like the mottled foliage that thrusts through the ground in March and the lovely flowers in April,” says Bond, even though they are “fleeting just like a bluebell wood in Britain, gone by late May, and all you’re left with in June is the seed pod.” The trout lily seeds well around the park, he observes. “It’s nice when plants seed naturally—so important. No matter how many you plant, somehow you don’t achieve the good range” that a natural seedling achieves.

Robert Pearson

Every week in the (London) *Sunday Telegraph*, Robert Pearson’s column inspires, instructs, or prods gardeners into action or thought, depending on the season. His warm manner and imperial stature—he’s well over six feet tall—make him a familiar figure on the British gardening landscape.

A longtime publisher at Collingridge Books and an author himself—he edited the indispensable *Ordnance Survey Guide to Gardens in Britain* with Susanne Mitchell and Candida Hunt—he refuses to retire. He writes a weekly newspaper column and, not content to take on just one job, he assumed the presidency of the Royal National Rose Society.

His favorite rose associated with America is not in fact a native. The Cherokee rose (*Rosa laevigata*) is Chinese in origin, but was introduced into America in the eighteenth century. It became a garden escape in the South and is the state flower of Georgia.

It is rarely seen in Britain, although it grows well on the Scilly Isles at Tresco, in northern Ireland at Mount Stewart, and on Scotland’s warm west coast at Inverewe. After years of following rose developments, Pearson only recently discovered this southern rose on Madeira. “I think it would make a jolly good rose for a large conservatory—it grows up to eighteen feet tall. It has the most lovely single white flowers with prominent yellow stamens. The foliage is glossy and very beautiful. So in all respects it’s quite a first-class plant.”

Rosemary Verey

This soft-spoken plantswoman and author of a half dozen books is familiar to many American gardeners. In researching *The American Man’s Garden* and the earlier *An American Woman’s Garden*, she spent many months on what was once colonial soil.



PHOTOS BY JOAN HOCKADAY

Top: Dennis Woodland photographs rhododendrons at Exbury in Hampshire. Left: Author Rosemary Verey greets visitors to her garden. Right: Columnist Robert Pearson.



MICHAEL S. THOMPSON

Her own garden at Barnsley in Gloucestershire is a showplace for hundreds of plants collected over the years. Her fine eye for grouping the plants, within the design established years ago by her late architect husband, makes a trip to this garden a highlight for groups of visiting Americans who arrive by the busload on spring and summer days.

Barnsley House, lacking the elaborate tea rooms, gift shops, and directional signs of other famous English gardens, is refreshing in its simplicity. Verey's shy gardener hovers beyond the garden gate, out behind the tennis court in the midst of lettuce edgings, strawberry rows, and fruit trees. Verey herself comes out of the house to speak, in hushed tones, to tour groups, often several a day. She often writes at night and one evening compiled her list of American favorites for *American Horticulturist*.

For her, each season brings on important border choices, and knowing the high season of each perennial is one secret of her successful plantsmanship.

"In spring," she says, "I love to have a few wild columbines, *Aquilegia canadensis*, tucked among the cowslips and tulips. Like all aquilegias they are easy to grow from seed.

"By June, spiderwort, *Tradescantia virginiana*, will be blooming. I have them in white, pale mauvey blue, through to much darker shades. They are not showy, but add constant color for many weeks. When their leaves become untidy we cut them to the ground and they will make new growth and flower again in the fall."

Blooming constantly for her through summer are her evening primroses. She was given seeds of *Oenothera speciosa*, a Texas native, on a visit to the National Wildflower Research Center in Austin. Its soft pink flowers open daily and fade by evening. The yellow flowers of the three- to four-foot tall *O. biennis*, on the other hand, don't open until around 4 o'clock in the afternoon, when the temperature begins to drop.

"We must have bergamot, *Monarda didyma*," says Verey, "with colors ranging from the bright red 'Cambridge Scarlet', the rich violet of 'Prairie Night', to the soft rose pink of 'Croftway Pink'."

In the United States, the bright red of *Lobelia cardinalis* is often snubbed by gardeners as too commonplace. This is not so, however, in Great Britain. "Our late summer border would be incomplete without perennial lobelias," says Verey. Besides *L. cardinalis*, a favorite is the purplish blue *L. vedrariensis*. "They both have attractive leafy stems rising from deep green basal rosettes and are a great addition to the borders."

But for Verey, it is in autumn when American natives are especially indispensable. "The obedient plant, *Physotegia virginiana*, comes into its own in September and October and is always a talking point, especially with young gardeners, as the flower heads can be turned around on the stiff square stems and obediently remain where you have put them.

"Yellow and deep red daisy flowers fit so well into the colors of autumn," she continues. "There are rudbeckias [black-eyed Susan], heleniums [sneezeweed], gaillardias [Indian blanket], helianthus [sunflowers], and heliopsis [oxeye]—all sunlovers and fine plants for infilling the borders with inspiration as autumn advances."



ROB AND MELISSA SIMPSON

Above: "We must have bergamot, *Monarda didyma*," says Rosemary Verey. Right: Southern California's *Ceanothus impressus* will succumb to a cold England winter. But at Dennis Woodland's home, as on this manor in Oxfordshire, the cultivar 'Puget Blue' makes an impressive climber.



PAMELA HARPER

Dennis Woodland

If ever the gardening world produced an elite, surely the graduates of the Hillier's famous Hampshire nursery would fill the bill. One of those graduates is Dennis Woodland, who co-authored *The Hillier Book of Garden Planning and Planting* and wrote the Royal Horticultural Society's Wisley handbook *Reclaiming the Neglected Garden*. Officially retired now, he is still sought after as a garden consultant, author, and lecturer. Behind his house in the village of Wilton is a garden that testifies to his years of collecting.

Just a single corm of coast trillium (*Trillium ovatum*) slipped into his spongebag by a generous West Coast gardener two years ago has now "settled in well" there. Last year his plant produced two flower heads and has even been reseeding itself. "I'm very pleased to have naturalized this California native," says Woodland.

One whole side of his house is covered with *Ceanothus impressus* 'Puget Blue'. This shrub grows well in acid or alkaline soil, but tends to be short-lived in England, says Woodland. "They're often clobbered by our uncharitable winters, and they don't like the winter wet," he says.

Fremontodendron californicum 'California Glory' is another West Coast shrub that he has used as a climber. "This plant has adapted well to this climate and has grown extremely well on south-facing walls—in my own case, it reached three stories high. 'California Glory' seems to have a larger flower and be hardier with us than the species, *F. californicum*. A spectacular plant."

Woodland's enthusiasm for American plants isn't limited to West Coast natives. The East Coast's *Rhododendron atlanticum* is a favorite for its late-season, fragrant white to pale pink flowers, while the flowers of our mountain laurel (*Kalmia latifolia*) "always remind me of sugar icing, with beautiful crimped buds like little mountain tops." He finds 'Ostbo Red' particularly impressive, although he notes that British gardeners have made the mistake of planting kalmias in woodlands, when they probably need more sun on that northerly island to get good flowering.

The New York aster (*Aster novi-belgii*) is another disappointment, as it tends to mildew there. That smooth-leaved aster and its Michaelmas daisy offspring "flop about everywhere, seed themselves around, and degenerate generally," he says. But the hairy-leaved New England



ANITA SABARESE



PAMELA HARPER

Above: The fall-blooming obedient plant is popular with youngsters who visit Rosemary Verey's Barnsley House, because its flower heads can be manipulated to stay in new positions. Left: Bob Pearson, president of the Royal National Rose Society, recently became enchanted with the Cherokee rose, which comes from China but is the state flower of Georgia.

aster (*A. novae-angliae*) doesn't mildew and comes in pinks and white as well as purple. British gardeners are especially fond of one that reached them via Germany. *A. novae-angliae* 'Alma Potschke' "stands out above all others—three feet high and a brilliant cherry red," says Woodland.

Among America's most recent introductions to Europe, he says, are *Euonymus fortunei* 'Emerald 'n' Gold' and *E. fortunei* 'Emerald Gaiety,' two U.S.-bred plants of Chinese parentage. These hardy, shade-tolerant variegated evergreens are widely used in public gardens, not only in England but in Germany, France, and even Norway.

With transatlantic travel today routine and uneventful, the search for new American plants continues with less adventure but more frequent exchanges. And yet the thrill of seeing our plants in the wild will always lure the keenest plant hunters, particularly those from the country where our plants are valued most—Great Britain. ♦

English Roses— Jolly Good?

A California rose grower takes a critical look at David Austin's much-touted hybrids.

B Y R A Y F O R D R E D D E L L

Early in the twentieth century the rose world split asunder. This was soon after rose breeders began churning out ever-blooming hybrids with formal forms in bold new colors. Many gardeners put their foot down.

"These new fangled hybrids don't even look like roses," horticulturists protested. "Sure, they're nonstop bloomers, but they've lost the romantic appeal of my old roses. And, by the way, where has all the fragrance gone?"

Rosarians defending modern hybrids pointed out that not only were many new roses deeply fragrant once their blooms matured, but they also had whimsical charm to spare—enough to rival the most endearing of their forefathers and dowager aunts.

Heated disputes persisted.

Shortly after 1950, a hybridizer from Albrighton, England, launched a rose breeding program that worked wonders to reunite the two rose camps. The breeder, David Austin, developed a line of roses that were so different from anything else in commerce, they qualified as a whole new race—the English rose.

When Austin began hybridizing roses at his Shropshire nursery, he knew precisely what he was after—sturdy shrubs, repeat blooming with delicate, pastel, fragrant,

old-fashioned blossoms. To achieve his dream, Austin crossed modern climbers, floribundas, and hybrid teas with two of the oldest families known to European rosarians—gallicas and damasks.

The first clue that he was on the right track came when the lovely floribunda 'Dainty Maid' was mated with 'Belle Isis', a sweetheart of a gallica. One seedling, 'Constance Spry', nearly hit the mark. This buxom, hot pink beauty produced flowers that looked just like those Austin had in mind. Alas, the bush bloomed only once a year. Subsequent crosses between 'Constance Spry' and other modern roses, however, brought Austin his dream.

Because he employed the help of deeply colored roses, such as the crimson gallica 'Tuscany', Austin's offspring began appearing in shades of red. Foremost was 'Chianti', a crimson beauty that, like 'Constance Spry', blossomed only once each season. In order to extend productivity as well as color, 'Chianti' was further crossed with sure-fire, modern, ever-blooming yellows like 'Golden Wings' and 'Chinatown'.

What followed is history, sufficient enough to place the English rose firmly in the annals of immortal rosedom.

The first Austin rose I ever saw was an arrangement of 'Claire Rose' in a display



LEFT: JOAN HOCKADAY; OPPOSITE: ROBERT GALYEAN

Above: Creator of the English rose, David Austin, at the 1992 Chelsea Flower Show. Right: Austin named 'Graham Thomas' in honor of Britain's most beloved rosarian.





Above: Myrrh-scented 'Cressida' will grow as either a climber or a sprawling shrub. Right: The intricately layered blooms of 'English Garden' reveal its old rose ancestry.



PHOTOS BY ROBERT GALYEAN

at the Chelsea Flower Show, England's famous floral extravaganza. 'Claire Rose' looked good enough to eat. Then I saw the balance of Austin's collection. Although I lusted for the whole batch and fantasized about where I'd plant them if I could sneak them home, I didn't dare order even my favorites, in fear of the rigors of importing (I would have to plant the bushes at least ten feet away from all others and consent to agricultural agents snooping around my garden twice a year for two years).

However, a short while later the English rose became available from U.S. and Canadian nurseries without such a rigamarole. I planted a large selection. Even after accounting for the fact that the stock numbered among the puniest bushes I've ever sunk in the ground, my first Austin roses didn't live up to my expectations. They were pretty, goodness knows, but I never saw enough blossoms. Would my long longed-for English beauties prove to be stingy bloomers?

My fears of too-few blooms eased somewhat the second year, when my English rosebushes blossomed intermittently from Mother's Day until Halloween. "They'll get up to speed in another year," I assured myself. But then a new problem cropped up. Bushes of varieties like 'Claire Rose' began growing out of control, almost as though they were reverting (or sporting) to climbers.

The following year, I went to visit David

Austin myself—on July 3, the exact date that he had predicted, six months earlier, his garden would be at its peak bloom. It was an experience rosarians dream of—a two-acre display garden in full glory.

After seeing them grown to perfection and speaking with the man who conceived them, I've put to rest certain fears regarding the English rose. First, many of Austin's roses are indeed luxuriant bloomers. Second, and more important, English roses should be richly grown and severely pruned—like modern roses rather than the old varieties. After visiting Austin's garden, I realized that I had been tending them backwards. Deceived by the fact that their blooms resembled old roses, I had treated my English roses as though they were delicate and retiring dowagers rather than aggressive ever-blooming hybrids.

Austin's *A Handbook of Roses*, the catalog from his nursery, now lists more than 80 varieties of English roses, in colors ranging from blood red to pristine white, grouped by projected height. I haven't grown them all, but here's a dozen I happily recommend:

'Claire Rose', as already mentioned, was the first English rose I fell for. That was in part, no doubt, because of the size and color of its flowers—large shallow-cupped blossoms intricately formed from massive numbers of blush pink petals. Austin claims 'Claire Rose' is not only fragrant, but that her only fault is that "petals tend

to spottle with age if there has been rain." This freckling tendency couldn't concern me less; it seems only fair for blossoms *this* large that last so long. I quarrel with the claim for fragrance, however, since, to my nose, 'Claire Rose' has no distinguishing perfume whatsoever.

'Cressida', I believe, will be recorded in history as one of Austin's triumphs, primarily because it serves double-duty as a climber or a sprawling shrub. It was the blooms of 'Cressida', however, that won me over—informal arrangements of myrrh-scented, pinkish beige petals with an apricot reverse.

'Dapple Dawn' is my personal favorite among the single English roses. A sport of 'Red Coat', 'Dapple Dawn' is, I think, superior to its parent. Bushes of 'Red Coat' blossom freely with flowers that begin life pure scarlet, but end up with dull brown overtones. 'Dapple Dawn', on the other hand, is fresh from start to finish—delicate pink petals, veined throughout with deep pink, entirely encircling a boss of long, golden yellow stamens. Like its parent, 'Dapple Dawn' is ideal for hedges and mass plantings. According to Austin, whether plants of 'Dapple Dawn' and 'Red Coat' are grown as upright bushes or spreading shrubs makes an enormous difference in quantity of bloom. When pruned as four-foot bushes, there are reportedly "two very big flushes of bloom, whereas when grown as shrubs, the flowering is spread out over

the season.” Fragrance in both varieties is only slight, if detectable at all.

‘English Garden’ is one of the most beautiful yellow roses I know of, old or new. Although the bush is on the short side for an English rose, it produces intricate blossoms of staggering symmetry. The color is basically buff yellow, paling to cream at petal edges. The foliage is light green and the fragrance is comparable to that of tea roses.

‘Gertrude Jekyll’ displays more old rose qualities than most other English roses, undoubtedly because one of its parents is the famous Portland rose ‘Comte de Chambord’. This heritage places ‘Gertrude Jekyll’ among the most strongly perfumed of Austin’s roses. Although buds start out small and scrolled, they quickly mature into plump, pink rosettes. For me, bushes grow to four-foot heights and almost as wide.

‘Graham Thomas’ is one of the most popular English roses for two reasons. First, it is named for the most beloved rosarian in Britain, but more importantly, it blossoms in a deep yellow color that is unmatched among old roses and rare among modern hybrids. Blossoms are medium-sized, deeply cupped, and have a strong tea rose fragrance. Leaves are smooth (perhaps because ‘Iceberg’ is num-

bered among its ancestors) and bushes are almost as wide as they are tall.

‘Heritage’ made the biggest splash in America of all English roses when it was introduced, hardly a surprise since Austin himself considers it “perhaps the most beautiful English rose.” Although bushes of ‘Heritage’ are admirably bushy and free-branching, I think that the enormous success of this hybrid is because of its irresistible shell pink color and perfectly cupped, richly fragrant blossoms. As a final bonus, ‘Heritage’s’ robust bushes are remarkably free-flowering.

‘Leander’ is touted as the healthiest and most disease-resistant variety of all the English roses, reaching heights of eight feet and taller. Alas, ‘Leander’ is not a free repeat-bloomer, although its bushes are literally showered with flowers in spring. For those hooked on deep apricot flowers with fruity fragrance, however, quantity of blossom is secondary to quality. Individual blossoms are smallish, but produced in handsome sprays.

‘Lilian Austin’ is the most modern-looking of the English roses since its semidouble flowers with wavy petals resemble modern hybrids rather than old garden roses. ‘Lilian Austin’s’ strong point is its growth habit—low, moundlike, and arching. Although the

color of the fragrant blossoms (salmon pink, tinted orange and apricot) looks out of place in most mixed borders, a few bushes planted together make a fine statement. The disease-resistant shrubs are quick to repeat their flowers.

‘Mary Rose’ produces flowers that are only slightly fragrant but its bush is a pruner’s dream—it will perform as told. Large rose pink flowers that are informally cupped and loosely filled with petals are likely to be the first of the English roses to appear and the last to give up the bloom. Plants are free-branching and robust but exceptionally thorny.

‘Perdita’ is considered to be one of the best all-round English roses. Although bushes rarely grow taller than three feet, in one season they produce an amazing number of medium-sized, fully double, light apricot blossoms that are richly fragrant. Foliage is ample, dark green, and disease-resistant, and stems are a handsome shade of reddish brown.

‘The Countryman’, like ‘Gertrude Jekyll’, owes much of its appearance to its ‘Comte de Chambord’ ancestry. Like ‘Lilian Austin’, ‘The Countryman’ is valued for its contribution to the landscape, since its bushes arch and prettily nod their blossoms. Although its bush is rather short, its leaves

Below: A big success in America, ‘Heritage’ is considered by Austin to be “perhaps the most beautiful English rose.” Right: Austin crossed a gallica with a floribunda to get the once-blooming ‘Constance Spry’, an ancestor of most English roses.



PHOTOS BY ROBERT GALYEAN

are long and its blooms are large, deep pink, heavily petaled, and richly fragrant.

I asked Austin if he had favorites among his roses and if he thought certain varieties would outlast others.

"I suppose 'Heritage' numbers among my favorites, but so do some of the simpler varieties," he said. Going on to explain how he resists evaluating his hybrids in strictly commercial terms, Austin spoke as though he were quoting from his own book:

"In the breeding of the English roses it has always been my aim first of all to hybridize, and then to select for the overall beauty of the plant. That is to say, for the charm, character, and fragrance of the flower, for the elegance and grace of growth and leaf. Only then do I consider the more practical aspects of reliability, toughness, disease resistance, and freedom and regularity of flowering, vital though these undoubtedly are. The tendency has too often been to see the rose as a machine for the production of flowers. The rose, it has been assumed, would automatically be beautiful. This unfortunately is not so. I really cannot see that the practical has much value without the aesthetic."

Neither can I. After having grown Austin's roses for more than ten years, I fear that a good number of varieties suffer

from transatlantic blues—a malady I've observed in many roses. Before learning to diagnose the condition, I couldn't figure out why so many fine modern American roses never catch on in England or why some varieties I see in gardens all over Britain aren't marketed in the United States. Now, of course, I realize that it's all a matter of certain roses traveling well and others preferring to stay near home.

Many roses, particularly modern varieties, don't perform identically from garden to garden. In America, for instance, roses that shine in Portland, Oregon, may pout in Portland, Maine, and vice versa—the reason why roses chosen as All-America Rose Selections are grown all over the country before being voted on, so that regional differences average out. Truly great roses, of course, have transcended their locales and crossed the wide Atlantic without mishap—immortals like the majestic pale pink grandiflora 'Queen Elizabeth', originally hybridized in California; 'Peace', the dazzling no-two-alike yellow hybrid tea created by the great French rose breeder Francis Meilland; or 'Sea Pearl', the salmon apricot floribunda beauty introduced by Jack Harkness of England. There are many more stars, but an even greater number of international also-rans

that perform satisfactorily only on one continent or the other.

When we consider the vast differences between the climates of the United States and the United Kingdom, we should know better than to make the Atlantic crossing a trial by ordeal for roses. When most English gardeners are deciding whether to carry galoshes as well as umbrellas, their Yankee counterparts are deliberating over which strength sunscreen to apply and whether to also wear a sun visor. Why then should our roses grow the same? I've never, for instance, been able to cultivate the splendid 'Silver Jubilee' (a fabulous two-tone pink hybrid tea hybridized by Scots breeder Alec Cocker) as well as I've seen it grown all over England. Instead, I settle for 'Color Magic', also a pink bicolor hybrid tea, but hybridized in America by the late William Warriner of Jackson and Perkins. This is hardly a compromise.

In defense of hybridizers, I understand why their breeding platforms are heavily biased in favor of roses that perform well close to home. Why shouldn't local favorites loom in a breeder's mind when imagining prospective parents? In the case of Austin's roses, however, I'm afraid that means certain varieties pay a luxury tax for performing best near Albrighton, England.



Left: Its strong tea-roselike scent earned 'Perdita' an award for fragrance from the Royal National Rose Society in 1984. Below: 'Mary Rose' is the first of the English roses to flower and the last to give up its bloom.



PHOTOS BY ROBERT GALVEAN



By perform, I mean bloom. Some varieties, such as 'Graham Thomas', 'Claire Rose', and 'Yellow Charles Austin' actually grow far larger in California than they do anywhere in England. Blossoming, however, is another matter.

In my garden, for instance, the roses just mentioned blossom in early summer as though they were hybridized with Petaluma, California, in mind. The outrageous show lasts a good six weeks. Then plants seem to say, "Okay, that's it for blooming for a while, let's vegetate." Bushes then spend a good portion of each summer growing like they never imagined so much warm sun and haven't figured out how to respond to it modestly. For these aggressive varieties, repeat blooming is skimpy and fall's show is a relative dud. In England, on the contrary, these varieties seem perfectly at home repeating their blooms as advertised.

So why the overwhelming success of David Austin's roses in America? In retrospect, I think it was inevitable. Another rose revolution like the one staged early in the nineteenth century by Empress Josephine, who grew every then-known variety and species at her chateau at Malmaison, near Paris, was long overdue.

Also, since the first hybrid tea was introduced, old-fashioned varieties have wandered in and out of vogue every few decades, and here were roses that not only looked like antiques, but rebloomed as well!

In time, I believe many American gardeners will do one of two things: 1. Stop pretending Austin roses are truly ever-blooming in our gardens and gratefully accept recurrent flowers as lagniappe. 2. Plant only those midsize and small English roses that grow modestly and repeat their bloom to an acceptable degree.

Although I'm not certain what I'll ultimately decide, many Austin roses are growing in my garden for good.

Rayford Reddell of Garden Valley Ranch in Petaluma, California, is the author of Growing Good Roses, available from the AHS Book Program for \$24.75 plus \$2.50 for shipping and handling.

SOURCES

Hortico Inc., 723 Robson Road, Waterdown, ON L0R 2H1, (416) 689-6984. Catalog \$3.

Pickering Nurseries Inc., 670 Kingston Road, Pickering, ON L1V 1A6, (416) 839-2111. Catalog \$2.

Rose Acres, 6641 Crystal Boulevard, Diamond Springs, CA 95619, (916) 626-1722. SASE for catalog.

Roses of Yesterday and Today, 802 Brown's Valley Road, Watsonville, CA 95076-0398, (408) 724-3537. Catalog \$3, deductible.

'Yellow Charles Austin' will grow larger in parts of the United States than on its native soil, but it may not rebloom as vigorously.



Just Dandelions

Before you pluck that common weed, take a closer look.

B Y M A R C I A B O N T A

Be careful! Those dandelions you destroy in your garden may not be the weeds you think they are. Most of us think only of the “common” dandelion, brought over by European settlers. But thousands of years before the European discovery of North America, other dandelions arrived on their own. They came the same way the first humans did, over the Bering Sea land bridge, the neck of land that once joined eastern Siberia to Alaska. From there they spread eastward to Hudson Bay and southward along the Rocky Mountains to Mexico and South America. A quarter of a million years ago, dandelions had already arrived on this continent, according to the Swedish dandelion expert Carl-Fredrik Lundevall.

The dandelion genus *Taraxacum* is assigned to the Cichorium tribe of Compositae, the huge composite or sunflower family (sometimes called Asteraceae). Eighty-five native *Taraxacum* species have been identified in North America. There are thirty-four in Alaska and Canada, and eighteen in the lower forty-eight states, including Colorado’s *T. fasciculatum*, Washington’s *T. olympicum*, Oregon’s *T. paucisquamosum*, and Pennsylvania’s *T. sylvaticum*, which was named as recently as 1977. In addition to the natives, the

United States has between 100 and 150 introduced European species.

During a 1990 visit to Lundevall’s home in Lidingö, near Stockholm, I was enthralled by his tales of the dandelion’s great age, diversity, distribution, and uses. We spent hours poring over his approximately 15,000 herbarium specimens, and I came away convinced that the world of dandelions was far more complex than I had thought.

Most of us have memories from childhood of picking a dandelion gone to seed and blowing those wonderfully buoyant seeds into the air. But whenever I did this my father or some other gardening adult would protest. By air-lifting seeds so light it takes 35,000 to make an ounce, I was irresponsibly spreading a pernicious weed—a weed that was preventing their lawns from looking like perfect green carpets. Even then, I thought its yellow flowers were beautiful and, like most people, I assumed all dandelions were yellow.

Not so, Lundevall assured me, as he showed me one white-blossomed Arctic species after another. Some Alaskan dandelions, like *T. carneocoloratum*, have flesh-colored flowers. In China, there are reddish species, like *T. aurantiacum*. Still others, like *T. albidum* from Japan and *T. arcticum* from Greenland and Siberia, have white



OPPOSITE: DAVID M. STONE; PHOTO/NATS; RIGHT: BRUCE BONTA

Opposite: A dandelion from Alaska, Taraxacum carneocoloratum. Above: Swedish dandelion expert Carl-Fredrik Lundevall displays one of his 15,000 specimens.



LEFT: HANS ØLLGAARD; RIGHT: CARL HANNINEN

*Dandelions thrive on disturbance. Above, the common dandelion, in *Taraxacum* section *Ruderalia*, will grow practically underfoot, as at this roadside. At right, a recent forest fire has not discouraged these members of section *Erythrosperma*.*

petals with a purple stripe underneath. Their blossoms have a bluish cast.

The leaf shape varies too. Some species, for instance, lack that jagged leaf edge that probably gave the dandelion its common name—from the French *dents de lion*, or “lion’s teeth.” Leaf shape varies so greatly that it alone has been used to define some species.

Such diversity has made it difficult to sort out the taxonomy of the genus. Linnaeus, the Swedish botanist who founded modern taxonomy, classified the dandelion as a single species, which he listed as *Leontodon taraxacum* in his *Species Plantarum*, published in 1753. Today, about 3,000 species have been described, according to the *Index Kewensis*, a repository of flowering plant names published by Kew Gardens.

The genus *Taraxacum* probably emerged seventy or eighty million years ago in the western Himalayas, since the most primitive forms are found in that region today. From there, the genus spread west to the Mediterranean and east throughout Asia. Today its distribution is practically world-wide. China, Japan, Korea, and eastern Siberia are rich in dan-

delion species. So is the other end of Eurasia. In the Czech and Slovak republics and southern Russia, scientists have found the oldest known remains of dandelion achenes (the plant’s fruit), believed to be ten to twenty million years old. Northern Europe is also fertile ground for dandelions. Farther north and west, Greenland has yielded thirty species. On the other side of the world, Australia and New Zealand have seven native dandelions. Central America has six, and another thirteen are native to South America.

Dandelions have colonized a wide range of habitats, including desert, fen, woodland, and tundra. All told, dandelions are native to six continents and to all major climatic zones except for the tropics and subtropics. (The central and south American natives all occur in temperate regions, like Patagonia, or in montane areas.)

But opinions differ on how significant all this dandelion diversity is. North American students of *Taraxacum* have tended to “lump” many forms into the same species, while the Europeans, who dominate the field, have tended to “split” them into different species. To split a complex genus like

Taraxacum, you first break it down into “sections”—an intermediate category between genus and species. Each section is then assigned a set of closely related species. To see how far the splitting has gone, consider the common dandelion, *T. officinale*. Once regarded as a single species, it has now been assigned to the section *Ruderalia*, and reclassified into some 1,500 different species. *Ruderalia* is the most widespread section, but more than forty others have been recognized, and there are perhaps another fifteen undescribed ones, mostly in central Asia.

What are the Europeans looking for when they split? Of course, they consider differences you can see with the naked eye—variation in leaf form, for example. But they also make finer distinctions. For example, Lundevall and his colleagues have used scanning electron microscopes to detect differences in pollen structure and chromosome count. They are also studying the embryology of *Taraxacum* species and working on various methods of chemical analysis.

The European splitting is perhaps understandable since European dandelions are much more diverse than their American

cousins, but many North American botanists still think the Europeans are cutting it pretty fine. This is “taxonomic hairsplitting,” according to Daniel Brunton, an independent ecologist in Ottawa, Ontario. “The feeling seems to be that the Europeans have gone way overboard in naming so many minor taxa, a great many of which are known from a single or few locations and only barely satisfy the literal, academic definition of a species.” Whether their splitting is useful or not, Lundevall and his Nordic colleagues may be reshaping the taxonomy of the genus: the Kew index puts the number of Scandinavian dandelions at 1,089—fully a third of all the species listed.

The experts may not be able to agree on a number, but there are clearly a great many dandelion species. Why should there be so many? Scientists believe that the explanation lies in the way the plant reproduces. The earliest dandelions are believed to have reproduced sexually, and some modern species still do. But as the genus spread out from its Himalayan homeland, it evolved a reproductive strategy called agamospermy, which most modern dandelions employ. Agamosperms produce seed

directly from maternal tissue, without fertilization. A seedling will therefore have a genetic complement identical to that of its parent, just as a clone would. An agamosperm that is well adapted to its environment will reproduce itself exactly, generation after generation. The result is a vast number of genetically identical plants—in effect a “microspecies” that differs consistently, if only slightly, from other microspecies. And with many microspecies, each pursuing its own, slightly different evolutionary tack, an agamosperm can become a taxonomist’s worst nightmare. Agamospermy, incidentally, is not limited to dandelions; it occurs in plant groups as diverse as mustards, cinquefoils, and pussytoes.

As taxonomists continue to struggle with *Taraxacum*, they depend heavily on such excellent herbarium collections as Lundevall’s and others at Leiden, Stockholm, Copenhagen, and Helsinki. But living collections are also important. Section *Ruderalia*, for instance, produces a wide variety of leaf shapes during its life cycle. Only during the main flowering period (usually April to May) is leaf shape a reli-

able identification key, and then only under ideal conditions. Ideal conditions cannot be found in mowed lawns or grazed turf, but only in a carefully cultivated dandelion garden. All dandelion taxonomists have one. Lundevall has two—one at his country home in Huddungeby, a town west of Uppsala, and another in his suburban Lidingö back yard. Such gardens are basically research plots. In his smaller Lidingö garden, Lundevall keeps many of his plants potted. Labels indicate their sections, habitats, and so forth. His larger Huddungeby garden is a haze of yellow when it is in full blossom.

There are practical reasons for dandelion research. In Finland, for instance, Arne Ronsi, a botany professor at the University of Turku, has a government grant to find a dandelion that could serve as a lettuce substitute in cold climates. Europeans have been consuming the dandelion for centuries. It was prized by the Greeks and Romans as a salad green and potherb. The Celts taught their Roman conquerors how to make a superior wine by fermenting dandelion flowers—a tradition still honored in country households all over Europe



JESSIE M. HARRIS



HANS ØLLGAARD

Taraxacum albidum, left, is readily distinguished from the common dandelion by its pale blooms. The two flowers at right are standard yellow but different in form. The bloom with the sparser cluster of petals comes from what is commonly called the mountain dandelion, a little-studied set of microspecies from the far north. The fuller flower belongs to *T. ostenfeldii*, a common dandelion.



PHOTOS BY HANS OLLGAARD

*Can you tell the difference? Section Ruderalia, the common dandelion, contains both striking and subtle variation. At top, the flower of *Taraxacum speciosum*, right, is unusual for Ruderalia, while that of its cousin, *T. valens*, is typical. Less obvious is the difference between the two buds, above. In *T. pallidipes*, left, the outer involucre bracts underneath the bud glisten slightly and have a narrow, almost transparent border. In *T. lingulatum*, right, the bracts are duller green and have no border—a small but consistent difference.*

and America. And the French actually eat the flowers, dipped in batter and deep fried.

The European dandelion is an ancient medicinal herb as well. In Britain, the Anglo-Saxons prescribed it for scurvy and as a laxative and diuretic. The latter use led to the inelegant English nickname “piss-a-bed.” Intentionally introduced to North America, it came to be known here as “pee-the-bed” and in French Canada as “pissenlit.” (More polite names included blow ball, lion’s tooth, peasant’s cloak, yellow gowan, priest’s crown, Irish daisy, and monk’s head.) The dandelion was also used to treat rheumatism, liver ailments, and gallstones. Modern herbalists usually make less sweeping claims for it, but they consider it safe even in large doses, and they continue to prescribe it for liver complaints, as a diuretic and a laxative. Nutritionists have discovered that the dandelion is high in calcium, potassium, vitamin A, thiamine, and riboflavin.

During the Civil War, Southerners found another use for what the Chinese call the dandelion’s “earth tail”—the long taproot so despised by gardeners. When ground and roasted it made a passable coffee substitute. During both world wars, home-grown dandelions provided Europeans with food, drink, a tonic, and a laxative. During World War II, the Russians discovered that the root of one of their dandelions, *T. kok-saghz*, produced abundant latex, a raw material for rubber.

There seems to be no end to the uses humanity can find for the ubiquitous dandelion. In her book *Green Immigrants*, Claire Shaver Houghton recounts the research of scientists who discovered that dandelion blossoms exude ethylene gas at sunset. Since ethylene hastens the ripening of fruit, some commercial orchards have resorted to mass plantings of dandelions. The late farmer and writer Louis Bromfield explained in his book *Malabar Farm* that he encouraged dandelions in his lawn: he argued that their long taproots bring valuable elements up from depths that short-rooted grass cannot reach. Scientific support for that belief comes from Lundevall and other scientists who have analyzed trace elements in various dandelion species. In one specimen they found traces of sixty-two elements.

Some gardeners even see a wildlife value in the dandelion. In urban areas, they argue, dandelions may be among the few flowers from which wild bees can gather nectar. And a number of native butterflies,

including the sara orangetip, red admiral, and comma, frequent the yellow flowers as well. Some birds may also profit from the dandelion’s success. My own lawn is at its most beautiful when it’s carpeted with golden dandelions and patronized by goldfinches and indigo buntings.

Whether you have a use for them or not, the Ruderalia dandelions and those of the reddish-fruited section *Erythroperma* are now abundant over most of North America. But what are your chances of finding a new species or even a section? On this continent, the best prospects for discovering a native are in California, the Rocky Mountains, or in the Arctic. According to Lundevall, there is a strong possibility of discovering new species across the entire northern rim of the world. Some of these could be quite rare: Norway, for instance, has an endangered dandelion—*T. dovrense*.

And just about anywhere in North America, you might discover a species newly arrived from Europe. In 1983, Daniel Brunton and his wife Karen McIntosh were the first to find the marsh dandelion, *T. cognatum*, in North America. Originally from central Europe, this species belongs to the section *Palustria*, which had not been known to occur outside of Europe and Turkey. Brunton says the marsh dandelion caught their attention because of its erect, narrow, widely serrated leaves, which looked quite different from the deeply cut, reflexed leaves of most introduced dandelions. *T. cognatum* prefers wet soils with calcareous gravel or clay on limestone or marble bedrock. The first specimens were found in a roadside ditch near Ottawa, Ontario. But once the dandelion hunters knew what to look for and where, they found their plant in many areas of southeastern Ontario, northern New York, and southern Quebec. This salt-tolerant species is spreading rapidly along roads, Brunton believes, because it is hitchhiking on cars, snow plows, and grass mowers. “It’s so rare where it occurs naturally,” Brunton says, “yet here it’s a weed.”

Since most of us are not trained botanists, no doubt some undiscovered dandelions will continue to flower unnoticed, amid their cousins’ familiar yellow bloom. But it’s humbling to find such complexity in the natural history of even the commonest dandelion.

Marcia Bonta, a frequent contributor to American Horticulturist, is the author of Women in the Field.

The Moonlight Garden

The night's silver orb inspires romance, myth, and all-white borders.

BY PETER LOEWER

In the middle of our walled garden there is a simple concrete stand exactly twenty-one inches high that holds a silver gazing globe. The globe is fourteen inches in diameter and made from handblown glass.

Way back in the 1600s, any fashionable Dutch garden had a gazing globe. In *The Story of Gardening* Richardson Wright wrote: "[Around] 1694 small Dutch gardens began sprouting queer-shaped trees and from then went on to making those toy gardens, some of which exist even today—gardens with miniature bridges and canals and gazing globes and fantastic topiary work and tiny painted garden figures."

Although that description sounds like a miniature golf course, the gazing globe has much more cachet. It's a piece of garden nostalgia that has a special place in the evening garden—and is especially wonderful when used to view the garden under moonlight.

I grew up with a love of the moon. The affection was partly scientific since I've always had a telescope of one sort or another and, as a result, have looked at the moon's craters, when young in hopes of finding a rocket ship (not from earth), and when older for the sheer beauty of the lunar landscape. And that affection for the moon (and its effect on the imagination) has also been rooted in my oft-noted love of the old black-and-white horror films. This, too, is wedded to my youth since moonlight never looks authentic in the typical color films of today's Hollywood: the moon is a sickly yellow and the night sky is never really black. If you don't believe me, rent the video for RKO's 1943 "I Walked With a



PETER LOEWER

*The reflection of the
moon in a gazing globe
attracts a luna moth.
The flower is one of the
night-flowering gourds.*

Zombie” and watch the real power of the moon. There, on a remote island in the Caribbean, a zombie follows two women across the canebrakes of a sugar plantation. Moonlight makes the shadows seem a mile long and wisps of clouds slowly pass over that silver orb above.

Thoreau loved the moon. “Now we are getting moonlight,” he wrote in volume two of his journals, “we see it reflected from particular stumps in the depths of the darkest woods . . . as if it selected what to shine on—a silvery light. It is a light, of course, which we have had all day, but which we have not appreciated, and proves how remarkable a lesser light can be when a greater has departed. How simply and naturally the moon presides!”

On the covers of old-time sheet music, the moon is often so large that it encompasses a kissing couple and most of a title like “Shine On Harvest Moon.” While it’s true our official satellite is sometimes larger and sometimes smaller thanks to its elliptical orbit around the earth, it’s the moon’s illusion that makes it appear to be so large at moonrise. Even today this phenomenon has not been completely explained and is usually written off to a visual effect supposedly caused by the moon’s proximity to terrestrial objects on the horizon. Perhaps, but why then is the moon equally large when rising over the mountains or looming over the flatness of the prairie or desert?

What of blood on the moon? Or honey-moon? These salutes to heavenly drama are all caused by the atmosphere of Earth. The warming air of late spring stains the moon with a honey color (just happening to coincide with June), while the thickening summer haze often turns the orb to orange or red. Then in winter the moon appears to be brighter than ever because the air is cold and dry.

The full moon nearest to the autumnal equinox is called the harvest moon. For several nights it rises shortly after sunset, its light enabling farmers to continue gathering the crops without the aid of artificial light. The reason the harvest moon luckily appears for the harvest is the tilt of the earth’s axis. At that time of the year, the moon’s orbit is just below the eastern horizon and it rises just in time to flood the fields as in a Samuel Palmer painting.

Gardening at night is nothing new but until the leisure world of the twentieth century, advice on the topic revolved around vegetables rather than flowers.

The Rev. Timothy Harley, in his 1885 book, *Moon Lore*, quotes an old English gardener as saying: “And when the light of the moon waxes warmer, golden-hued plants grow on from the earth during the spring,” and “cucumbers and radishes, turnips, leeks, lilies, horse-radish, saffron, and other plants, are said to increase during the fullness of the moon; but onions, on the contrary, are much larger and are better nourished during the decline.”

Edith Sitwell, writing in her 1957 classic *English Eccentrics*, says that Pliny believed that the fourth day of the moon determines the winds for that month, and the ants never work when the moon is about to change. She writes that the growth of the moon will enlarge the eyes of cats and that onions will bud while the moon wanes and wither when it waxes.

Percy Bysshe Shelley was more than a poet, he was a political radical of the nineteenth century. He was known to be a professional agitator and while in Dublin in December of 1812, he went out at night to talk to the poor laborers who worked the entire day and were forced to garden little vegetable patches under moonlight in order to feed their families.

“It has come under the author’s experience,” he wrote, “that some of the workmen on an embankment in North Wales, who, in consequence of the inability of the proprietor to pay them, seldom received their wages, have supported large families by cultivating small spots of sterile ground by moonlight.”

Today gardening by moonlight is not by misfortune but by choice. And moonlight gardeners plant their seeds according to the phases of the moon because they believe that the same action that the moon directs towards the tides also applies to the water in the ground. Vegetables and flowers that open to the air should be planted from the new moon to the full moon while root vegetables should be set out during the dark nights of the moon, from full to new. And nothing should be planted on the exact day of the new moon or the full moon.

The *Old Farmer’s Almanac* not only gives directions for planting thirty-two vegetables by moonlight, but also advises that flowering bulbs need to be planted by the dark of the moon and all other flowers at the time of the new moon.

But planting isn’t the only gardening activity for moonlight. Recently *Avant Gardener* reported that two German scientists found that weeding by moonlight re-



sulted in fewer weeds during the daytime. Test plots cultivated at night had forty times fewer weeds than those plots cultivated by day. The theory is that the tiny amount of light a weed seed receives when exposed to the sun before it goes under the earth again is enough to trigger sprouting.

In 1904 Alice Morse Earle wrote *Old Time Gardens*, a wonderful book full of chatter about gardens and gardeners. "I plant a garden like none other," she writes, "not an everyday garden, nor indeed a garden of any day, but a garden for 'brave moonshine,' a garden of twilight opening and midnight bloom, a garden of nocturnal blossoms, a garden of white blossoms, and the sweetest garden in the world."

One of the most unusual gardens she described was Indian Hill, Ben Perley Poore's white moonlight garden in Newburyport, Massachusetts. During Poore's lifetime the garden had extraordinary charms. "On every side," wrote Earle, "were old terraced walls covered with roses and flowering vines, banked with shrubs, and standing in beds of old-time flowers running over the lovely hillside, was the Garden, and when we entered it, lo! it was a White Garden with edgings of pure and seemly white Candytuft from the forcing beds, and flowers of Spring Snowflake and Star of Bethlehem and Jonquils;

and there were white-flowered shrubs of spring, the earliest Spiraeas and Deutzias; the doubled-flowered Cherries and Almonds and old favorites, such as Peter's Wreath (*Spiraea prunifolia*), all white and wonderfully expressive of a simplicity, a purity, a closeness to nature."

Poore's garden featured a magnificent double flower border over 700 feet long. A broad straight path edged with trimmed boxwood ran down through the center with twelve-foot wide flower borders on each side. "It do swallow no end of plants," the gardener is quoted as saying.

Interestingly, this American garden was begun in 1833—over 100 years before Vita Sackville-West thought of planting the now famous White Garden at Sissinghurst. Indian Hill was laid out and planted by Poore's parents, after they returned (it must be admitted) from an extended tour of England, no doubt under the influence of the English flower garden.

On the hillsides around the farm, Poore grew every variety of native tree that would survive a New England winter. Then, to carry on the theme of white, there were vast herds of snow white cows, flocks of white sheep, and all the oxen were white. Then adding white to white, white pigeons circled the air above white doves, and the farmyard poultry were also all white; one

local account reported there were white peacocks on the garden walls, but these reports were discounted.

The Sissinghurst garden, created by Sackville-West and her husband, Nigel Nicolson, was planted between 1949 and 1950. The first plant was a silvery willow-leaved pear that was moved from the Rose Garden. The total cost of the plants was exactly £3 since most of the stock came from cuttings and seedlings. Purchased plants were *Crambe cordifolia* and *Gypsophila* 'Bristol Fairy'.

One of the features of the White Garden is a *claire-voie*. This is a large round hole cut in a hedge of clipped cypresses that gives a view to the gardens beyond—in essence a window to another room. It's often found in older French gardens—and a few American gardens as well—where the opening has been located to give a view of the rising moon. In China they have the *di xue*, meaning moon door or, literally, ground hole. Here, too, these are decorative openings in various garden walls not only to give mysterious views to other parts of the garden but often so situated that the moon is visible as it rises in the evening.

America has been blessed with a number of garden writers who have known of the beauty of evening gardens and the special fascination of white flowers: Earle is one,



The six-inch sweet-scented white blooms of the moonflower appear at twilight and remain open until morning light.

Neltje Blanchan is another, and Louise Beebe Wilder is a third.

Wilder dreamed for years of having a white garden. In the 1918 *Colour in My Garden* she wrote: "Some day I should like to plant a garden to the night, to be frequented only at dim twilights, by moonlight, or when there is no light save the faint luminousness of white flowers. There should be somber evergreens for mystery, an ever-playing fountain to break the tenseness, a pool for the moon's quaint artistry, and a seat." She went on to describe a garden of wraithlike shadbush, cherry trees to "hang like ghostly balloons among the shadows," white roses, scented pinks, and great white peonies.

In 1935 in *What Happens in My Garden*, she wrote again about her dream: "I never have come anywhere near to realizing this dream, never had space enough to be anything so special" but she did see a white garden of "such stuff as dreams are made on," on an estate in Wales, on the river Ely, not far from ancient Llandaff.

Like Sissinghurst, the garden was enclosed by stone walls of a warm pinkish gray, the curious hue of the stone making a wonderful background for the pale and white flowers. The Wilders saw the garden at twilight, after a gray and cloudy day, the best time to view a white garden. They were welcomed by a clematis with white blooms that wound around tall iron gates. "It is impossible to describe its beauty at this dim hour—so soft, so ethereal, so mysterious, half real it seemed," she wrote. "At twilight, of course, it seemed a little unreal, but isn't that true of almost any garden at this hour when the hand of man is less apparent and mysterious agencies seem to have brought it into being?"

The shape of the garden was a large rectangle and at the back was a raised stone pool lined with the palest of sea blue tiles. From a spout in a frame of carved lilies, a jet of water rose high in the air, swaying in the wind, then falling back with a sigh to the clear waters of the basin. On either side of the pool were tubs filled with white lilies-of-the-Nile.

A four- or five-foot border lay against the enclosure's wall and all the flowers were planted there; the gateway was seven feet wide. The rest of the garden was cut grass, unbroken except for a very old thorn tree that spread its crooked branches and its shadow over a small iron table and a few comfortable garden chairs.

The flowers that bloomed in this garden



were phloxes, tall and short; white sweet peas that were supported on trellises at the back of the border; gladioli and dahlias; and a number of different annuals. The borders were edged with stone, and spilling over out onto the lawn were masses of white annual pinks, *Phlox drummondii*, petunias both frilly and plain, verbenas, pale yellow and white California poppies, sweet alyssum, Carpathian harebells, white coralbells, and more.

Finally Wilder described the garden at dusk, when the fragrance from the white tobacco, stock, lilies, masses of white heliotrope, tuberoses, and petunias filled the night garden with sweet perfumes.

But the moonlight gardener should remember before trudging down the silvery path to the garden, that—according to Sitwell—a person falling asleep under the full moon's light will grow even drowsier than usual, and if care isn't taken, might not wake in time to greet the morning sun as it shines upon the garden. So moonlighting gardeners had best take care . . .

This article is adapted with permission from Peter Loewer's most recent book, The Evening Garden (Macmillan, 1993), available from the AHS Book Service for \$21.25 plus \$2.50 for shipping and handling.

The brilliant white, satiny petals of an oriental poppy cultivar, 'Perry's White', glow in the moonlight.

encourage expanded root growth. Then in another drought, the plant would be better prepared to survive.

Bob Danik
Valencia, Pennsylvania

Robert Kourik responds: *Daily irrigation is merely one of the many options that I discuss in my book, from which the American Horticulturist article was adapted.*

Plants get most of their growth-promoting water and nutrients from the top one to two feet of soil. "Deep watering" does not encourage a "more expanded root system," but wastes water that drains below the most efficient roots.

No single watering method is appropriate for all settings, and every watering option has different pluses or minuses. Around my home, in a completely rainless summer climate, there are landscaped areas that have never been irrigated since they were fall-planted, sections on monthly and bi-monthly irrigation schedules, and container plants that are watered daily. There's a rationale for every irrigation possibility.

I would suggest, naturally, that you read the extended rationale that I lay out in my drip book for daily irrigation although again, I do not present it as the only approach. (Editor's note: Kourik's Drip Irrigation for Every Landscape and All Climates is available through the AHS Book Service for \$10.75 plus \$2.50 for shipping and handling.)

Refreshing Philosophy

I just read Elisabeth Sheldon's refreshing piece in the "Offshoots" department. ("Help," February.) How good to hear from a world-class gardener that I needn't consult a color wheel nor be fanatical about soil for bulbs. Certainly she is right when she says, "Gardening is supposed to be fun." *American Horticulturist* is adding to the fun by printing personal and wide-ranging observations like Ms. Sheldon's. In addition to the articles on plants, we need philosophers and humorists to enrich our gardening lives.

Lucy Fuchs
Ambler, Pennsylvania

Corrections

Due to an editing error, two reblooming irises were incorrectly described in "Irises for Autumn" in April. 'I Bless' is a creamy white intermediate iris produced by Lloyd Zurbrigg in 1985. It is an offspring of 'Baby Blessed', a yellow fragrant dwarf that won the American Iris Society's Cook-Douglas Award in 1989.

The entire breeding program for the yellow African violet, developed by Nolan Blansit ("Pursuing the Yellow Violet," February), has been sold to Lyndon Lyon Greenhouses, Inc., 14 Mutchler Street, Dolgeville, NY 13329. This company has all of Blansit's records and stock and will continue Blansit's breeding work. A color catalog supplement that includes five varieties available this year is \$2, refundable with the first order.

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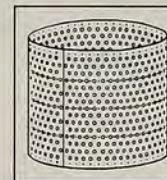
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résumés and cover letters of individuals seeking job changes and employers seeking candidates. All responsibility for checking references and determining the appropriateness of both position and candidate rests with the individuals. AHS's participation in this activity is only to serve as a connecting point for members of the Society. Inquiries and informational materials should be sent to HORTICULTURAL EMPLOYMENT—AMERICAN HORTICULTURAL SOCIETY, Dept. 693, 7931 East Boulevard Dr., Alexandria, VA 22308-1300.

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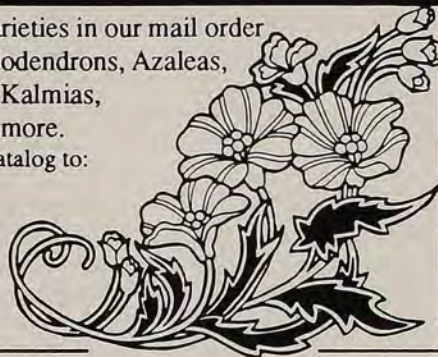
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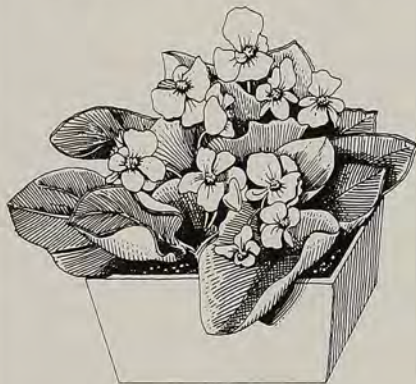
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A. rubrum A. ROO-brum
Ailanthus ay-LAN-thus
Aquilegia canadensis ah-kwi-LEE-juh
 kan-ah-DEN-siss
Armeria ar-MEER-ee-uh
Aster divaricatus ASS-ter
 dih-vair-ih-KAY-tus
A. novae-angliae A. NO-vee-ANG-lih-ee
A. novi-belgii A. NO-vih-BEL-jee-eye
Betula nigra BET-yew-luh NY-gruh
Ceanothus impressus see-ah-NO-thus
 im-PRES-us
Commelina kom-eh-LEE-nuh
Coreopsis verticillata koh-ree-OP-siss
 ver-tih-sih-LAY-tuh
Cornus florida KOR-nus FLOR-ih-duh
C. nuttallii C. nut-AL-ee-eye
Crambe cordifolia KRAM-bee
 kor-dih-FOE-lee-uh
Crataegus phaenopyrum krah-TEE-gus
 fee-no-PIE-rum
Darnera peltata DAR-mer-uh pel-TAY-tuh
Dicentra formosa die-SEN-truh
 for-MOH-suh
Dodecatheon doh-deh-KATH-ee-on
Echinacea purpurea ek-ih-NAY-see-uh
 per-PER-ee-uh
Erythronium revolutum
 air-ih-THROW-nee-um reh-voh-LOO-tum
Erythrosperma air-ih-throw-SPUR-muh
Euonymus fortunei yew-ON-ih-mus
 for-TOON-ee-eye
Franklinia alatamaha frank-LIN-ee-uh
 ah-la-ta-MAH-hah
Fremontodendron californicum
 free-mon-toh-DEN-dron
 kal-ih-FORN-ih-kum
Fritillaria biflora frit-ih-LAIR-ee-uh
 by-FLOR-uh
Gypsophila jip-SOF-ih-luh
 × *Heucherella alba* hyew-ker-EL-uh AL-buh
Ilex verticillata EYE-leks ver-tih-sih-LAY-tuh
Juniperus communis joo-NIP-er-iss
 kom-YEW-niss
Kalmia latifolia KAL-mee-uh
 lat-ih-FOE-lee-uh
Lewisia rediviva loo-ISS-ee-uh
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Liquidambar styraciflua lik-wid-AM-ber
 sty-rass-ih-FLEW-uh
Liriodendron tulipifera
 leer-ee-oh-DEN-dron too-lih-PIH-fer-uh
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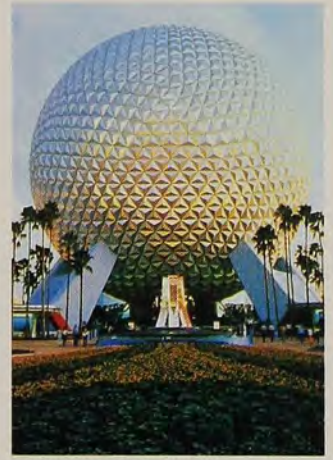
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P. quassioides P. kwahs-ee-OY-deez
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 ahk-sih-den-TAL-iss
P. orientalis P. oh-ree-en-TAL-iss
P. racemosa var. *wrightii*
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R. viscosum R. viss-KOH-sum
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T. carneoloratum T. kar-nee-oh-kul-ler-AY-tum
T. cognatum T. kog-NAY-tum
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T. valens T. VAL-enz
Taxus baccata TAK-sus bak-AY-tuh
Tradescantia virginiana trad-es-KAN-tee-uh
 vir-jin-ee-AN-uh
Trillium grandiflorum TRIL-ee-um
 gran-dih-FLOR-um
T. grandifolium T. gran-dih-FOE-lee-um
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AMERICAN HORTICULTURAL SOCIETY 1993 ANNUAL MEETING ▲ OCTOBER 8 TO 11

DISNEY'S VILLAGE RESORT LAKE BUENA VISTA, FLORIDA

Our Annual Meeting is AHS's event of the year, when we honor our Annual Award winners, undisputed leaders in horticulture from across the country. Chosen for high achievement in plant breeding and development, landscape design, horticultural therapy, communications, plant conservation, and new technologies, this year's winners will present a series of lectures during our 48th Annual Meeting at Disney's Village Resort.

Our 1993 Program, designed especially for AHS members, also includes two special horticultural tours at the WALT DISNEY WORLD® Resort:

▲ EPCOT® Center will be our living classroom during the "Gardens of the World" Program. Horticulturists will highlight specific plants and gardening techniques and explore the importance of landscape themes during this 3½-hour walking field trip.

▲ During "Planting Ideas: The Art and Science of Gardening at the WALT DISNEY WORLD Resort," we'll explore the 120-acre WALT DISNEY WORLD Nursery and Tree Farm for an up-close look at the extensive horticultural operations at MAGIC KINGDOM® Park.

We expect a great deal of interest in this year's Annual Meeting. If you're planning to attend, please fill out the coupon at right and mail it as soon as possible.

Yes! I'm interested in attending the 1993 Annual Meeting at Disney's Village Resort.

I'm interested in information about the AHS Young People's Program at the Annual Meeting.

Name: _____

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MAIL TO: 1993 AHS Annual Meeting, Dept. M, 7931 East Boulevard Drive, Alexandria, VA 22308-1300.



STUDY TOURS

TRAVEL/STUDY TRIPS FOR THE AHS GARDENER

JULY 14-26, 1993

GARDENS OF THE MEDITERRANEAN

A voyage of exploration on board the small ship *Stella Maris* from Nice, France, to Venice, Italy. Ports of call will include Portofino, Elba, Sorrento, Messina, Katakolon, Corfu, and the Termiti Islands. Each day will bring different gardens in different settings, from the Château de la Garoupe on Cap d'Antibes, creation of Lady Aberconway, to the medieval Palazzina dei Mulini on Elba; from the cascading flowers on the terraces of Ravello to the quiet meadows of Olympia. During hotel stays in Nice and Venice we'll take an excursion to the Island of Torcello, one of Venice's Lagoon Islands, where the quiet gardens of Locanda Cipriani attracted Ernest Hemingway. Leading this program will be AHS Board Member Sarah S. Boasberg of Washington, D.C. Joining her as guest horticulturalist will be David Wilson, popular panelist on the BBC program "Gardener's Corner."

AUGUST 1-19, 1993

GARDENS OF SCANDINAVIA

A unique itinerary into the heart of Scandinavia that will include a three-day side trip to St. Petersburg, formerly Leningrad of the U.S.S.R. Trains and overnight ferries will help us reach Finland, Sweden, Norway, the Norwegian fjords, and the conclusion of our trip in Copenhagen, Denmark. Our scheduled stops include private gardens and many great botanical gardens, such as the Bergianska Botanical Gardens in Stockholm and the University Botanical Gardens in Helsinki. We will also see the spectacular gardens created by Peter the Great at his Summer Palace in Petrodvorets, just outside St. Petersburg. AHS Board Member Beverly White Dunn of Birmingham, Alabama, will lead the tour.

SEPTEMBER 22-OCTOBER 2, 1993

GARDENS AND FALL COLORS ALONG THE MISSISSIPPI

A steamboat voyage on board the magnificent *Mississippi Queen* up the Mississippi River from St. Louis, Missouri, to Minneapolis, Minnesota. The program includes a two-night stay in St. Louis, a seven-night voyage on board the *Mississippi Queen*, and a one-night stay in Minneapolis. We'll view the fall foliage color at its peak along the Mississippi and visit the homes, gardens, and clubs of AHS members and friends, including the shade and perennial gardens of Mike and Ann Case in St. Louis and the unique Bickelhaupt Arboretum in Clinton, Iowa. Former AHS President Everitt L. Miller and his wife Cass will lead the program.

Leonard Haertter Travel Company, 7922 Borhomme Avenue, St. Louis, MO 63105,
(800) 942-6666, (314) 721-6200 (in Missouri)

Participants in the "Gardens of Scandinavia" trip will visit the Bergianska Botanical Garden's Victoria House in Stockholm.

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