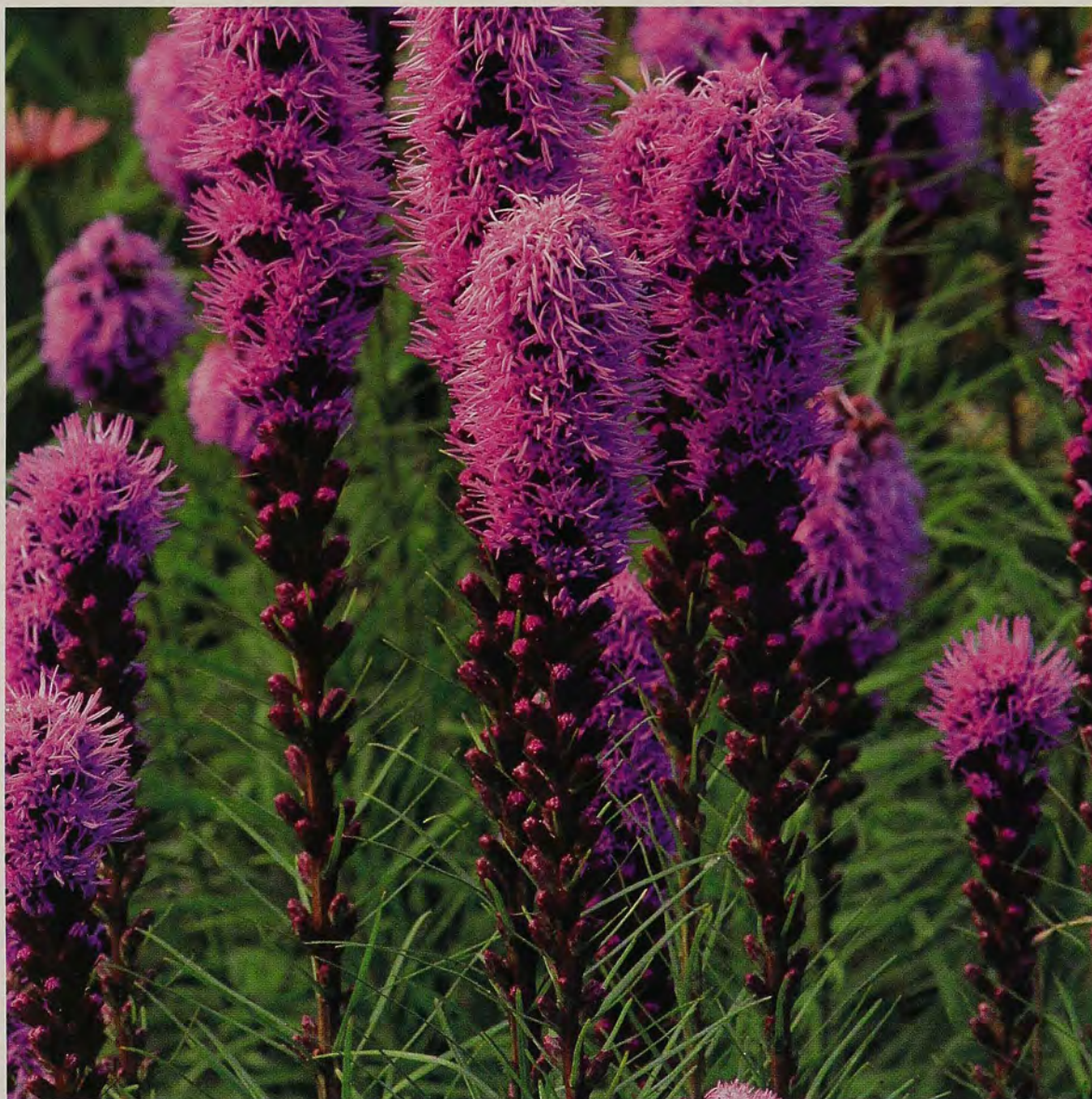


REVELING IN ROSES: *Tough in Texas, Modern in Maryland*

THE AMERICAN GARDENER

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May/June 1997 \$3.95



CELEBRATING OUR DIAMOND ANNIVERSARY

75 Great Plants for American Gardens

ASIA-U.S. RELATIONS How Our Plant Families Were Reunited

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HAPPY 75TH ANNIVERSARY, AHS!



75 Great Plants for American Gardens 6
The very best? For everywhere? We wouldn't dare. But AHS members and leaders agree that these are eye stopping and low care. Plus members' own stories.

On the cover: Our native blazing stars or gayfeathers (Liatris spp.) have become favorites both for informal meadow gardens and for making a strong vertical statement in a more formal border. Representing the genus on our list of "75 Great Plants for American Gardens" is Liatris spicata. Photo by Christi Carter.

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7931 East Boulevard Drive
Alexandria, VA 22308-1300
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commentary

Once you've grown a plant in your garden you become biased about its possibilities. Did it meet your expectations for performance, color, fragrance, resistance to insects and diseases, and other attributes? You'll remove some plants and expand your use of others. Or enthusiasm will fade, then be rekindled by a trip, conversation, book, or catalog.

I have spent my career studying cultivars—"cultivated varieties" propagated by cuttings or bred as controlled crosses to produce clones with predictable characteristics. Today we are seeing more promotion of naturally occurring species and, especially among vegetables, open-pollinated varieties. Those who champion these plants observe that they may contain unique genetic material that could be bred into future crops to meet new environmental challenges. In a natural setting, the planting of native ornamental species allows natural selection to weed out seedlings less likely to survive. On the other hand, open-pollinated varieties not isolated from one another cross-pollinate. In a group of their seedlings, it is impossible to anticipate which will mature with the delicious flavor or bigger flowers of the parents.

Preservation of our open-pollinated lines should of course be part of our strategy for maintaining genetic diversity. Yet we should also continue to seek and promote varieties propagated asexually or through controlled crosses to offer predictable performance under certain conditions—early maturity for growers in the North, heat tolerance for growers in the South. After all, few gardeners can test 900 varieties of okra in their own back yards in order to find the best.

In this issue, we present for the first time Great Plants for American Gardens, naming 75 suggested by members and AHS leaders as having special value in American gardens. Forty are native to North America, recognizing the merits of plants with origins on our own continent. Some have drawbacks, such as being on the edge of being invasive, lacking cold tolerance, or being particular about soil. For some we suggest cultivars that perform better over a wider geographical area than the species. Nevertheless, choosing the best plant for a particular space will always be a judgment call for the individual gardener.

We anticipate responses to the list: "Why not all natives?" with Judy Glattstein's piece on the relationship of North American and Asian plants; "why no rhododendrons or roses?" (there are too many to choose just one!) with articles on those well-loved plants.

We hope you'll have fun with this year's list of "75 for the 75th." Help us add to our list of Great Plants for American Gardens by sending us the names of your favorites for possible inclusion in future lists.



H. Marc Cathey

H. Marc Cathey, AHS President



members' forum

SATISFIED CUSTOMER

I have been an AHS member for only a little more than a year, but the magazine is one of the best benefits of membership.

I am relatively new to gardening and find the articles well written and most helpful. They are not so technical that even a novice like me can't understand the content. The format of the magazine is colorful, logical, and easy to follow. In this day of "maxi-advertising" in a "mini-text" format, the minimal advertising in *The American Gardener* is truly a joy! By keeping most of the advertising toward the back, you have made it easier to try to find a product or service that interests the reader. Bravo!

The January/February issue had two articles that I found particularly arresting. "Ellen's Lot," unfortunately, is an accurate description of most "landscaping" in today's housing developments, and it was refreshing to read of one solution to the boring vistas so often seen in these neighborhoods! I also appreciated the article about the "building envelope." It always distresses me to see builders level the trees on a piece of ground in order to place a house, and this approach would seem to be the answer.

Thanks again for providing such a wonderful resource for all of us gardeners and "wannabes." *Jacqueline Lunderberg
Gahanna, Ohio*

EARLY "ENVELOPER"

The concept of the building envelope is not new. It was one-third of a century ago that my wife and I bought a wooded lot in a new development in the hamlet of Gang Mills. The woods consisted of 100-year-old white pine, white and black oak, shagbark hickory, and an understory of hop hornbeam, flowering dogwood, pagoda dogwood, hawthorn, and witch hazel. We marked off an envelope and saved all but one large white oak that was just too close to the front of the house. After our home was built, our only lawn areas were small plots in front of and in

back of the house. All the rest was retained and developed as woods. Over the years I have added to the native flowers, ferns, shrubs, and trees while maintaining that "woody" feeling.

But articles like this need to be written at least every 10 years.

*William A. Plummer
Painted Post, New York*

ANOTHER CAMERA TIP

In your November/December "Gardeners' Information Service," Walter Salmon wanted a recommendation for an inexpensive camera to take close-up pictures of flowers.

I have been taking close-up pictures for some time and have had good results with magnifier lenses. These lenses screw onto the standard lenses of ordinary single-lens reflex (SLR) cameras. They usually come in a set of three, with powers of one, two, and four. The sets cost around \$50 and can be purchased at most photo stores. *Lee Ellis
River Falls, Wisconsin*

Send letters to: Editor, *The American Gardener*, 7931 East Boulevard Drive, Alexandria, VA 22308-1300, or e-mail to editorAHS@aol.com.

Corrections

The editing process introduced an error into "Questions of Collection" by Sara Stein in the November/December issue. Seed germination expert Norman Deno lives in State College, Pennsylvania.

The correct address for the American Conifer Society is P.O. Box 360, Keswick, VA 22947-0360; phone and fax is (804) 984-3660. Dues are now \$25 for individuals, \$30 for institutions, \$32 for members outside the United States, \$100 for corporations, and \$500 for life memberships.

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Aster novae-angliae (New England aster, eastern and central U.S., Zone 4-9)—Superior to other asters in its restraint in the border, it is also less susceptible to powdery mildew and tolerates wet soil. While it tends to drop its lower leaves and appear wilted on overcast days, some cultivars are less likely to have this habit. The yellow disk flowers are surrounded by rays that vary in the species from purple to pink or red. Cultivars include 'Alma Potechke' (electric salmon pink, early bloom), 'Harrington's Pink' (later bloom), 'Hella Lacy' (rich lavender, prolific bloom), and 'Purple Dome' (deep purple, compact plant).

Aster tataricus (Tartarian aster, Asia and Europe, Zone 3-7)—Four to six feet tall with sturdy stems, it has a stately presence in the garden. The two-foot-long leaves resemble tobacco, and monarch butterflies love the late season purple-blue flowers. It spreads by rhizomes, however, and can be invasive.



JERRY PAVIA

Baptisia australis (blue false indigo, eastern U.S., Zone 3-9)—This legume has blue-green cloverlike leaves and bears long racemes of indigo blue pealike flowers followed by interesting dark seed pods. It can be used as a hedge or for erosion control. May need staking. Drought tolerant and long-lived.

Boltonia asteroides (boltonia, eastern and central U.S., Zone 3-9)—In fall this asterlike native forms an exuberant clump of small white ray flowers up to seven feet tall, which may need staking in shade. Tolerates wet or dry soil. Easier to find than the species is the compact cultivar 'Snowbank'. For color variety look for 'Pink Beauty'.

Ceratostigma plumbaginoides (leadwort or plumbago, China, Zone 5-9)—Useful for edging, as a ground cover, and for underplanting spring bulbs. The leaves of this spreader become tinged with red in fall, when the deep blue flowers appear. May need mulching in cold areas, cutting back in the South. Needs well-drained soil and lots of organic matter.

Chrysogonum virginianum (green-and-gold, eastern U.S., Zone 4-9)—A woodland plant that makes an ideal ground cover in light shade. Dark green hairy foliage and bright yellow, five-petaled flowers that bloom from spring to late summer. Named selections and a



HAL HORWITZ; PHOTOMATS

botanical variety, *C. virginianum* var. *australe*, are available.

Coreopsis verticillata (threadleaf coreopsis, southeast U.S., Zone 4-9)—Fine foliage makes an excellent foil to coarser-leaved perennials; the yellow flowers rebloom if cut back. Drought tolerant and useful in naturalized areas. 'Moonbeam' is pale yellow; 'Golden Showers' and 'Zagreb' are brighter yellow.

Crocasmia 'Lucifer' (crocasmia or montbretia, South Africa, Zone 6-8)—This member of the iris family has similar sword-shaped leaves and produces intense flame red flowers on wiry stems from mid- to late summer. Attractive to hummingbirds, it needs some shade in the South and can spread vigorously in mild climates.

Echinacea purpurea (purple coneflower, central and eastern U.S., Zone 3-9)—The growing popularity of native plants and naturalized meadows has brought this prairie native a great deal of attention. Drought tolerant and attractive to butterflies, it is the source of extracts said to prevent or shorten the duration of colds and flu. The prickly central cones provide winter interest. It is susceptible to leaf spot and attracts Japanese beetles.

Helleborus orientalis (Lenten rose, Turkey and Bulgaria, Zone 3-9)—The common name reveals the early spring bloom time of this shade-lover. There may be several naturally occurring varieties; the nodding flowers vary from light green to cream, maroon to pink, often spotted inside. The dark green evergreen leaves can scorch in winter without snow cover. Plants hybridize easily and will self-seed.

Heuchera micrantha (alumroot, northwest U.S., Zone 6-8)—The species, which has gray-marked leaves, is the parent of the extremely popular cultivar 'Palace Purple'. Seed-produced plants that do not perform as expected have diminished its reputation. Many new cultivars, which offer interesting coloration, shade tolerance, and wider growing ranges, are coming on the market.

Hyacinthoides hispanica (formerly *Endymion hispanicus*, Spanish bluebell, Iberian peninsula, Zone 5-8)—Will natu-

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Rosa rugosa 'Blanc Double de Coubert'

The best of the rugosa roses, 'Blanc Double de Coubert' is beautiful, prolific, exquisite, fragrant, and yet somehow still untamed, almost wild. Hybridized in 1892 in France, it retains the disease resistance of undomesticated roses and is extremely tolerant of heat and drought. It looms over us in peak season, growing to six feet in my USDA Zone 5 Chicago suburb, providing shade, fragrance, and beauty unmatched by my puny overhybridized and sadly unfragrant newer shrub roses. While they may be suffering from black spot, aphids, and heat stress, this rugosa is producing enchantingly perfumed and immaculate white double blossoms, then red-orange hips. After the first and most prolific



ic flowering in June, it continues to produce giant blooms well into September. It's unrelenting in its determination to please the senses.

'Blanc Double de Coubert' even tolerates shade, and would make a great hedge, foundation planting, or a magnificent specimen in the middle of a lawn. A flaw? You can't throw sulfur-based chemicals at it, or it will reward you by turning yellow and losing its leaves. It has its own defenses against fungal diseases such as black spot and powdery mildew; a heaping helping of bone meal in early spring and some good mulch is all my wonderful rugosa needs to get by.

—MARINA KREFFT, Darien, Illinois

ralize quickly in an open deciduous woodland and, blooming in May and June, is striking under rhododendrons and azaleas. The species has up to 15 flowers per stem.



JERRY PAVIA

Liatris spicata (spike gayfeather, central and eastern U.S., Zone 3–8)—The purple-pink flower spikes, which open from



CHRISTI CARTER

the top down and look a bit like a bottlebrush, provide vertical interest in a garden. Native to meadows, the plant requires good drainage in winter but will tolerate summer drought.

Lobelia cardinalis (cardinal flower, central and eastern U.S., Zone 3–9)—The bright red flowers are loved by hummingbirds. The plant needs shade and damp soil and may self-sow if planted where it grows naturally, alongside a stream or pond.

Penstemon digitalis 'Husker Red' (beard-tongue, eastern U.S., Zone 4–9)—There are many wonderful penstemon species native to our West and useful for gardeners there. The eastern species adapts better to rich, moist soil and humidity. This cultivar has burgundy foliage; the tubular white flowers appear in late spring.

Perovskia atriplicifolia (Russian sage, western Pakistan, Zone 5–9)—This subshrub adds an airy touch of silver gray to a border and is especially striking in the late afternoon sun. It bears tiny lavender-blue flowers in mid- to late summer. Many gardeners enjoy the stems' winter silhouette. It tolerates poor soil and drought, but needs good drainage.

Phlox divaricata (blue phlox or wild sweet William, east and north central U.S., Zone 4–9)—A woodland native, this semi-evergreen creeper produces clusters of one-inch blue flowers in spring. It is especially useful for inter-



DAVID CAVAGNARO

Dictamnus albus

For 29 years my husband and I lived on a beautiful three-acre property in southeast Michigan. Level lawn areas were bordered by mature native conifers and deciduous trees, but the early demise of nine majestic elms gave us sun for ornamental trees, flowering shrubs, and perennial beds. Beside a shingled chicken house that was transformed into a shed we established a cottage garden overflowing with vegetables, herbs, ornamental grasses, annuals, and perennials. Native wildflowers and other woodland plants carpeted shaded areas.

Now in the northern Rockies at an altitude of 6,500 feet, we look back with nostalgia on our midwestern garden. We yearn to grow strawberries, to inhale the aroma of trumpet lilies on a humid summer evening, to taste a hint of earth in newly dug potatoes, or relive the freshness of spring on cool October afternoons with the sudden extravaganza of white Japanese anemones.

The quintessential perennial of the entire collection was *Dictamnus albus*, or gas plant. While other perennials were planted in large masses, great

drifts, or double rows, this one proclaimed its stature all by itself.

My husband gave me the plant—then diminutive with possibly three spires—soon after we bought the property. Attached directions said it needed full sun and excellent



drainage, so I positioned it among some peonies and phlox in a bed planted 50 years earlier by the former owners. This bed became the focal point of my own perennial garden, in part because of the gas plant. It forms a deep taproot, which provides moisture during times of drought, and does not like to be transplanted, so the entire garden had to be planted around it.

Dictamnus albus proved sturdy, reliable, and long-lived, impervious to insects and diseases. I fertilized it once a year and rarely watered it. It is handsomely rounded with glossy pinnate foliage and airy white flowers on four-foot spires that never need staking. Its common name comes from the citron-scented vapor exuded from the stem that, if ignited, will produce a brief flame. Its only flaw is a sap that can cause a rash, but that can be avoided by wearing gloves and long sleeves when cutting back the spent blooms.

As the years passed our gas plant doubled and redoubled in size. First surrounded by bearded iris, lupine, and sweet William, it later reigned over Siberian iris, baptisia, columbine, and coral bells. One year I proclaimed my gas plant the largest specimen in Michigan. I photographed it from every angle, in every condition of light, and invited friends to garden parties to celebrate its beauty.

The year we sold the house it sent up a hundred spires. The following year I made the mistake of returning for a visit. The gas plant had been eliminated by the new owners.

—ALISON JONES, Wilson, Wyoming

planting with spring bulbs, but tends to develop mildew in areas with high humidity. (Pictured: 'Chattahoochee'.)

Polygonatum odoratum 'Variegatum' (variegated Solomon's-seal, Europe and Asia, Zone 4–8)—Added to the gracefully arching stems and delicate, pendulous white flowers are white leaf margins. They make its presence striking in the shaded garden, where it's happiest.

Rudbeckia fulgida 'Goldsturm' (orange coneflower cultivar, eastern U.S., Zone 3–9)—This plant has become a staple for meadows and other informal gardens. It often blooms well into fall, and the central cones provide garden interest all winter. It can become invasive, however, and when propagated by seed loses the quality of the asexually propagated cultivar.

Salvia leucantha (Mexican bush sage, Mexico, Zone 9–10)—A tall, gracefully arching subshrub that makes a splash in fall when it produces fuzzy purple-pink and white flowers over a long period.

Sedum 'Autumn Joy' (stonecrop, Asia and Europe, Zone 4–9)—This cultivar is often paired with the 'Goldsturm' coneflower in plantings with ornamental grasses. In fall the domed flowers open purple, turning a rust color that may be retained into winter.

Shrubs

Abelia x grandiflora (glossy abelia, hybrid of species from China, Zone 5–9)—A three- to six-foot shrub valued for glossy, dark semi-evergreen foliage. The blushing white flowers are slightly fragrant and last many weeks in late summer and early fall. Useful for hedges; can be grown as a perennial in Zone 5.

Aesculus parviflora (bottlebrush buckeye, southern U.S., Zone 5–8)—Striking



for its spreading habit and upright panicles of white flowers in late summer. Shade tolerant, growing to 12 feet high and 15 wide. The large palmate leaves may turn yellow in fall.

Aucuba japonica (gold-dust tree, Japan, Zone 6–8)—Southerners plant variegated forms of this evergreen extensively to

Perovskia atriplicifolia

I love many plants, but I've never been so impressed with the qualities of one single plant before I became acquainted with Russian sage. First, it is extremely easy to grow in many different areas. It is drought resistant, but thrives here in rainy Arkansas in a well-drained location. It tolerates our intensely hot summers very well, never drooping or fading in color.



It can't survive freezes all winter, but we've had two freezes here this fall, and it is still showing color and enhancing my garden. It has the longest blooming season of any plant I know.

Second, it is a marvelous foil for many other plants. In early summer, as it begins to flower, it looks great with Siberian iris, white phlox, and coreopsis. Later, it complements Sedum 'Autumn Joy' and Liatris. But my favorite season is fall, when all of the foliage is turning colors and the Russian sage glows silvery blue against brilliant red euonymus.

Russian sage is also strong, tough, disease free, and beautiful, and modestly sends up a few shoots occasionally so one can share it with friends and neighbors. This plant gives a great big "bang for the buck." When I look out at my garden in the mornings and see the sun glowing through that silvery blue haze, it makes my day and I wish I had room to plant more.

— KATHLEEN RAMSEY, Little Rock, Arkansas

brighten shady areas. Females produce bright red, grape-sized berries. This shrub can be severely damaged by stem dieback and is hard to prune back into shape.

Buddleia davidii (butterfly bush, China, Zone 6–9)—This plant, with its honey-scented "summer lilac" flowers, is considered a must for butterfly gardens. It's easy to grow in well-drained soil, and cultivars offer colors from white to bright pink to purple-black, and dwarf forms. There are increasing reports that the plant can reseed and become invasive.

Callicarpa americana (beautyberry, southeast U.S., Zone 7–9)

— Bright purple berries that persist after the light green leaves drop will attract birds. The habit, similar to a forsythia in being loose and slightly pendulous, looks best in a natural setting.

Calycanthus floridus (Carolina allspice or sweet shrub, eastern U.S., Zone 5–8)—



BEN PHILLIPS: PHOTONATS



ANN REILLY: PHOTONATS

First and foremost a fragrant plant, it needs to be sited where its fruity-spicy odor can be appreciated. The unusual reddish brown flowers premiere in May and reappear sporadically through the end of summer. It grows slowly to six or eight feet and possibly a bit wider.

Caryopteris × clandonensis (blue-mist shrub, hybrid of two Asian species, Zone 5–8)—The clusters of true blue, late summer flowers attract butterflies, and the narrow gray-green leaves provide an airy effect in a border or against rocks. It blooms on new growth and, like *Buddleia*, is usually cut to the ground each spring. Foliage, stems, and flowers are lightly scented.

Cephalotaxus harringtonia (Japanese plum yew, Japan, Zone 6–9)—The black-green needles of this conifer are long, slender, and slightly tapered, and the bark

exfoliates in strips. The habit is graceful and refined, usually spreading to five or 10 feet. Like the common yew it somewhat resembles, it produces a reddish, olivelike fruit rather than a cone. It tolerates shade, wet soil, heat, and humidity.

Chamaecyparis obtusa (hinoki false cypress, Japan and Taiwan, Zone 4–8)—The dark green branches of this evergreen droop and are reminiscent of a fern. The species is pyramidal and will grow more than 50 feet tall but sometimes only five feet wide. There are numerous cultivars, chosen primarily for dwarf characteristics.

Clethra alnifolia (summer-sweet, eastern U.S., Zone 5–8)—Late summer panicles



ANITA SABARESE

are fragrant, in white, pink, or rose. Yellow to golden fall foliage; fruit capsules persist through winter. Will grow in sun or shade, wet or dry soil. Cultivars include the compact 'Hummingbird', heavy-flowering 'Paniculata', 'Pink Spire', and 'Rosea'.

Daphne odora (winter daphne, China, Zone 8–9)—Bears very fragrant rosy purple flowers from February through March. Will tolerate shade and is less choosy about soil than most daphnes. The variegated cultivar 'Aureo-Marginata' is hardier than the species and can survive into Zone 7.



MICHAEL S. THOMPSON

Fatsia japonica (Japanese fatsia, Japan, Zone 8–10)—Bold palmate leaves can reach 16 inches across on six- to 10-foot-tall plants. Produces umbels of white flowers

and black fruits one-third inch in diameter. Grows in full shade. Sometimes treated as a house plant.

Hamamelis mollis (Chinese witch hazel,



JOANNE PAVIA

Ilex × meserveae 'Blue Princess'

On Mother's Day 1982, my son, daughter-in-law, and then infant grandson drove in and presented me with this tiny holly plant. "This will grow here," they said. "The people at the garden store said so."

They were so poor at that time in their lives. The \$10 or \$15 they spent was a major gift, probably more than half of what they spent for food each



week. It was hard not to choke up as I thanked them, and I vowed that if determination would keep it alive, it would live. I planted it in a sunny spot, sheltered from our fierce northwest winds, where we all passed it on every trip through the back door.

The children didn't know it but this female holly was going to have to have a male companion if there were ever to be any berries. So in 1985 (or 1986) it was joined at the back door by 'Blue Prince'.

A few years later, the first few berries appeared, and we were all ecstatic. My children knew their gift had lived and grown and fruited; it was worthwhile. I was delighted for the same reasons.

Best of all, it had grown by itself! No water, no sprays, no fertilizers—it just got a little bigger each year. Removing a few crossed-over branches and too-long spires gives us just enough for Christmas decorations, and is all the pruning it needs. The driest summer in decades caused no problems, and neither have winter temperatures between 0 and 10 degrees. This is a wonderful holly for a part of the country "too cold" for the genus.

Today the holly is loaded with berries, and all visitors comment on its beauty. It's still no more than five feet tall, just right for where it is.

Our 'Blue Princess' holly has indeed been a lifetime gift.

—HELEN HIGHTOWER, Ontario, New York

Chorisia speciosa

My love affair with *Chorisia speciosa* started when I was an undergraduate at the University of California, Riverside. There were many beautiful trees on the campus, but I loved the floss-silk tree — with its strange fat trunk covered with stout, sharp spines — the best. In



winter it looked forlorn and wicked with its barren, outstretched green branches making the spines look more menacing, and I liked the way the trunk narrowed like a bottle.

The flowers on larger specimens I have since encountered at the Arboretum of Los Angeles County and along the freeways in Pasadena are nothing short of spectacular. They remind me of hibiscus or orchids, and they rival bougainvillea and crape myrtle in their late season colors, which range from light pink to a bright chartreuse. The sight of a 20- to 30-foot crown covered in these blossoms is a welcome relief after a hot, dry, brown California summer.

I've recently planted a spineless grafted cultivar, 'Majestic Beauty'. The bottom two inches have the usual spines, so that the smooth trunk above the graft offers an interesting contrast.

There is also a rare white form that I occasionally encounter.

The floss-silk tree is not tidy, dropping spines, leaves, flowers, and its fat, drooping seed pods. But it blooms young, has striking lateral branching, and is drought tolerant and pest free. In its native South America, the silky seed filaments are used for stuffing pillows. And because it reminds me of my college years, it holds a special place in my heart.

—ANN HOPKINSON, *La Crescenta, California*

central China, Zone 5–8)—The most fragrant witch hazel, its March-blooming flowers are yellow with red-brown calyx cups. Pure yellow leaves in fall. The cultivar 'Pallida' has paler yellow flowers.

Hydrangea quercifolia (oakleaf hydrangea, southern U.S., Zone 5–9)—Lobed leaves can turn red, orange, and purple in fall. The white flowers turn pink as they age and persist on the plant. The exfoliating bark provides additional winter interest. Likes some shade.

Ilex verticillata (winterberry, eastern U.S., Zone 4–9)—Bright red berries can persist into January. A twiggy shrub that tends to sucker and form a multistemmed clump. 'Winter Red' is one of the best-known cultivars. Male and female plants are needed to produce berries.

Itea virginica (Virginia sweetspire, eastern U.S., Zone 6–9)—The white, slightly fragrant flowers bloom May to July in racemes up to six inches long. The plant can spread to 10 feet, half that in height. Fall foliage is



J. PAUL MOORE: PHOTONATS

often reddish purple and persistent. Grows naturally along streams but will tolerate drought. 'Henry's Garnet' (pictured) has a neat, compact habit and reliable fall color.

Kalmia latifolia (mountain laurel, eastern U.S., Zone 5–8)—This broad-leaved evergreen is the state flower of Connecticut and Pennsylvania. The species has light pink buds and white flowers, but there are many cultivars with buds or flowers that are deep pink or red and some with banded flowers. Somewhat prone to pests and diseases, and needs good drainage.

Myrtus communis (Greek myrtle, Mediterranean and southwest Europe, Zone 9–11)—An evergreen grown for its fragrant foliage, it is a house plant in most of the U.S. The species will grow to 15 feet, but there are dwarf forms. It can be trained as a bonsai, topiary, or espalier.

Nandina domestica (heavenly bamboo, India to China, Zone 7–9)—Valued for its delicate evergreen foliage and bright red winter berries. There are many cultivars, offering white or yellow berries or more compact shapes. The plant spreads by rhizomes and can be invasive in some situations.

Osmanthus × fortunei (Fortune's osman-

thus, hybrid of two Asian species, Zone 7-9)—This fragrant fall bloomer can grow to 15 feet or more but takes well to pruning. A broad-leaved evergreen that is naturally dense and oval to round in shape.

Pieris japonica (pieris or andromeda, Japan, Zone 5-8)—A broad-leaved evergreen in the heath family, it produces racemes of fragrant white flowers in April or May. New growth is bronze. Needs acid soil, and some shade in the South. Susceptible to lace bug.



SAXON HOLT

Rhapsiolepis indica (Indian hawthorn, southern China, Zone 9)—Leathery evergreen leaves, small white or pink flowers. A popular tree in the South, with many cultivars being developed.

Spiraea × bumalda (Bumald spirea, hybrid of two Asian species, Zone 5-8)—There are many forms of this hybrid and of its cultivars. ‘Goldflame’ has pink flowers and yellow to bronze new growth; ‘Lime-mound’ is hardier and has lime green leaves that turn orange-red in fall.

Viburnum × burkwoodii (Burkwood viburnum, hybrid of two Asian species, Zone 6-8)—Produces extremely fragrant, white snowball flowers that are pink in bud. Tolerates pollution, heat, and cold. Leaves are leathery, and red fruits can be persistent. Good cultivars include ‘Mohawk’ and ‘Conoy’, which is less fragrant but evergreen to Zone 7.

Trees

Acer rubrum (red maple, north central and eastern U.S., Zone 3-9)—This native of low, wet areas is valued for its orange to red fall colors. This coloration isn’t as predictable in the species as in such cultivars as ‘October Glory’ and ‘Red Sunset’.

Amelanchier arborea (serviceberry or shadblow, eastern North America, Zone 4-9)—The delicate white flowers of early spring are replaced by small berries that are delicious if you can beat the birds to them. Fall color can vary from yellow to salmon to deep red. A member of the rose family that usually grows only 15 to 25 feet tall, it can be disfigured by rust, blight, or mildew. Some cultivars, such as ‘Autumn Sunset’, are less susceptible. ‘Autumn Brilliance’ and ‘Ballerina’ are cultivars of *A. × grandiflora*, a hybrid of this species and *A. laevis*, the Allegheny serviceberry.

Betula nigra (river birch, eastern and north central U.S., Zone 4-9)—Valued for its exfoliating bark, which can vary from gray-brown to reddish brown, it is usually grown to have multiple stems. Grows quickly to 40 feet or more. Although not as prone to borers as the European white birch, it can develop leaf spot. The ‘Heritage’ cultivar is considered superior for its disease resistance, vigor, big glossy leaves, and light brown to cream bark.

Cercidiphyllum japonicum (katsura tree, Japan and China, Zone 4-8)—Similar to redbud in the shape of its leaves and their early purple color. In fall they turn yellow to salmon; for winter interest the tree has slightly shaggy bark. Grows to an average of 50 feet tall.



AL BUSSEWITZ; PHOTO/NATS

Chionanthus retusus (Chinese fringe tree, Asia, Zone 5-9)—A large multi-stemmed shrub or small tree that produces dense spangles of white flowers in spring,



JERRY PAVIA

followed by blue fruits that look like little plums. The bark peels as the tree matures.

Cornus florida (dogwood, eastern U.S., Zone 5-9)—Recently this tree has received more attention for its problems with the fungal disease anthracnose than for its qualities—horizontal branching, white floral bracts that appear before the leaves, red berries in fall. Most experts feel that well-tended trees in a landscape are unlikely to become diseased.

Cornus kousa (kousa dogwood, Japan and Korea, Zone 5-8)—White bracts ap-



JERRY PAVIA

pear two or three weeks after those of *C. florida* and persist for more than a month, and the edible pinkish fruits look like large raspberries. Exfoliating bark can provide winter interest. Resistant to anthracnose.

Eriobotrya japonica (loquat, China and Japan, Zone 8-10)—This rose family member is valued in the South for its shiny dark evergreen leaves. It produces fragrant white flowers and, in the lower South, small edible pear-shaped fruits.

Halesia diptera (two-winged silverbell, southeast U.S., Zone 6-9)—This native of our South will do well farther north, possibly even to Zone 5. It produces pendulous, bell-shaped white flowers in mid-spring and two-winged seed pods that persist into winter. It grows vigorously and can reach 30 feet. *H. diptera* var. *magniflora* produces even larger flowers.

Koelreuteria bipinnata (bougainvillea golden rain tree, China, Zone 7-10)—Less cold hardy but more heat tolerant than the better known panicked golden rain tree (*K. paniculata*), it has more delicate leaves, similar to those of Kentucky coffee tree. The early fall flowers are followed by rosy pink seed capsules, and fall foliage is yellow. Both species self-sow readily in many parts of the country.

Lagerstroemia indica (crape myrtle, China, Zone 7-9)—While the common crape myrtle dies to the ground in winter north of Zone 7, northern gardeners often grow it as a perennial for its late season bloom. Unfortunately, they miss its other attributes of handsome bark and fall leaf color. Cultivars are generally superior to the species. Those produced by the late Donald Egolf of the U.S. National Arboretum offer many flower colors, mildew resistance, smaller stature, and in some cases greater cold tolerance. All are named for Native American tribes.

Magnolia grandiflora (southern or bull bay magnolia, southeast U.S., Zone 7-9)—There are more than 100 cultivars of this ubiquitous southern evergreen. Loved for its thick, lustrous leaves, perfumed white flowers, and conelike pods that produce red seeds, it will eventually need more room than the average suburban lot can provide.

Magnolia virginiana (sweet bay, eastern

For a list of mail-order sources of these plants, send a self-addressed, stamped envelope to American Horticultural Society, “Sources 75,” 7931 East Boulevard Drive, Alexandria, VA 22308-1300.

Desmanthus illinoensis

I first became acquainted with this amazing legume in the fall of 1987, walking on the flood wall of the Ohio River in Cincinnati. Its seed pods were like nothing I had seen before—each plant had about 20 of the inch-long curved pods, resembling a wood rose, that I later learned were great in dried arrangements. There were hundreds of the plants growing between



the wall's granite blocks.

I collected some of the seeds, scarified them, and planted them in my garden, where about half of them germinated the next spring. Once I saw the leaves, I was finally able to identify them.

They thrived and grew to almost five feet, twice the size of their parents along the river.

The inch-and-a-half-long white to pale green flower clusters have five petals and five stamens, and bloom from mid-July to mid-August here. Not only will they grow in wet conditions similar to where I found

them, but they tolerate drought and cold down to minus-10 degrees—even minus-40 if they have snow cover. They seem to have no serious disease or insect problems, their one drawback being a tendency to become tall and floppy so that they may require staking in a more formal garden.

Since then I have found them all over this part of Ohio, usually in scattered patches on both high and low ground, but always in full sun. Their natural range is from South Carolina to Florida and west to Texas, north to the Dakotas, Minnesota, Illinois, Ohio, and Kentucky. The seed is commercially available from most nurseries specializing in prairie species, and I also have a supply on hand available for the asking. *Desmanthus illinoensis* also transplants well and can be started indoors under lights in mid-March.

— CHERYL SHELBY, 2720 Oakleaf Avenue, Cincinnati, OH 45212

U.S., Zone 5–9)

—A small tree in the North, it can grow to 60 feet in the South. The two- to four-inch white flowers are lemon-scented; the leaves display a silvery underside in a breeze. Tolerates wet feet. A botanical variety from the South, var. *australis*, is more likely than the species to be evergreen.



EDSEL CAINE: PHOTO/NATS

Metasequoia glyptostroboides (dawn redwood, China, Zone 5–8)—Famous for its discovery after it was presumed extinct, this deciduous conifer has delicate foliage that often turns orange-brown in autumn. Grows rapidly and will easily reach 100 feet with a 25-foot spread.

Nyssa sylvatica (black tupelo or sour gum, east and south central U.S., Zone 3–9)—This is one of our most reliable natives for striking color in fall, when the glossy leaves quickly turn scarlet. Extremely adaptable, it produces blue fruits that are popular with birds. The shape can become very irregular with age.

Ostrya virginiana (ironwood, eastern U.S., Zone 4–9)—Often known as the American hop hornbeam, it bears many similarities to *Carpinus caroliniana* but produces fruits that resemble hops (*Humulus* spp.). Both trees are beech family members. Ironwood rarely grows more than 40 feet tall; catkins provide winter interest.

Oxydendrum arboreum (sourwood, eastern U.S., Zone 4–9)—Many think this is one of our most ornamental trees, native or exotic. A heath relative, it is smothered with drooping panicles of fragrant white flowers in midsummer, and in fall may produce yellow, red, and even purple foliage. It needs acid soil and good drainage.

Pistacia chinensis (Chinese pistachio, China, Zone 6–9)—This is a valuable tree



SAXON HOLT

for southerners who long for fall color—frequently brilliant orange but somewhat variable. Often used in California where a

cultivar, 'Keith Davey', was developed. Awkward shape in youth, but a maximum height of 35 feet and drought tolerance make it a good urban tree candidate.

Quercus alba (white oak, eastern U.S., Zone 5-9)—The state tree of Connecticut, Maryland, Iowa, and Illinois, it's impossible to beat as a shade tree for those who can accommodate its spread of more than 100 feet. Autumn leaves can be burgundy red, and it produces copious acorns for wildlife.

Quercus virginiana (live oak, southeast U.S. into Mexico, Zone 7-10)—This evergreen, the state tree of Georgia, is known for its spreading crown and picturesque association with Spanish moss.

Sophora japonica (Japanese pagoda tree, China and Korea, Zone 4-8)—This locust relative is known primarily for its pendulous white, late summer flowers. It survives pollution and other urban hardships, but its appearance may suffer. Susceptible to mildew and leaf hoppers.

Taxodium distichum (bald cypress, eastern U.S., Zone 4-8)—The state tree of Louisiana, this is one of our country's few deciduous conifers, closely related to the dawn redwood. Known for its buttressed trunk and the "knees" or knobs that its roots will

develop in wet locations, it can live a thousand years or more.

Tsuga canadensis (eastern hemlock, northeast and central U.S., Zone 3-7)—The branches are graceful, and in spring the lacy foliage is two-toned. Slow growth and shade tolerance make it useful in many situations. But it is extremely sensitive to environmental changes, susceptible to many diseases and pests—particularly the woolly adelgid—and a favorite of deer and rabbits.

Ulmus parvifolia (lacebark elm, Asia, Zone 5-8)—Sometimes vase shaped like the American elm, it can become broader. It is admired for its toughness, fine foliage, and the mottled bark from which it gets its common name. Highly variable; there are an increasing number of named selections.

Zelkova serrata (Japanese zelkova, Japan, Zone 5-8)—Another vase-shaped shade tree considered a replacement for the American elm. It also has attractive bark and foliage—sometimes wine red in fall. Popular cultivars include 'Green Vase' and 'Village Green'.

Rhododendron schlippenbachii

We sold our 1820 farmhouse and its 10-plus acres when I realized I had out-gardened my store of energy. In 10 years I had succeeded too well in restoring the nondescript house and property. My friend Myrna, born and bred in Brooklyn, remarked in her broad accent, "Vahginyub, you don't have a gabden, you have a pabk!" What I

didn't have was the time and energy to keep it looking that way. Yet I seem genetically incapable of buying anything new, and we found another run-down house on a small lot that was also run down.

There was no garden, but in one corner was an interesting little tree that I didn't recognize. Caroline DeWilde, the county agent, identified it as *Rhododendron schlippenbachii*



and explained that it was named for Baron Alexander von Schlippenbach, who schlepped it back (sorry!) from one of his plant-hunting expeditions into Korea and Manchuria in the mid-19th century. There it grows wild on hillsides as an understory plant.



When I told Caroline I wanted to transplant this rhododendron, she advised me to plant it in the same direction it was growing; because of its size, its growth pattern would be fixed. Digging it

out took an entire morning. Exhausted, I put the plant in the shade and protected its roots with wet gunnysacks. The next morning I replanted it in the rain, making sure that the buds faced the light and the root ball was at the same depth as before. I enriched the soil with leaf mold and builders' sand to ensure aeration for a good root run.

That was fall. Late the next April, the buds colored rosy pink then opened into pale pink flowers with pale yellow stamens. More and more buds kept opening to more and more flowers. I couldn't get enough of those blossoms! The second act followed later with whorled green leaves, and the third in fall, when those leaves tried on all shades of yellow, orange, and crimson. After they dropped, I picked off the seed pods and surrounded the base with blue muscari bulbs.

—VIRGINIA GROSS, Monroe, New York

MICHAEL S. THOMPSON



Gardens and Fall Colors September 20-27, 1997
Along the Hudson



COURTESY OF CAROLINE BURGESS

THIS TRIP ALONG THE HUDSON RIVER on board the M/V *Nantucket Clipper* features an exceptional collection of private gardens including Far-a-Field, home of former AHS Board member John H. Whitworth Jr., and Stonecrop, home of Garden Conservancy chairman Frank Cabot, along with Lisbourne Grange, home of Mr. and Mrs. William Moss. We will visit private gardens designed by landscape architects Fletcher Steele and Lynden Miller and the home garden of esteemed plantswoman Louise Beebe Wilder. The fall colors along the Palisades and in the Berkshires promise to be in full glory. Leading the program will be AHS President H. Marc Cathey and his wife, Mary, along with guest horticulturist Caroline Burgess, director of Stonecrop.

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KUDZU SURRENDER

by Michelle Howell

When I first moved to Mississippi I thought our lush plant life would turn my sister green with envy. I envisioned my father marveling over our rich clay, comparing it to his own sandy soil. I would point out our towering live oaks, our glossy magnolias, the thousands of azaleas thriving on neglect.

When I'm talking to anyone who hails from north of Georgia, I find ways to slip "extended growing season" into the conversation. I weigh the merits and demerits of southern humidity (it keeps our skin young but our clothes limp). I even expect references to the size of our insects—jumbo—to elicit appreciation.

It's all in vain. Nothing piques a visitor's interest like a mountain of kudzu. You'd think it was the sole survivor in an otherwise barren landscape. Whether my visitors are family or friends, from across the state line or across the ocean, that prolific alien vine steals the spotlight every time.

Pueraria lobata makes a stand in the most unlikely places, silhouetted against the backdrop of a blue delta sky. It stakes its claim in a way that leaves little room for argument. And once rooted it will grow a foot a day, scrambling to the top of a hundred-foot oak or shaping a leafy sarcophagus for an abandoned Chevy. It's a bit like the drape a coroner throws over a homicide victim. You can still tell there's something dead under there.

If my guests make this grisly connection it only adds to the seduction, and distracting them has become a personal challenge. Bringing them home from the airport, I speed past kudzu-infested portions of the landscape, simultaneously unveiling my juiciest gossip.

Once as I brazenly—in fact, untruthfully—disclosed a mutual friend's penchant for stealing limousines, a newly arrived visitor screamed "Stop the car!" What could I do? I pulled over and he jumped out with his camera, snapping pictures as if the kudzu might get up and stalk off. His Nikon whirred with fatigue. Done shooting, he stared reverently at the lumps of vine-choked forest. "It's beautiful," he whispered. "A natural sculpture."

"It's a vicious weed," I snorted.

For a minute I thought I had his attention. "Yeah," he nodded as he climbed back into the car.

"That's the difference between you and me. You have no aesthetic appreciation."

When I suggested that a walk home would give him more time to appreciate Mississippi's natural beauty he hurriedly buckled his seat belt. Even the most artistic souls have their limits.

On the way home I condescended to explain that kudzu was one of those weeds intentionally brought to this country with a mission. A legume native to China and Japan, kudzu was introduced here in 1876 with the idea that its long runners might help reduce soil erosion. In fact it worked all too well, generating roots along its runners like mad.

Let one vine creep near my property and I'm on it like a screaming banshee. In fact, I have begun to suspect that it may be an intelligent life form, since it will head straight for my land, then veer back to my neighbors'. Does it smell the herbicide in the canister on my back? Catch a glint of the sun reflecting off my shovel?

Maybe I'm mellowing with age, but the other day I actually caught myself thinking of ways to use kudzu. As a health food, it could be a panacea. Full of protein and vitamins A and D, its roots are prized in Asia where they're used to make cakes, breads, cookies, and even soft drinks. But Japan's land shortage makes farming it impractical there, so a Japanese company recently bought 160 Alabama acres with the sole intent of growing kudzu as a cash crop. Next week some friends who own a chain of gourmet food stores are coming down from Virginia, where kudzu is still pitifully sparse. I'll cook them up a big pot of *P. lobata*. Imagine—every produce bin across the nation crammed with little bundles of kudzu. I'll have to research its shelf life. I could tie the bundles with kohemp—a fiber made from kudzu's stem.

Not only nutritious, it also has medicinal potential. Studies show an herbal extract from kudzu root dampens the craving for alcohol in hamsters. Traditional Chinese medicine employs this herb to treat alcoholism in humans. Why not a Betty Ford-style treatment center between my house and greenhouse?

From the healing arts to arts and crafts! Think of the potential for topiaries! I could shape chicken wire into animals, stuff them with a growing medium, and let kudzu do the rest. Then I'll sell them to Walt Disney World.

And imagine the beauty of a living kudzu wreath!

The trick will be finding a way to control the plants on my lot before I turn them loose on someone else. In the meantime, I've got an appointment with a local florist who's ordered a hundred dried kudzu-vine wreaths. I wonder if they'd ship well overseas?

Michelle Howell is a free-lance writer who fights kudzu at her home in Vicksburg, Mississippi.



BILL FIRESTONE



mail-order explorer

TRIPPLE BROOK FARM

by David J. Ellis

Many nurseries fit into a niche—they specialize in perennials, or alpines, or native trees and shrubs. Tripple Brook Farm nursery in Southhampton, Massachusetts, appears to defy categorization by listing a diverse assortment of native woodland plants, fruiting plants, bamboos, and ornamental grasses. But Tripple Brook's owner Stephen Breyer says his offerings reflect his "personal enthusiasm for plants that are interesting, attractive, or productive."

Judith Meunier, a librarian at Bradford College in Haverhill, Massachusetts, says Tripple Brook "has plants you can't get other places, including native viburnums, and a very good selection of ground covers."

Michael Bartholomew, a consumer horticulturist with Cornell Cooperative Extension of Albany County, New York, says, "When hardy kiwis were starting to become a famous thing a few years back, Steve had been selling them for years and at much

lower prices." In addition to 30 kiwi selections, other, mostly hardy, fruits Breyer offers include mulberries (*Morus* spp.), groundnuts (*Apios americana*), pawpaws (*Asimina triloba*), pineapple guava (*Feijoa sellowiana*), and pomegranate (*Punica granatum*).

The back of Breyer's catalog is devoted to bamboos—he lists around 40 selections from 10 genera. Breyer believes bamboos are unfairly stereotyped as unredeemably invasive when in fact there are many ways to control individual species—growing them in shade, using sunken containers, and harvesting the edible shoots. Among his offerings are canebrake bamboo (*Arundinaria gigantea*), a native of our Southeast that has survived to minus-19 degrees at the nursery, and the popular black bamboo (*Phyllostachys nigra*), with elegant black canes that Breyer says provide "incredible appeal."

In recent years Breyer's interests have gravitated toward native plants. "I used to think they were kind of bland, but after learning more about them I have found they are anything but. Now I feel that it makes good sense to know what is in my back yard before trying to work with plants from other countries."

Breyer says additions to his catalog this year are "heavily slanted toward natives, perennials, and ground covers," including several new phlox selections (he already

lists 18), bear's-breeches (*Acanthus spinosus*), wild petunia (*Ruellia humilis*), *Gaura lindheimeri*, and black huckleberry (*Gaylussacia baccata*).

Breyer represents the third generation of his family to live and work at Tripple Brook Farm, a 90-acre property in western Massachusetts. "I was looking for ways to make good use of the farm and I've had an interest in plants, and nature in general, going back as long as I can remember," says Breyer. In the early 1970s, he began collecting and propagating plants that grew wild on the farm. "Basically at some point I ended up with an out-of-control plant collection."

In 1983 he issued his first catalog, a mix of perennials, bamboos, and fruiting plants. Slowly but steadily he has added plants to his catalog as his interests diversified. Expanding the nursery "has been more difficult than I ever imagined," says Breyer, in part because he made a decision early on not to use chemical pesticides. Instead of using herbicides to control weeds, he sprays them with boiling water from a modified 40-gallon hot-water heater he keeps on a garden cart. After two years of this treatment, Breyer says, "At this point I have almost no weed problems."

Breyer is fascinated by the idea of using native ground covers to reduce maintenance, particularly weeding and mowing. "Once you can get to the point of learning how to use good ground cover plants I think you can have much more interesting, attractive, and productive landscapes while at the same time having very little maintenance. I have a lot of very useful plants collected, but I'm really only now learning how to put everything together."

It was ground covers that attracted Caroline Summers of Hastings-on-Hudson, New York, to the Tripple Brook catalog. Summers, director of natural resources for the New York City Department of Environmental Protection, says she was looking for native ground covers to replace "massive beds" of pachysandra. In addition to buying wild ginger, foamflower, heuchera, and three-toothed cinquefoil (*Potentilla tridentata*), she was delighted to find wild strawberries (*Fragaria virginiana*) in the catalog. "I didn't think anyone offered those," she says.

Lee Reich, a writer and horticultural consultant, met Breyer while researching sources of plants for his book, *Uncommon Fruits Worthy of Attention*. "He had a lot of the plants I was writing about," says Reich. "It's an interesting place to visit—the quality of his stock is excellent, he has a nice selection, and his prices are good. It's a good nursery. I'd highly recommend it."



The spring where Tripple Brook begins.

David J. Ellis is assistant editor of *The American Gardener*.

COURTESY OF STEPHEN BREYER



gardeners' information service

I purchased a tree advertised as growing more than 10 feet in its first year. The growth last year lived up to its promise; my neighbors were very impressed. The only identification that came with the plant was the fanciful name emerald tree and Paulownia. Can you tell me more?

—R.L., Daytona Beach, Florida

Your tree is probably *Paulownia tomentosa*, most commonly called Chinese empress tree. It is known for its showy purple, fragrant flowers, shaped somewhat like foxglove. *Paulownia* has produced fruit as early as its fourth year—woody, egg-shaped capsules, one to two inches long, that remain on the tree in winter. The six- to 16-inch leaves resemble those of catalpa.

The name *Paulownia* supposedly comes from Grand Duchess Anna Pavlovna, daughter of Russia's Emperor Paul I. In the 1800s, Chinese exporters of porcelain dishes used leaves of the tree as packing material; when seeds found their way into the boxes, this native of mainland China entered the United States. Concentrations of *Paulownia* are found in eastern American port cities, such as Charleston, South Carolina.

It is a prolific seed producer that adapts to many soils and is free of pests and diseases. Like many such undemanding plants, it has become invasive in neglected areas, especially in the mid-Atlantic and Southeast, where it is likely to outcompete native vegetation.

Its large leaves and seed pods make it "messy" in a garden setting. But it also has considerable value as a lumber tree, particularly for the Japanese, who use it to make such things as furniture, boxes, sandals, and harps. A mature tree, which can reach 60 feet, has reportedly sold for as much as \$1,500.

I want to grow artichokes and harvest the fruit for decorative material. Can you give me a source for seeds?

—S.F., Grand Junction, Colorado

Before buying seed, you should be aware of some of the problems involved in growing artichokes. Globe artichokes (*Cynara scolymus*) are not very cold hardy. They may survive if well protected, but will not produce satisfactorily where harsh winters prevail. Seeds will produce quite a few plants of inferior quality, either for eating or to use in dried arrangements. The most satisfactory means of propagating artichoke plants is through suckers, which mature plants produce in abundance. Also, artichokes require a long growing season and do best in California, although they can be grown in the South and Southwest.

If you still want to try, start individual offsets indoors in three-gallon containers. After the last frost, transplant them to a sunny spot outdoors, preferably in a fertile sandy loam and spaced four feet apart. A straw mulch is beneficial.

Artichoke seeds are available from Thompson & Morgan, P.O. Box 1308, Jackson, NJ 08527, (800) 274-7333; W. Atlee Burpee & Co., Warminster, PA 18974, (800) 888-1447; and Shepherd's Garden Seeds (see final question, below).

Can you tell me more about the "tree tomato" that I've seen advertised?

—G.G., via e-mail

The tree tomato or tamarillo (*Cyphomandra crassicaulis*, also known as *C. betacea*) is native to Chile, Ecuador, Bolivia, and the Peruvian Andes. It can grow 10 to 25 feet tall, with heart-shaped leaves and light pink, clustered flowers. The fruit is smaller than most slicing tomatoes, but bigger than a cherry tomato, and is orange-red or light red. It is also more acidic in flavor than the tomatoes we're used to, and the skin is bitter and inedible. People have used tree tomatoes in preserves, salsas, and meat sauces. Some companies are advertising the plants as producing the "best-tasting tomatoes you've ever eaten, at less than one penny a pound." At a price of \$10 a plant, you'd have to get more fruit than this plant has ever been known to produce.



I'd like a copy of the USDA Hardiness Zone map. Where can I get one?

—S.H., Winner, South Dakota

Supplies are low and the U.S. Government Printing Office has not set a date for printing more. While they last, you can obtain one free through the Agricultural Research Service Information Office. Call Norma Moore at (301) 344-2152, or e-mail her at nmoore@asrrarsusda.gov.

The *American Nurseryman* publication catalog lists a two-by-two-foot hardiness zone map poster for North America for \$10.95. Call (800) 621-5727 to order.

I have heard of a salad green called rughetta. What can you tell me about it?

—L.P., via e-mail

You must mean rucetta or Italian wild rustic arugula (*Eruca selvatica*), a close relative of the more domesticated *E. sativa*. Shepherd's Garden Seeds offers this species, which it describes as slower growing than the cultivated arugula, with a deeper and more complex flavor. You can receive a free catalog from Shepherd's by calling (860) 482-3683, or writing to them at 30 Irene Street, Torrington, CT 06790.

—Sara Epp, Editorial Assistant

For answers to your gardening questions, call Gardeners' Information Service at (800) 777-7931 ext. 31 between 11 a.m. and 3 p.m. Eastern Time, or e-mail us anytime at gardenAHS@aol.com.



conservationist's notebook

COMING TO GRIPS WITH GARLIC MUSTARD

by Margery Guest

I'm a birder—we prefer that term to “birdwatcher,” which conjures up too much khaki and nerdiness—and it was on an annual birding excursion to Point Pelee National Park in Leamington, Ontario, that I first became aware of the growing infamy of garlic mustard (*Alliaria petiolata*).

Point Pelee, at the southernmost tip of Canada, is known among birders throughout the world as one of the best migratory hot spots. Here, for about 30 days beginning each May, the prothonotary warbler (*Protonotaria citrea*), the northern parula warbler (*Parula americana*), the summer tanager (*Piranga rubra*), and many other species rarely seen at this latitude can readily be viewed, photographed, and admired as they pass through.

Early one spring morning, sleepy-eyed, on a birding tour with one of the park naturalists, I did a double take when I heard him say they were planning to eradicate garlic mustard from the park. I looked around at the forest floor. Even as I admired this naturalist for his skill in luring black-throated blue warblers toward us with “shhhshhing” bird noises, he was, I decided, crazy. It seemed out of the realm of possibility to rid the park of this proliferating herb.

I stopped looking for warblers and began watching the ground, pondering the problem of garlic mustard and other invasive aliens. Although I visit the park annually for the birds, I also enjoy the wildflowers. How big a problem must these invaders be that they cause otherwise intelligent naturalists to believe they must—let alone could—exterminate them?

A NATURALLY DIVERSE ZONE

Point Pelee is at the northern limit of the Carolinian deciduous forest. Within Canada, the Carolinian forest is now a very small area, crowded with one-fifth of the entire Canadian population. Yet, according to Gary Mouland, senior park warden for Point Pelee, a high percentage of rare plant species found in Canada are limited to the Carolinian zone because so much of Canada's land mass is north of many species' northern limit. Many of these rare plant species grow in the park, and ecologists are concerned they may be crowded out by plants that are not so rare, especially garlic mustard.

Today, Point Pelee is protected from development, but this wasn't always the

case. Its history includes native settlements dating from A.D. 600, an Ojibwa Indian community during the 19th century, commercial fishing and trapping, and farming. As recently as the late 1970s, there were still hundreds of private cottages in the park. Now, as a result of a buy-back program, there are almost none. So, when we talk about Point Pelee, we're talking not about a preserved environment, but rather about a restored one.

INTRODUCING...THE ALIEN

Garlic mustard is a biennial herb that produces rosettes of dark green, kidney-shaped basal leaves the first year. The second year, serrated, heart-shaped leaves unfurl from a one- to three-foot stalk. Small, inconspicuous white flowers with four petals, growing in a cross pattern characteristic of the mustard family (Cruciferae), bloom between April and June. They're followed by erect, capsulelike seed pods known as siliques, which can eject oblong black seeds several feet. One plant produces an average of 350 seeds, which remain viable for up to five years. Garlic mustard is unlike other members of its family in one regard, however; it emits the odor of garlic when bruised, hence its common name.

Garlic mustard's preferred habitat is disturbed woodland, but it tolerates both full sun and full shade and is often found along roadsides and stream banks. While it prefers soils that are moist and neutral to limy, it will colonize a wide range of soil types. In Illinois oak forests, garlic mustard has been seen to dominate ground-level vegetation within 10 years of initial invasion. Such colonization results in a dramatic decline in diversity of native herbaceous plants, especially spring ephemerals such as trout lily (*Erythronium* spp.) and spring beauty (*Claytonia* spp.) that need early spring light to trigger their life cycles.

Native to eastern Europe, garlic mustard probably arrived at Point Pelee sometime during the 19th century. It may have been brought in as seeds on someone's boots—it's still being spread around North America by boots and, more recently, by tires—but Mouland believes it was brought to Point Pelee intentionally for its medicinal and culinary attributes. Both in Europe and in North America, garlic mustard was eaten raw in salads or cooked and used as an accompaniment to meat dishes. Modern foragers relish the garlicky zest the young leaves add to sandwiches. Medicinally, the leaves were boiled and taken internally as a cure for dropsy and coughs, or applied as a compress for sores and even gangrene.



Garlic mustard colonizes disturbed ground in woodlands throughout North America.

JESSIE M. HARRIS

Mouland feels strongly that park managers should do everything they can to keep out invasive non-native species, but he disagrees with Canadian biologist Mary Gartschore, who has referred to Point Pelee as a "scary place ecologically" because of the relatively unchecked growth of garlic mustard. "I'd say it's not bad," says Mouland. But plant communities in North America average 28 percent non-natives, whereas at Point Pelee non-natives constitute 37 percent of the vegetation. And Mouland acknowledges that the rate at which invasive species like garlic mustard reproduce is no longer a "natural" process. As with many invasive exotic plants, it has no natural enemies to help contain its spread. "Before Europeans came here," he says, "species would adapt to much slower climatic and environmental changes. Because we live on the land, not with the land, the way we change habitat, and the rapidness of the changes, species aren't really able to adapt."

ATTEMPTS AT MANAGEMENT

The park has experimented with different methods of removing garlic mustard, mostly hand pulling and weed whacking. But these methods are highly labor intensive. Evaluation of controlled burns is planned this year.

Garlic mustard isn't just confined to Canada, of course. Returning home to Michigan, I took a walk in a small forest near my house and spotted it all over the place. It is plaguing managers of natural areas throughout the Northeast and Midwest from Ontario south to Virginia and west to Missouri and Iowa. It has also been reported growing in Utah and the Pacific Northwest.

According to Ann Rhoads, botanist at Morris Arboretum of the University of Pennsylvania, garlic mustard is "very abundant...and pervasive in moist deciduous forest in the state," although not much is being done about it there. In Pennsylvania, proliferation of garlic mustard and some other invasive non-natives is exacerbated by an exploding deer population. "The deer prefer native vegetation," Rhoads says, "gobbling it up at ground level, leaving garlic mustard and others like it with an even greater competitive edge." This unfortunate synergy has also been observed in Illinois, where the trampling of deer that are browsing native plants creates ideal conditions for colonization by garlic mustard. In Illinois, researchers have tested various control methods, including cutting flowering plants at ground level, controlled burns, and glyphosate herbicides. All resulted in a significant reduction of seedling frequency the following year, but repeated annual treatments were needed to exhaust the seed bank.

In addition to his concerns about the practicality of eradicating garlic mustard, Mouland worries that the public may not have enough information on the complexities of the non-native versus native plants issue, so that publicized eradication efforts may rile people up pointlessly. I observed this firsthand when I overheard a fellow park visitor remark to a companion, "They're actually pulling out daffodils around the old buildings because they're non-native. Can you believe it?"

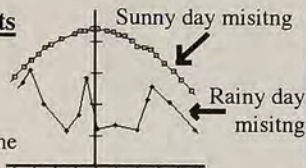
Maybe pulling out daffodils is going a little too far. I didn't ask Gary Mouland whether he'd ever personally removed naturalized daffodils, but, given his philosophy regarding invasives' long-term effects on biodiversity, I doubt it. Populations readjust, he contends. "Nature returns itself to a state of equilibrium." I hope he's right. I would hate to visit Point Pelee 10 years from now and not be able to see spring beauties, Dutchman's-breeches, round-lobed hepatica... even an occasional daffodil.

A free-lance writer and bird enthusiast who lives in Grand Rapids, Michigan, Margery Guest is a frequent contributor to The American Gardener.

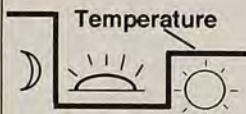
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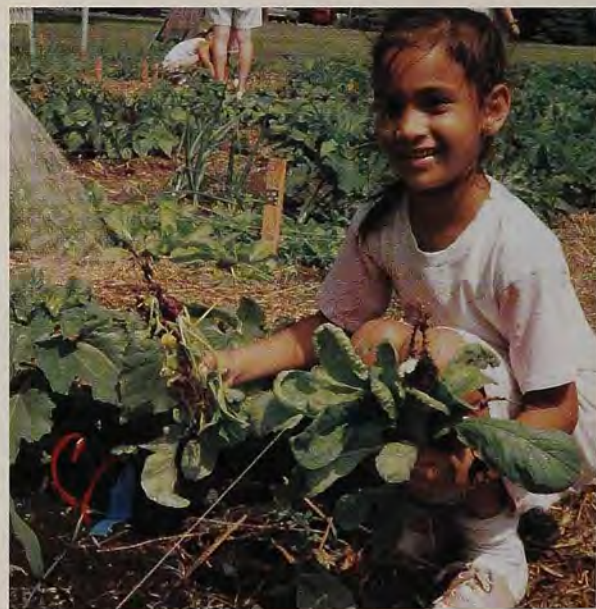
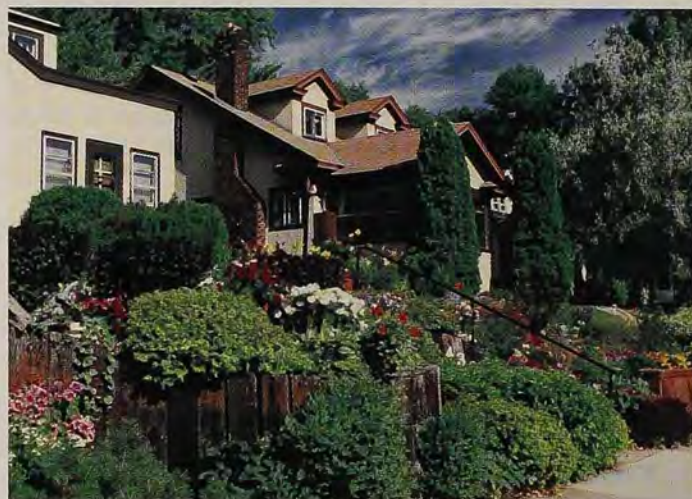
BOOMING BLOOMING

by Susan Davis Price

Minneapolis has been known by many nicknames: “The City of Lakes,” “The Mill City,” “The Minneapple.” With the rapid spread of its Blooming Boulevards program during the last few years, it could well be called “The Garden City.” A volunteer initiative that encourages gardeners to ply their art in front yards, alleys, or other spaces where the public can enjoy it, Blooming Boulevards has grown from a handful of participants in the mid-1980s to more than 400 in 1996. “The program has been very successful,” says Kellie Rose Jones of the city’s Committee on Urban Environment (CUE). “We have new gardens every year, and more and more interest all the time.”

The idea of encouraging flower planting along the city’s boulevards was the brainchild of the late Nathan Siegal, a devoted gardener, civic activist, and member of CUE. On a visit to Vancouver, British Columbia, he observed homeowners planting along the curbs. The Canadian gardens were completely spontaneous, but with a bit of incentive—such as public recognition—he thought CUE could launch a similar effort. “That first year there were five winners,” explains Jones. “But gardening is contagious; people notice how nice their neighbor’s yard looks, and they start. Now you can see whole blocks where people have inspired each other.”

The program is simple. Citizens beautify the public spaces in their yards. Then they or others nominate their gardens to the



“Gardening is contagious; people notice how nice their neighbor’s yard looks, and they start. People have inspired each other.”

Blooming Boulevards Committee. A team of judges gives each garden a rating. The contest is not meant to be elitist, explains Jones, but instead is designed to encourage and inspire.

“E” FOR EFFORT—OR EXCELLENCE

All nominees receive a Certificate of Appreciation. Those with higher marks can earn a Garden of Merit (weed-free and well-maintained) or a First Place (showing evidence of hard work). The ranking of Exceptional Garden is reserved for the very top gardens (one or two percent). “The unique thing about our program,” says Jones, “is that it’s not for the ‘professional-type’ gardener. Though people have clearly spent a lot of time on their

yards, they don’t need to be designers to be selected.” Winners range from retirees like Danuta Mazurek, who spends many hours in the garden, to the children from the troubled neighborhood around Messiah Lutheran Church, who come one morning a week to their plots.

The midwinter award ceremonies give gardeners the chance to share photos and stories, pick up seeds for next year, and be recognized for their efforts. “Everybody gets a round of applause,” explains garden winner and judge Betty Sisson. (Judges are eligible to win the contest; other judges evaluate their gar-

CLOCKWISE FROM TOP LEFT: GREG POTTER; RILL SEAMAN; RILL SEAMAN; IAN OLIVICK

dening.) "It's a casual, neighborly gathering that's lots of fun."

The growth of Blooming Boulevards is especially impressive given that it operates primarily on donated hours. The only city employees are a part-time intern and Jones, who, in her job as a Minneapolis planner, devotes several hours a week to the project. Judges, workshop instructors, people who nominate gardens, and of course gardeners are all volunteers.

Typical of citizens who give untold hours to make the program work is Jack Parker, a retired librarian. Parker first heard about Blooming Boulevards several years back when he received a letter from the committee notifying him that he had won an award. Since then he has become a judge while con-



Opposite, top: Gardeners in the Bryn Mawr neighborhood inspire each other. **Bottom:** Emelie Mahommed in the Kaleidoscope Garden at Messiah Lutheran Church. Betty Sisson, left, and Jack Parker, below, both tend prize-winning gardens.



tinuing to tend a prize-winning yard. He also trains other volunteers to judge gardens and helps teach homeowners to design "visible" gardens.

Recently Parker served on a committee that systematically surveys Minneapolis for gardens to nominate. "That tends to keep nominations balanced around the city. Before, there could be several enthusiastic nominators clustered in a few areas of town." Though his schedule sounds crowded, Parker insists that gardening and working with Blooming Boulevards are "just my entertainment for the summer."

IMPRESSIVE COLLECTIONS

The gardeners may not be pros, but their results are often anything but amateurish. Adventurous Sisson tends an impressive array of perennials, herbs, and wildflowers because she likes "to try anything unusual." She grows hundreds of bulbs, including scilla and chionodoxa, and cultivates numerous alliums and daylilies so she can observe "all the different varieties of one plant." Sisson uses no chemical sprays on her plants and digs ground-up kitchen waste and finished compost into her beds. It's no wonder that neighbors often stop by to laud her efforts.

Mazurek, a retired physician born in Poland, lives next door to a service station in an aging, semicommercial section of south Minneapolis. She has converted all of her once neglected city lot into a garden. From spring to fall the small front yard is lush with an everchanging array of bulbs, alpine plants, dahlias, and sunflowers. Along the sides and back of the yard, Mazurek grows the fruits and vegetables of her homeland—apples, pears, cherries, currants, berries, tomatoes, and beets. "If Polish people don't have borscht at Christmas, we will die," she tells the visitor. With all the food crops, Mazurek finds room for a water garden, roses, and morning glories. "People say I've made heaven of hell!" she says.

Accomplishments like Mazurek's, repeated many times across Minneapolis, have an impact. At its most basic, believes

Blooming Boulevards participants talk of personal satisfaction, increased self-esteem, and renewed community spirit.

Parker, tending a garden is a good way to get to know your neighbors. "When you're out working, people stop by to chat and tell you how nice the flowers look," he says. "It's a great way to socialize."

The success of a single homeowner has a ripple effect as well. "Once the idea of front yard gardens takes hold," explains Parker, "up and down the street you can see flowers. I think good landscapes can be an inducement to others to improve their own yards."

The program's most important rewards are perhaps the intangible ones. Blooming Boulevards participants talk of personal satisfaction, increased self-esteem, and renewed community spirit. The children of Messiah Lutheran are proud of their harvest and find a respite from the worries of urban life. All are helping to make their corner of the world a lovelier place. "People can't always save a neighborhood," says Jones. "But they can garden. It's a wonderful way for an individual to make a contribution."

Susan Davis Price is the author of Minnesota Gardens: An Illustrated History.

Would you like to see more blooming along your own city's boulevards? Kellie Jones of Minneapolis' Committee on Urban Environment says she will be happy to send a packet of information about the program to readers of *The American Gardener*. "The program has been wonderful in bringing people together and creating small pockets of beauty in our neighborhoods," she says. "It would be wonderful to help it get started in other places." Jones can be reached by calling (612) 673-3014.



plants and your health

MAN VERSUS MOSQUITO

by Carolyn Steigman

Is there anything that can spoil a perfect day in the garden faster than mosquitoes? Their buzzing and biting can force even the staunchest nature-lover and plant-tender to turn tail and head for the great indoors.

In the United States, 167 different species of mosquitoes are buzzing around. But we should be thankful: There are more than 2,700 species worldwide. And the nasty bump that itches like crazy doesn't seem so bad when you consider the diseases mosquitoes can spread. Mosquitoes are the vectors of the microbes that cause malaria, yellow fever, and dengue fever—deadly diseases that still plague residents of the tropics and subtropics. In the United States, malaria was common in parts of the Mississippi Valley and the Chesapeake Bay area until after the Civil War, when sprays to kill mosquitoes and their larvae brought the disease under control.

While malaria is now extremely rare in this country, we do have mosquitoes that can transmit three types of encephalitis (LaCrosse encephalitis, St. Louis encephalitis, and California encephalitis). From 1963 to 1993 in my home state of Ohio alone, 757 cases of LaCrosse encephalitis were diagnosed and five people died of the disease. Mosqui-

toes can also transmit encephalitis to horses. In dogs, mosquitoes spread heartworm, a parasitic worm that can kill a pet by invading its heart and pulmonary vessels.

PREVENTION IS THE BEST CURE

For the average homeowner-gardener, the first step in controlling mosquitoes is to eliminate any standing water, a critical element in mosquito life cycles. Eliminate areas of poor drainage and don't over-irrigate. [See "What Noah Didn't Know," March/April.] Keep tight covers on cesspools and septic tanks and keep the bird-bath water fresh. If you have a pond, stock it with mosquito-hungry fish such as green sunfish, bluegills, guppies, or surface-feeding minnows. Mosquito fish (*Gambusia affinis*) are so named because they're champions at eating these insects. Use them only in man-made ponds that aren't connected to natural water bodies, however, as they can outcompete native fish species.

When standing water can't be removed, check it for mosquito larvae each week by dipping a white cup in the water. The brown larvae can be spotted easily against the light background. If you

see any, they can be eliminated with products called Mosquito Dunks or Mosquito Rings, which contain the bacterium *Bacillus thuringiensis* var. *israelensis*.

ALTERNATIVE CONTROLS

Even if you're careful to eliminate all the breeding sites on your own property, your neighbors may not be so conscientious. Sometimes these little blood suckers seem to come out of nowhere. You either need to go after the adult mosquitoes or treat yourself with a repellent so they will leave you alone.

Many communities have stopped widespread chemical spraying to kill mosquitoes, but the search for less toxic alternatives has met with only spotty success. The Ohio State University Extension Service has done considerable study on alternative pesticides. Here are some of their assessments:

The mosquito plant, *Pelargonium × citrosum*, commonly sold as 'Citrosa', was developed by Dutch horticulturist Dirk Van Leeuwen. So far, research has not found it effective—the oil needs to be vaporized by periodically crushing or at least brushing against the leaves, which makes for a tiring night on the patio. Buy it if you like to look at geraniums.

Forget electric and black-light bug zappers. They kill more harmless and beneficial insects than mosquitoes and produce annoying sounds each time they send a bug to meet its maker. They will not win you any friends among your neighbors.

Ultrasound repellents also lack any significant effect on mosquito behavior. Too bad—it sounded like such a nice quiet idea.

Two new options are being developed by Garlic Research Labs of Glendale, California. Garlic Barrier is 100 percent garlic oil, sold in large quantities to those with a lot of land. A 10 percent solution is sprayed on grassy areas. The company says in tests conducted by the Baton Rouge Mosquito Abatement District the product killed 84 percent of mosquito larvae in four hours and 100 percent in 24 hours.

One of their outlets, JFK Enterprises in Cleveland, Ohio, sent me a complimentary bottle. My yard is heavily infested and I was skeptical, but it did seem to reduce the mosquito population noticeably and the garlic smell dissipated after a few minutes. The bad news is that it has to be reapplied every 10 days and after a heavy rain, but it will probably keep your yard clear of vampires, too. A quart sells for about \$15.

Garlic Research Labs have developed a premixed solution under another name, Mosquito Barrier (which will be sold as Victor Mosquito Barrier through Woodstream Corporation of Lititz,

Sources

GARDENER'S SUPPLY, (800) 863-1700. Mosquito Rings.
NEEM AURA NATURALS, (800) 375-6336. Neem Mosquito Repellent.
SUMMIT CHEMICAL COMPANY, (800) 227-8664. Mosquito Dunks.
WOODSTREAM CORPORATION, (717) 626-2125. Victor Mosquito Barrier.



ILLUSTRATION BY RON FLEMINGS

Pennsylvania)—now available through Wal-mart stores. It sells for about \$10 for a 32-ounce hose-attachment dispenser bottle that will cover 4,000 square feet. The manufacturer says one application should last about two weeks to a month.

Since there seems so little on the market for actually killing mosquitoes, I asked Ohio State University Extension about insecticides. They replied that malathion is currently the most effective and relatively safe to humans when mixed correctly at about nine tablespoons per gallon of water and applied with a hose-end sprayer. It's extremely toxic to bees, however, as well as to fish and frogs, and will spot a car's finish if it drifts into the driveway. If you feel a need to bring on this Big Gun—and you don't have a pond—spray in late evening when bees have returned to their hives, and concentrate your efforts on the shade of dense trees and shrubs, where mosquitoes like to hide, rather than all over the lawn. Wear rubber gloves, a long-sleeved shirt, and long pants.

REPELLENTS

For keeping mosquitoes off your body, the most common active ingredient in commercial repellents is N, N-diethyltoluamide, commonly known as DEET. It's effective not only against a large number of mosquito species, but also against ticks, sandflies, and deerflies. But humans absorb this chemical through their skin and even into their blood, resulting in possible allergies, skin reactions, muscle cramps, and neurotoxic effects. DEET should be applied to your clothes rather than your skin, and products containing more than 20 percent DEET should not be used on children. Apply DEET outdoors and avoid inhaling its vapors. Wash your sprayed clothes once you're indoors for the day.

Avon Skin-So-Soft smells too good to repel mosquitoes, but

studies have shown that it does seem to work against some species. Nearly all of its active ingredients are botanical in origin. A new product, Bite Blocker, claims the effectiveness of 20 percent DEET using botanical extracts.

In fact, there are hundreds of plants said to kill or repel mosquitoes. A summary of botanical mosquito repellents in the fall

Take heart—the fight against mosquitoes is age-old. In fact, they predate humans by millions of years.

1996 *Common Sense Pest Control* newsletter says oil of citronella, found in lemon or citronella grass (*Cymbopogon* spp.) as well as the “mosquito plant,” is one of the best and is low in toxicity, but doesn't last very long. Neem, a botanical oil extracted from a tree native to India, *Azadirachta indica* [see “Focus,” March/April], repels mosquitoes when burned in kerosene lamps and when applied as a cream, the article reports, and is also inexpensive, of low toxicity, and long-lasting.

Take heart—the fight against mosquitoes is age-old. In fact, they predate humans by millions of years. Throughout our history, people have been trying this plant and that chemical in hopes that the next one will keep the little buzzers at bay. Maybe a plant from India—or even from our own gardens—will be the next to spell relief.

Free-lance writer Carolyn Steigman lives in Bay Village, Ohio.

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Old as the Hills, Tough as a Boot



Texas is well known for its natural disasters:

drought, heat, tornadoes, blue northers, and hail the size of grapefruits. Given the rigors of the climate, it's no wonder Texans appreciate a survivor. Maybe that's why old roses are gaining such ground in cultivated landscapes. In a place where the frontier ethic is still very much alive, Texans figure anything that can survive a hundred years of bad weather has earned its keep.

Keeping roses in good health in this climate has traditionally meant applying massive amounts of fungicides and pesticides. As concerns about such applications rise, gardeners are faced with putting unconscionable amounts of chemicals into the soil and air or giving up on the world's best-loved flower. Enter the old rose. Over the last 15 years interest in the roses our ancestors cultivated has been gathering momentum. Rose fanciers have hailed these tough survivors of abandonment and neglect as the answer to our need for roses without the chemicals that must accompa-

Texans have good reason to whoop and holler about antique roses.

Old cemeteries, above, are fertile grounds for rose rustlers. The tough rebloomer 'Old Blush', opposite, was the first everblooming China rose introduced to Europe.

ny the planting of the modern varieties. And nowhere has the clamor for old roses been louder than in Texas and the South.

Pam Puryear is one of the founding members of the fabled Texas Rose Rustlers, a group of old-rose devotees whose activities were chronicled in Thomas Christopher's book *In Search of Lost Roses*. Puryear speaks for most old-rose lovers when she says, "I felt like the rose existed to please me, not for me to devote the rest of my life to it." Puryear, of Navasota in central Texas, began wondering about old roses years before she discovered that Texas had a rich heritage of them. "I had joined the Houston Rose Society, but we didn't talk the same language—spray this and spray that. I already knew I didn't want to spray." Although she saw the kinds of roses she wanted in books, she couldn't find a way to buy them. She tried mail-ordering roses from California, but the plants performed dismally in the Texas heat. Puryear began looking for roses on her own and with like-minded friends in forays that would ultimately be known as "rustles."

b y L i n d a T h o r n t o n





A bright scarlet China rose that was never otherwise identified became the namesake of Martha Gonzales, above, who was growing it in her Navasota, Texas, garden. Mattie Breedlove of Washington, Texas, opposite, preserved a plant of "Maggie," which Rose Rustler Bill Welch had named for his wife's grandmother.

"Roses have poor taste," Puryear says. "They like their feet in clay. I have lovely sandy loam. I fertilize the plants one day, and the fertilizer is in Freeport [on the Gulf Coast] the next. All the old parts of town, where the poor folks live, that's where roses do best. They like that godawful black gumbo because it holds nutriment. It doesn't dry out. That's one of the things you think of when you start looking—is where you *wouldn't* be if you were a plant."

Old roses have survived at the edges of fields, in cemeteries, at abandoned home sites, along lonesome stretches of railroad track. Many came as cuttings from the yards of the wealthy, who tended to replace the old plants with modern roses such as the hybrid tea. The progeny of these bushes found homes in the yards of the humble. Nameless, they were still attended with great love and care. Cuttings were passed to relatives and neighbors and down many generations.

Old roses are known variously as heirloom, antique, or heritage roses. Throughout the United States, old roses are found that represent a number of rose classes, including species, teas, Chinas, gallicas, albas, damasks, centifolias, mosses, noisettes, bourbons, and hybrid perpetuals. Generally roses in these older classes were bred not so much for a picture-perfect, show-stopping bloom, like that of the modern hybrid

tea, but for all-around beauty, growth habit, and, above all, fragrance. Liz Druitt, who lives in East Texas and is the author of *The Organic Rose Garden*, says, "An antique is synonymous with a good garden rose—not age, but proper garden performance."

Find 'em Now, Name 'em Later

For the Rose Rustlers, the emphasis has traditionally been less on defining old roses than on finding them. Besides the obvious thrill of exploration and discovery, there has also been a sense of urgency attached to their efforts. Who knows how many of these old roses have disappeared already? The roses are tough, but every year old landscapes are demolished and new ones emerge, and the roses that are displaced may be lost forever.

The Rustlers began their activities in the early 1980s. They included, besides Puryear, such figures as Joe Woodard, a Dallas rosarian who has grown hundreds of old roses; Bill Welch, a Texas A&M University Extension landscape specialist in College Station, Texas; Margaret Sharpe of Houston, a rose judge and an instructor of rose crafts; and Mike Shoup, who today runs one of the foremost old-rose nurseries in the country, the Antique Rose Emporium in Brenham, Texas.

"Several of us had a merging interest," Welch said of the Rose Rustlers' founding.

Identifying Old Roses

When asked "How do you identify an old rose?" many an old-rose devotee will simply say, "Ask Charles Walker." Walker, the founder of the Heritage Rose Foundation, based in Raleigh, North Carolina, has been studying old roses since 1971. When he began his studies, he was convinced that old roses could be identified from old literature. He no longer believes that.

"Now all I can do is compare whatever someone shows me to something that I've seen before," he says.

Walker's fascination with old roses began when he read the rose volume from the

Time-Life *Encyclopedia of Gardening*. "It was the first time I'd seen an article on old roses. And it was also fascinating that you could root them from cuttings. It was amazing to me that these things could be around for several hundred years."

Literature on old roses was scanty when he began his research. Illustrations of the roses described in earlier literature are hard to find.

"When I started, it was pretty grim," says Walker. "There were exactly two nurseries carrying old roses back in the early '70s."

Walker now has a thousand books and articles on old roses and has done much

to unravel some of the confusion over the identity of many of these plants. Even so, he does not believe old rose identification will ever get any easier. Not only is there insufficient evidence to make positive identifications, but roses have a way of complicating the issue further.

"Most roses are hybrids. A lot of people believe they're pure. But they don't breed true to type. Some might even hybridize further in the wild—that aggravates the identification system."

Even in nurseries, roses are mislabeled, either by chance or by misidentification.

"People insist they know, and they can be firm in their

opinions. You have to realize there's an element of doubt in many cases if not most. And I'm sure as old roses become more popular, the errors will become more prevalent."

If you have an old rose you want identified, you can send some photographs of it to Walker, who will give it his best shot. (You can contact him through the Heritage Rose Foundation; see "Organizations" in sidebar.) If he can't place it, he'll tell you. After all, he's been at this long enough to come to terms with the fact that the identity of some roses may always be a mystery.

—L.T.

His Extension work had taken him throughout Texas and the South. "I was looking for colorful, low-maintenance plants and began to visit old home sites and cemeteries. When I found these roses, I began to propagate and try to identify them through research in art and literature."

The rustles took place in spring and fall. Puryear and others would scout out locations in Texas and Louisiana in November—"just after a rain, looking for roses in bloom" in out-of-the-way places. Puryear knew the roses she was searching for would be the remontant (repeat-blooming) roses that do better in Texas than the once-blooming albas, gallicas, and centifolias. On the morning of a rustle, the participants would gather early and set off in a caravan, sometimes covering hundreds of miles before sunset. Evening would find them with numerous cuttings from a variety of locations to swap, and plenty of discussion about the identity of the "found roses."

If a rose was unknown, it would receive a study name. That name might refer to the location where the rose was found or else to the person growing it, as with "Martha Gonzales" (study names are in double quotation marks, while cultivars are in singles), a rose found in a Navasota yard by Puryear. (Welch writes that "Martha Gonzales" may be 'Fabvier', a red China.) Other roses named in this manner include "Pam's Pink," a China found near Navasota and named after Puryear, and "Miss Mary Minor," a rose found in the yard of an elderly African-American woman in Anderson, Texas. The latter was subsequently revealed to be 'Souvenir de la Malmaison', a bourbon rose cultivated in the garden of the Empress Josephine after her death.

Black neighborhoods, incidentally, have yielded some of the most prized specimens.

"African Americans were some of the most significant conservators," Welch says. "They didn't give up on the old roses. They appreciated good quality." Some roses found in African-American yards throughout the South are believed to be descendants of those cultivated on antebellum plantations.

Marauders with Shears

As word of the Rose Rustlers' activities got around, interest in their activities grew. Belle Steadman, a member of a Dallas heritage rose group and a frequent participant in the rustles, recalls going through the small town of Schulenburg in the mid-'80s in a caravan of 20 to 30 cars. "People



"African Americans were some of the most significant conservators," Welch says. "They didn't give up on the old roses."

Antique Rose Sources

THE ANTIQUE ROSE EMPORIUM,

Route 5, Box 143, Brenham, TX 77833, (409) 836-4293. Catalog \$5.

ARENA ROSE COMPANY, 536 West Cambridge Avenue, Phoenix, AZ 85003, (602) 266-2223. Catalog free.

HEIRLOOM OLD GARDEN ROSES, 24062 N.E. Riverside Drive, St. Paul, OR 97137, (503) 538-1576. Catalog \$5.

HERITAGE ROSE GARDENS, Tanglewood Farms, 16831 Mitchell Creek Drive, Fort Bragg, CA 95437, (707) 984-6959. Catalog \$1.50.

HISTORICAL ROSES, 1657 West Jackson Street, Painesville, OH 44077, (216) 357-7270. For catalog, send business SASE.

THE ROSERAIE AT BAYFIELDS, P.O. Box R(A), Waldoboro, ME 04572, (207) 832-6330. Catalog free.

ROSES OF YESTERDAY AND TODAY, 802 Brown's Valley Road, Watsonville, CA 95076, (404) 724-3537. Catalog \$3.

ROYALL RIVER ROSES AT FOREVERGREEN FARM, 70 New Gloucester Road, North Yarmouth, ME 04097, (207) 829-5830. Catalog \$3.

Books

ANTIQUER ROSES FOR THE SOUTH by William C. Welch, Taylor Publishing, Dallas, 1990.

IN SEARCH OF LOST ROSES by Thomas Christopher, Avon Books, New York, 1989.

OLD ROSES by Ethelyn Keays, the Macmillan Company, New York, 1935.

THE ORGANIC ROSE GARDEN by Liz Druitt, Taylor Publishing, Dallas, 1996.

Organizations

HERITAGE ROSE FOUNDATION, c/o Charles Walker, 1512 Gorman Street, Raleigh, NC 27606-2912, (919) 834-2591. \$10/individuals. Benefits of membership include old-rose identification and the quarterly *Heritage Rose Foundation News*.

TEXAS ROSE RUSTLERS, 5020 Fairvent, Pasadena, TX 77505. Members receive the quarterly *Old Texas Rose*.



stared. Asked where the funeral was. Pam and Dr. Welch had checked out the locations beforehand. We went to a huge Victorian house. I don't think the lady dreamed there'd be that many people. We found an 'Archduke Charles'. It was five-and-a-half feet tall and I don't think it had ever been pruned. We'd never seen one before. A quite elderly lady started down the steps, and we hid our pruning shears. The lady was quite gracious, but I think she was in shock, seeing how many of us there were and wondering if we all meant to take cuttings."

Roses that had not been seen for decades emerged from the Rustlers' activities in the little towns of central and south Texas. Shoup found the vigorous 'Mermaid', a yellow hybrid bracteata, growing in a field and gave it a study name until it was identified. (This is the same rose that Steadman only half-jokingly recommends pruning with a chain saw to keep it under control.) Welch found a China hybrid that he named "Maggie" after his wife's grandmother. "Maggie" has still not been identified. A member of the Dallas Area Historical Rose Society one night spotted a flash of magenta in his headlights at a construction site. He later took cuttings from the plant, identified by Dallas group member Emile Galutin as 'Hippolyte', a gallica.

Fame has not necessarily been a good thing for the rose rustles. Puryear laments the fact there are now just too many people brandishing pruning shears to rustle roses

without harming the bushes. Still, the group gathers—the membership is up to 200 now—every fall to rustle roses, swap cuttings, and exchange stories of these roses' ability to endure the worst of conditions.

Dependable in Disasters

Just how hardy are the old roses? Ask Steadman, who grew about 125 different varieties around her Dallas home before she sold it in August. A series of natural disasters has confirmed her faith in antiques. It started on April 19, 1994, with a rampaging thunderstorm that unleashed fist-sized hail on Steadman's neighborhood for 40 minutes, punching huge holes in the densely planted bushes. A few days later, the canes began to split. Steadman took up the loppers and began pruning. She kept at it until May 2, when she had a heart attack. She spent the summer recovering, watching as the canes split still more under the Dallas sun, and thinking the plants would die. But by fall, with still more pruning, the roses had begun to grow back. Then in March, two successive nights of 8-degree temperatures froze many of the roses to the ground. Steadman got out the pruning shears again. The roses were on their way back to recovery when a drought that had begun the previous fall carried over into the spring and summer, followed by temperatures that soared over 105 degrees for much of June. Despite steady watering, the foliage began to scorch. The rose bushes



endured nevertheless, and by the time the rains finally came in July, Steadman hadn't lost a single bush. "I used to kill all my modern roses. But since I began growing antiques in the early '80s, I haven't lost but three or four bushes," she says.

Welch, who grows many of the lovely specimens he's written about and photographed for his book *Antique Roses for the South*, likewise found that his old roses held up well without irrigation during the most punishing part of the summer. Welch has written in his book about old roses' natural resistance to fungal and bacterial infections. Any disease-prone roses sold a hundred years ago did not survive, he says. The ones we find today have obviously persisted without sprays, so they are bound to be tougher plants. Furthermore, says Welch, roses of today are usually budded onto an understock—a hardy if not very distinctive variety—rather than grown from cuttings. Hard winters can kill the rose to the ground, and emerging shoots will be those of the understock. Robert Basye, a retired Texas A&M mathematician who began breeding old roses for disease resistance and a better plant, says that modern roses are inbred and therefore tend to have less resistance to disease than many of the older plants.

Old roses are not maintenance free. Many varieties get blackspot and powdery mildew, and all may be attacked by a variety of pests. David Byrne, a researcher at

Texas A&M who has been studying 150 roses, old and new, for their resistance to blackspot, has found that 'Old Blush', one of Texas' and the South's favored Chinas, is highly susceptible to defoliation from blackspot. Nevertheless, 'Old Blush' is "durn common" in the South, as Puryear puts it, and in some places has grown for decades with little or no care.

As southern gardeners have more opportunity to plant old roses, they will inevitably find many that do not succumb to the standard rose diseases—roses that flourish in spite of adverse weather and neglect, and that may, as the word spreads about their beauty, fragrance, and vigor, supplant the modern rose.

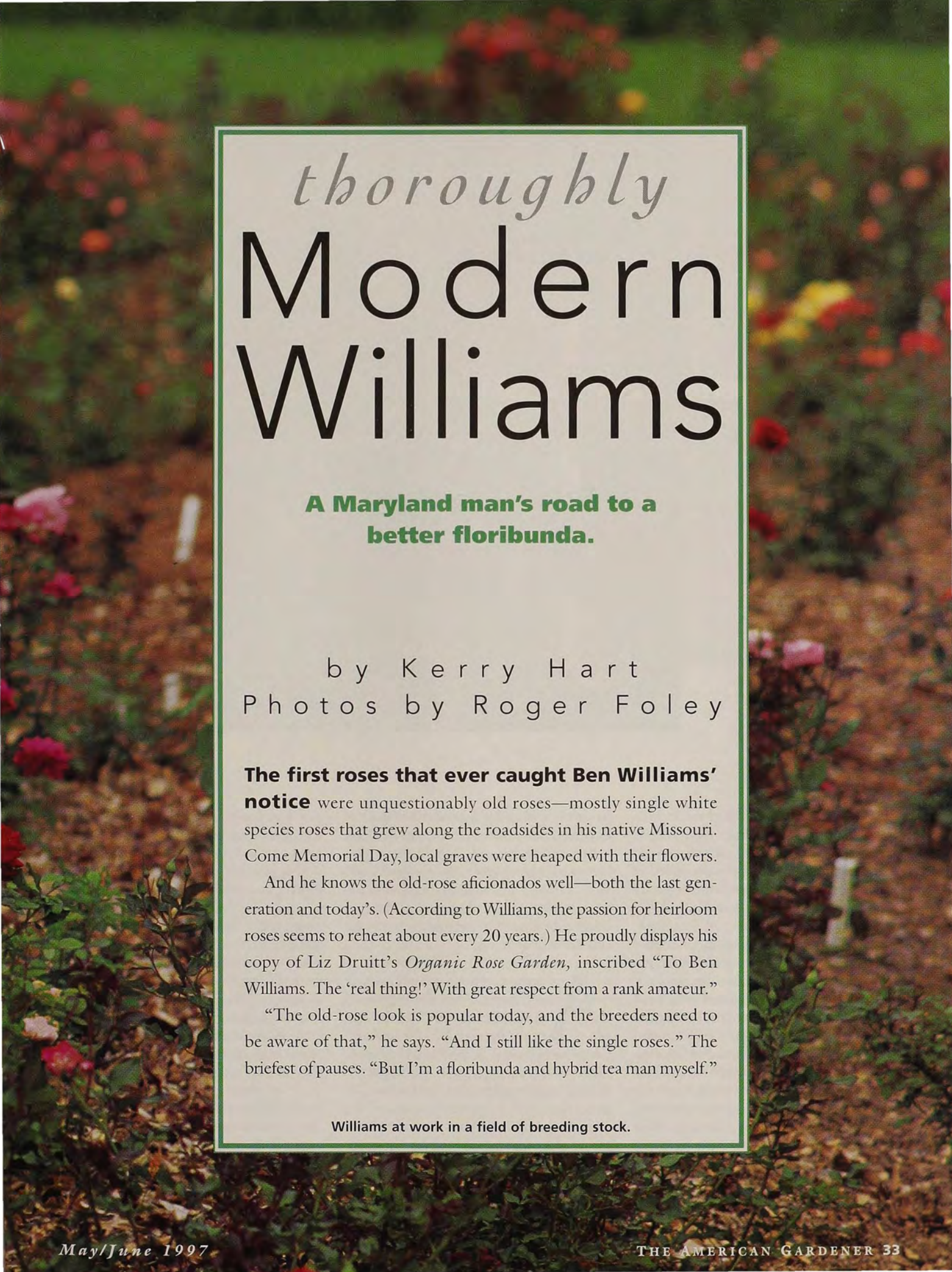
"I think it's a huge relief to a lot of gardeners to get roses they're not afraid they're going to kill," Druitt says. "With passive organics such as composting and alternative sprays, it's a lot less work than it used to be with petrochemicals. You don't have to be as precise if you take good care of the soil and make good selections for your area."

Indeed, organic practices, applied to the cultivation of these beautiful, fragrant, and hardy old plants, may be the best way for rose lovers—not only in the South but in the rest of the country as well—to continue to enjoy their favorite flower.

Linda Thornton is a free-lance writer living in Tucumcari, New Mexico.

A Dallas rose rustler's headlights revealed 'Hippolyte', opposite, growing on a construction site. Above left, rustlers swap cuttings. From top, 'Archduke Charles', 'Souvenir de la Malmaison', and 'Mermaid'.





thoroughly
**Modern
Williams**

**A Maryland man's road to a
better floribunda.**

by Kerry Hart
Photos by Roger Foley

The first roses that ever caught Ben Williams' notice were unquestionably old roses—mostly single white species roses that grew along the roadsides in his native Missouri. Come Memorial Day, local graves were heaped with their flowers.

And he knows the old-rose aficionados well—both the last generation and today's. (According to Williams, the passion for heirloom roses seems to reheat about every 20 years.) He proudly displays his copy of Liz Druitt's *Organic Rose Garden*, inscribed "To Ben Williams. The 'real thing!' With great respect from a rank amateur."

"The old-rose look is popular today, and the breeders need to be aware of that," he says. "And I still like the single roses." The briefest of pauses. "But I'm a floribunda and hybrid tea man myself."

Williams at work in a field of breeding stock.

Right and top center:
Williams tends seedlings
at his home. Far right,
top: Pollinated roses
protected with glassine
bags. Bottom center:
'Spinning Wheel', one of
his newer introductions.
Far right, bottom:
Collecting pollen
for hybridization.



The “real thing,” in Williams’ case, is an independent rose hybridizer. Not an amateur, but a breeder not in the employ of one of the big marketers. He’s succeeded at what many avid gardeners only dream of: He turned what began as a hobby in 1953 into a career by 1960.

In 1975 he grabbed what is considered by many to be the brass ring of rose breeding, winning the coveted All-America Rose Selections (AARS) competition with ‘Rose Parade’, a disease-resistant, winter-hardy pink floribunda praised for its vigor, compact growth, resistance to mildew, and fragrance. That same year the Conard-Pyle Company of West Grove, Pennsylvania, introduced his ‘Red Fountain’, a dark red climber with thick, leathery, dark green foliage. The clustered double flowers have an old-fashioned fragrance.

While he loves all roses, he admires modern roses most and is always hoping

to give the world a new and better one. Recently, he’s contributed to the versatile group called ground cover roses with a cherry red semidouble, ‘Red Carpet’, and Hine’s Nurseries Freedom Series—‘Scarlet Spreader’, ‘Dawn Creeper’, and ‘Ivory Carpet’—all said to be disease resistant and winter hardy.

A specialty of his company—J.B. Williams and Associates—is “celebrity roses.” He’s sold roses to be named for such notables as National Symphony Orchestra Music Director Mstislav Rostropovich (‘Slava’) and Brooklyn Botanic Garden Director Emeritus Elizabeth Scholtz. Hotel Hershey in Hershey, Pennsylvania, had him put its name on an orange-red grandiflora, and Tupperware bought a carmine-pink hybrid tea with a silver reverse. “I’m not sure what Tupperware is doing with theirs,

but it was an especially nice one, fragrant with the flowers in perfect quarters, and disease resistant with waxy leaves.”

Tupperware? Roses may symbolize romance, but the rose business is meat-and-potatoes, involving lots of paperwork and plain hard work. Thirty years into this second profession, Silver Spring, Maryland-based Williams is still constantly on the road, visiting flower shows and his test plots in season, exhibiting at trade shows and otherwise keeping in touch with others in the trade during the off-season. “There are so many facets to the rose trade,” he says, “it’s hard to keep up with all of them.”

Certainly, there are other independent breeders. In 1996, retired engineer Frank Strickland of San Bernardino, California, won AARS recognition with his ‘St. Patrick’. Frank Benardella of New Jersey, a specialist in miniature roses such as ‘Black Jade’, ‘Figurine’, and ‘Kristin’, had



an earlier career in international sales.

But not many of the independents have had Williams' staying power. "It's hard to face the disappointments—and the competition," he says. Launching a new rose in the marketplace is like sending a child off into the world. The apple-of-the-breeder's-eye, even if commercially developed and heavily marketed, may meet with indifference from gardeners. Luck and timing also come into play. Few new roses even qualify for the AARS trials. An independent breeder may produce a nice new yellow rose the same year a major company plans to introduce its own yellow variety. The independent may decide to try again when there's less direct competition.

Williams says it takes six to 10 years to develop a new rose. (Industry insiders say at least eight years, at a cost of \$15,000 or more.) Before he considered himself exper-

rienced as a hybridizer, he estimates that he made thousands of crosses, retrieved and planted 200,000 seeds, and grew to maturity 4,000 seedlings that resulted in a few hundred plants each year.

Some of the classic roses have been used for breeding so often that their dominant and recessive traits, strengths and foibles are well-known. Nevertheless, a breeder trying to attain the color of a lavender rose and the disease resistance of a second could conceivably wind up with bland foliage from the former and muddy orange petals from the latter. A recessive trait from a grandfather could give the offspring a floppy neck. The bloom could be nicely shaped but fade from crimson to blue with age, or toast in the sun. The plant could look like a winner for several seasons, then fall flat on longevity.

"Some breeders go through their seedlings and discard all the weaker ones," Williams says, "but you don't

know for a long time what strengths the smaller ones might have to offer." When the new seedling is grafted, a princely rose can look more like Rumpelstiltskin, and an ugly duckling can turn into a swan. (Old roses are usually grown on their own roots, but modern cultivars are grafted onto vigorous rootstock in order to reach salable size faster.)

Once a breeder is satisfied that he may have a rose that's novel, beautiful, and tough, he must pique the interest of a commercial nursery—and the odds are against him, says Tom Carruth, research director for Weeks Roses in Upland, California. "It's hard to find an independent hybridizer with a good eye," Carruth says. "And it's going to depend on what you need in your own product line at the time. Right now, for instance, I definitely don't need another pink floribunda." Although Carruth says the odds are

Many Moore Years

Perhaps there's something about rose breeding that also breeds a long healthy life. Ralph Moore, considered the father of the miniature rose in America, was feted by friends and family in Visalia, California, in January on his 90th birthday. Moore bred his first rose while he was in high school and founded his Sequoia Nursery in 1937 with \$800. He has since registered 380 roses with the American Rose Society and is one of only three Americans to receive the Dean Hole Award from the Royal Rose Society of England. In addition to roses of many shapes and sizes, he's experimented with other plants, including blueberries and lilacs.



Moore and some of his miniatures.

COURTESY OF SEQUOIA NURSERY

Moore told friends he has three projects going that will take at least a decade to complete, including breeding work with the recalcitrant *Rosa persica*, a native of the deserts of Iran and central Asia with yellow flowers and a crimson base. Friends praised Moore not only for his unfettered vision—he once created a gray rose—but also for his generosity and kindness. “People who are spiritually strong,” says Visalia Mayor Mary Louise Vivier, “are giving people.”

For a copy of the Moore catalog, write Sequoia Nursery, 2519 East Noble, Visalia, CA 93292.

—K.H.

against the independent breeder, the odds of AARS recognition are high for anyone: After 21 years as a hybridizer, Carruth got his first win this year with ‘Scentimental’, a strongly scented, burgundy-and-cream-striped floribunda.

Williams sends budwood from his new varieties to several American nurseries for testing and evaluation. If they pass muster, the grower will rebud enough to meet national demand—usually in the tens of thousands. Several international test gardens also study his new varieties in their rose trial competitions. “The industry works differently in different countries,” says Williams, who often travels overseas to judge flower shows and visit nurseries. “In some, it might be enough for a grower to have only a few hundred plants of a variety.”

The mere act of crossing two roses to produce a hybrid is a skill quickly learned, Williams indicates. “Bees do it all the time.” Getting a hybrid that will make the world

sit up and take notice takes creativity, curiosity, patience, diligent record keeping, and sound marketing strategies. At these things, Ben Williams is uniquely qualified.

Williams grew up in La Plata, Missouri, a small town in the north central part of the state. He was hardly isolated, with the Santa Fe and Wabash railroads bringing people of all walks of life to the hotel his family ran. “I would get up in the morning and help prepare food for the kitchen,” he recalls. “Then I would work after school at anything I could get—shining shoes, soda jerk, selling cosmetics, cutting wallpaper.”

He also drove the town doctor around. “The doctor was the sort of man that people in town could come to when they were in trouble financially.” They knew the MD didn’t really expect to see his money again, but one day, he called in his chips. “We had

a trash ditch in town that he wanted to make into a golf course, and everyone was expected to help out.” Williams, already something of a horticultural pro from tending his family’s kitchen garden, became groundskeeper.

Later, Williams would hone his promotional skills as a booking agent for entertainment acts traveling the Carolinas, Georgia, and Alabama. He became fascinated by the motion picture business and had his eye on the West Coast until he met Lillian Roberts. Assistant to a Holly Sugar broker in Des Moines, she convinced her new husband to seek a more practical future. On a promise from a hometown chum, Williams headed to the nation’s capital in search of a job that would support a family. Entering civil service as a messenger, by the time the Unit-

Opposite, Williams’ AARS winning ‘Rose Parade’.



The "New Kids"

All-America Rose Selections is calling them "the dream team," representatives of "the next generation of rose hybridizers." Keith Zary, vice president of research for Jackson &



Keith Zary, top. Tom Carruth, bottom.

Perkins in Somis, California, won AARS honors for 1997 for two hybrid teas. 'Artistry' is coral-orange and 'Timeless' is deep rose pink. Tom Carruth, director of research for Weeks Roses in Upland, California, was recognized for a floribunda, 'Scentimental', which is burgundy and cream striped with a spicy fragrance.

It was the first AARS win for both, but neither is new to hybridizing. Zary has been breeding plants for 16 years and has been with Jackson & Perkins for 12, and Carruth has been in the industry since 1975. Those in the know say we'll be hearing a lot more of them. —K.H.

ed States was engaged in World War II he was supervising delivery of all General Accounting Office documents at the Post Office. In the meantime he was taking night school classes through the Department of Agriculture in subjects as diverse as accounting and plant pathology. At home, garden magazines kept fanning the horticultural flame.

When his son Ben Jr. was only eight months old Williams got the call and was gone three years, serving in the Army's 3rd Infantry Division. "From December 1944 to May 1945 I slept in foxholes, bombed-out buildings, old trucks. I never saw a bed." It wasn't all horror, though, and he credits a chance encounter with a hybridizer in the gardens of Bad Homburg, Germany, for planting the seeds of his future enthusiasm.

Returning to Washington, Williams worked as an auditor and investigator for the U.S. Comptroller General until 1960, and drew assignments to the Howard Hughes hearings, the McCarthy hearings, the renovation of the Capitol Building and the White House (he spent two years working out of a trailer at 1600 Pennsylvania Avenue), and hearings on suspected price controls in the meat-packing industry.

In the meantime he had bought a home, which he landscaped primarily with azaleas, boxwood, privet, and lilacs. Then a magazine ad persuaded him to order six rose plants from a Texas nursery. "I expected big bushes, so when I got these four- or five-inch sticks, I thought I'd been robbed." By the second year, "I had five healthy rose plants and some pretty nice blooms" and an acquaintance talked him into entering a rose show at the Smithsonian.

"When I walked into that room, carrying my roses in a bucket of water, all the other flowers looked like jewels in a display case. One man had 'Peace' roses that seemed as big as my head." His friend took him to a workroom where everyone was arranging their roses in vases and tagging them. Williams can still replay the look he had on his face. "Tag them? I didn't even know they had names." Fortunately, his friend was adept at telling 'Nocturne' from 'Charlotte Armstrong'. Williams now advises novice gardeners: "If you grow something, show it. When we came back at the end of the day, every one of our entries had a ribbon."

His second piece of advice is to get to know other gardeners, who are invariably

generous and will share their knowledge and insight. Through the Potomac Rose Society, Williams met Danish rose breeder Neils Hansen, who encouraged him to try his own hand at hybridizing.

Williams not only joined local plant and rose societies—a few years later he was judging the rose show he first entered—but became active in the Washington Flower Show held annually in the DC Armory and served as show manager from 1953 to 1960.

Through the shows he met the owners of Washington's now defunct Woodward & Lothrop department stores. "Woodies" already sold garden supplies and wanted to expand to plant sales. Williams, still working full-time for the government, became a weekend garden consultant, selecting plants, supervising displays, and even designing newspaper ads. "We would have displays in every department, so that someone buying cosmetics might see a vase of roses, and they could order them on the spot."

For 12 years Williams served as executive director of the Maryland Nursery Association, developing a manual for certifying professional horticulturists. He's lectured and taught at the universities of Maryland and Delaware while continuing to educate himself, graduating from the U.S. Patent Office Academy so that he can patent his own plants. He's also worked as a landscape designer, creating public rose gardens at Colonial Williamsburg, the American Horticultural Society's River Farm headquarters, and Ladew Topiary Garden in Monkton, Maryland. In 1960, the American Rose Society named him the nation's Outstanding Consulting Rosarian.

Last year, Williams gave the American Rose Society a pink hybrid tea rose to serve as the organization's "patron" rose. Everyone donating funds proposed a name, and the winner—"Miss All-American Dream"—was registered for marketing by W. Atlee Burpee.

One magazine article about rose hybridizers called Williams "a dapper, fast-talking, gregarious promoter." While he does go on about roses, he'd just as soon promote the classics—"Peace", "Mr. Lincoln", "Queen Elizabeth"—as he would his own roses, and like many plantsmen, he's often motivated by passion rather than profit. For instance, there's the story about the four rose gardens designed and installed for a rest stop along I-95 near

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Rugged Little Rhodies

It was worth some bold experimenting to find these diminutive, cold-hardy shrubs.



by Gerald Taaffe

There's a whole world of small rhododendrons, many of them alpinists, waiting to be explored by gardeners in cold climates. In the past 12 years here in Ottawa, Ontario, I've found more than a dozen species that bring a special delicate beauty to the garden, despite summer highs in the 90s and bitterly cold USDA Zone 4 winters, some with less than our usually reliable snow cover. There have been disappointments, particularly with the dwarf hybrids, but also many triumphs, such as the unexpected hardiness of species such as *Rhododendron buerarii*, with perhaps the most beautifully felted leaves in the genus, and aromatic, daphnelike *R. trichostomum*.

These plants are soothing to the soul. While recovering from a minor injury last fall, I'd do the prescribed exercises from a prone position near the dwarf rhododendrons, which were planted in a raised peat bed. This gave me close-up views of tiny, deciduous *R. camtschaticum*, whose foliage was turning rich rusts and golds, and *R. keiskei* 'Yaku Fairy', which was filling the space

between rocks with a ground-hugging mass of lance-shaped, olive green leaves. Combined with the crisp autumn air and glimpses of migrating wildfowl against a sky of saturated blue, the rhododendrons turned irksome necessity into pleasure.

The *R. trichostomum* had come to me cloaked in mystery. It was mislabeled as *R. lapponicum* and the following year produced dense clusters of small, fragrant, blush pink flowers unlike those of any rhododendron I'd yet seen. In the five years since, it has become a shapely, upright shrub of about 15 inches with slender leaves. A member of the seldom grown Pogonanthum subsection, it's closely related to the ultrahardy *R. fragrans*, a rare, pink-flowered beauty from the mountains of Central Asia. I've hungered for this plant since seeing it during a slide presentation and talk by the great Czech plant explorer Josef Halda.

The prostrate habit of lavender-flowered *Rhododendron fastigiatum* makes it a useful ground cover.



Through his mail-order house in the Czech Republic, Halda is distributing seeds of deep yellow- and orange-flowered variants of the wonderful *R. aureum*, which he lists as a botanical variety, *R. aureum* var. *mongolicum*. I grow the pale yellow-flowered version, *R. aureum* var. *aureum*, which has relatively large flower heads on slow-growing, four- to 10-inch-tall plants. They look like miniatures of the familiar eastern United States native *R. catawbiense*, to which they're closely affiliated. *R. aureum* is native to frigid, windswept areas from northern Japan through Mongolia and adjacent areas of Siberia.

Foliage—and Flowers, Too

In addition to delicate miniature blooms, many dwarf rhododendrons reward the grower year-round with beautiful foliage. The first three-inch-wide clusters of blush pink flowers on my *R. recurvoides* were a sort of extra gift from this queen of dwarf foliage plants. In four years this native of rocky scree on high mountain slopes in northern Myanmar (formerly Burma) has become a dense, six-inch-tall dome of thick, narrow, recurved leaves of a very dark green. The top of each leaf is deeply wrinkled, or rugose, and the underside features the tawny covering of fine, feltlike hairs that



Hardy dwarf rhododendrons come in a variety of shapes and flower colors, from 'Koichiro Wada', top, a pale pink-flowered cultivar of *R. degronianum* subsp. *yakushmanum*, to yellow-flowered *R. keiskei* 'Yaku Fairy', above, which rarely grows taller than six inches.

botanists call indumentum. Some references list this as only hardy to Zone 8, but the Rhododendron Species Foundation, a nonprofit organization founded by members of the American Rhododendron Society, rates it to minus-10 degrees.

R. bureavii and a naturally occurring hybrid between it and the closely related *R. elegantulum* have even more beautifully sculptured foliage, with a thick indumentum that's pale on new growth and rusty red on the undersides of the velvety smooth, light green mature leaves. Both plants, like others in the Taliensia subsection, eventually bear pretty, pinkish white flower heads and are merely very slow growing rather than true dwarves. Although it has been known to reach 25 feet in its native habitat in the mountains of southwest China, in a garden setting *R. bureavii* will top out at somewhere between four and 10 feet tall. It has proven reliably hardy in Zone 6a.

As long as they are young, plants of the amazingly hardy *R. yakushmanum* (Zone 4b)—which taxonomists have now saddled with the even more unwieldy *R. degronianum* subsp. *yakushmanum*—also bring sculptured light green leaves with felted undersides to the peaty rock garden. After a few years, though, named selections such



as 'Koichiro Wada', 'Mist Maiden', and others have outgrown such a use and will need to be moved to more roomy quarters for their annual show of indescribably beautiful flower clusters of frilled, apple-blossom white.

The Lowest of the Low

Unique in effect is *R.* 'Wilsoni'—you may also find this victim of convoluted nomenclature listed as *R. concinnum* or *R. xlaetevirens*—generally believed to be a cross between the native Carolina rhododendron (*R. minus*, formerly *R. carolinianum*) and the European alpine rose (*R. ferrugineum*). This rugged heat- and cold-tolerant plant (Zone 5) makes a dense, two-foot-tall mat of dark green, glossy foliage that in time can spread as wide as six feet. It can take neglect and less than ideal soil. Too large for the rock garden, it's perfect for the front tier of a shrubbery or anywhere else that would benefit from a low-growing, disease- and pest-free evergreen. The dull pink, two- to three-inch flowers aren't missed very much when, as sometimes happens, the buds are winter-killed.

The 'Yaku Fairy' cultivar of *R. keiskei* is another good choice if you are looking for a prostrate form. Hardy to Zone 5, this plant is beautiful in leaf and becomes sen-



Rhododendrons that have proven reliably hardy at least into the northern half of USDA Zone 6 include *R. kiusianum*, top, and *R. bureavii*, above. The latter is slow growing, but under ideal conditions will eventually outgrow true dwarf stature to reach between four and 10 feet tall.

sational in flower. The rich cream-colored, trumpet-shaped flowers are a proportionately large one-and-a-half inches in diameter. In alternate years, they either cover the plant completely or are displayed generously against the olive green, tapering leaves. More upright, yellow-flowered selections of the species are still under trial here, but have done exceptionally well in a friend's equally chilly Nova Scotia garden.

Another very low-growing species is the deciduous, four- to 10-inch *R. camtschaticum*, which has showy one-and-a-half-inch flowers of spotted purple or pink that open almost as wide and flat as a pansy. The unique growth habit of this plant, with flowers that emerge from hairy, leaflike bracts rather than the usual naked buds, have earned it a subgenus (*Therorhodium*) of its own. Widely distributed from the easternmost peninsulas of the former Soviet Union—including Kamchatka, from which its species name is derived—to western Alaska, the Aleutian and Kuril island chains, and northern Japan, this species takes cold and moisture in its stride but can be set back by summer heat and drought. It seems happiest in gravelly, peaty soil among rocks softened by moss or lichens.

Also assigned by taxonomists to its own section (*Rhodora*) is the taller *R. cana-*

dense, native to damp, open woods and sometimes even swamps of northeastern North America. It's an open, branching, two- to three-foot deciduous shrub that bears flights of mothlike purple or white flowers in early spring before the gray-green leaves unfold. The white-flowered selection—listed as either *R. canadense* var. *album* or as a cultivar, 'Album'—have done best for me and are reputed to come true from seed. Grown in damp, acid soil on the margin of deciduous woods, this species has an unsurpassable light, airy beauty. It is hardy to Zone 3, but is not very heat tolerant.

About the same size are the very free-flowering and heat-tolerant dwarf selections of semi-evergreen *R. dauricum* and the closely allied *R. mucronulatum*, which is deciduous. Both are precocious bloomers, flowering in February to early April—as early as December in mild regions. The former, hardy to Zone 4b, has wide, funnel-shaped flowers that range from pink to dark purple. A number of white-flowered cultivars exist, including 'Album', 'April Reign', and 'Madison Snow'.

Commonly known as the Korean rhododendron, *R. mucronulatum* is hardy to Zone 5 and has bright rose to purple flowers that open well before the leaves emerge. Cultivars abound, including a white-flowered variant of great charm ('Alba') and a difficult-to-find but interesting reddish-flowered dwarf selection that originated on the island of Cheju Do, South Korea ('Cheju Dwarf'). Another dwarf cultivar, with pale purple flowers, is often sold under the name 'Nanum' or 'Nana'. Like their larger kin, these rhododendrons will remain more compact and floriferous if you cut back wayward long stems immediately after flowering.

Some Like it Hot

Summer heat can be a problem with many of the wonderful cold-hardy dwarf rhododendrons in the Laponica group. Exceptions to the rule have been *R. telmateium*, which bears half-inch-wide, light purple flowers and tiny leaves on a shapely, upright, 15-inch plant, and *R. russatum*, larger in all its parts, with flowers of rich, royal purple on a straggling, upright shrub. Another heat-tolerant species, *R. hippophaeoides*, has paler purple to lavender flowers on an equally straggling plant. As does *R. russatum*, it benefits from having lankier stems cut back after flowering.

In my garden, other members of the

Comely Companions

Smaller rhododendron species have done best for me in a rock garden among contrasting companion plants. The acidic soil, heavily amended with peat, is made grainy with fine chicken grit or coarse sand. The rocks are generally noncalcareous—although slipping in some irresistibly weathered limestone in a few places doesn't seem to do any harm—and preferably covered with mosses or lichens.

Being alpinines, these smaller rhododendrons generally prefer more light than taller species, but I try to give them some relief from the midday sun. A north-facing slope or the passing shadow of a nearby shrub or tree can make all the difference. Fortunately these dwarf rhododendrons are

easy to transplant, so if necessary they can be moved around until the light exposure is right.

Small rock ferns are among the many plants with similar cultural needs that can provide some of the moisture and coolness that the roots of dwarf rhododendrons crave. Another good choice is Himalayan creeping willow (*Salix hylematica*), the long, prostrate branches of which can easily be trained to make an inch-tall mat of tiny, glossy leaves around more upright plants. Fragrance can be added with prostrate daphne (*Daphne arbuscula*), which needs only a pocket of soil among rocks and a pinch of lime to make a slowly spreading, four-inch-tall mass of



MICHAEL S. THOMPSON



JESSIE M. HARRIS



JERRY PAVIA

Laponica group, notably *R. fastigiatum* and *R. impeditum*, were set back badly by a string of three exceptionally hot summers. In cooler seasons they were enchanting foot-high mounds of small leaves, covered with bright purple flowers in spring.

Every year brings additions to the list of dwarf rhododendrons in my cold garden. This time around I'm giving a better loca-

tion to a newly acquired *R. calostrotum* subsp. *keleticum*, a prostrate to gently mounded plant with large purplish crimson flowers that contrast nicely with the purples of the Laponica group. 'Mary Fleming', a *R. keiskei* cultivar planted this spring, has pink-streaked yellow flowers, and I have a new batch of seedlings of *R. hirsutum*, smaller of the two European

tidy evergreen leaves and deliciously fragrant pink flowers.

A more vigorous spreader is the incredibly hardy (Zone 1) native arctic or crimson bramble (*Rubus arcticus*). Deciduous and thornless, it makes a four-inch-tall carpet of three-part leaves with large pink flowers in June, followed by red berries. Also red berried is native wintergreen (*Gaultheria procumbens*), whose four- to six-inch-tall clumps of thick, glossy leaves emerge from the melting snow in earliest spring like fine jade carvings.

With their needlelike grayish leaves, native heaths make a fine contrast to the broader, glossy leaves of rhododendrons. Hardy choices include flowering bog rosemary (*Andromeda polifolia*), which reaches up to 18 inches tall in summer, and white heather (*Cassiope mertensiana*),

which is only a few inches tall and delights with pendulous, bell-shaped white or pink spring flowers.

Herbaceous plants can add further color and interest from spring to frost. Among the first to bloom are *Primula modesta* and *P. yuparensis*, with yellow-eyed pink flowers of good size over tiny, silvery rosettes of leaves that look good all season. The purple and pink pea-flowers of spring vetch (*Lathyrus vernus*) open a little later on ferny-leaved, foot-tall plants. Some good, large-flowered blues among the summer- and fall-blooming gentians are *Gentiana cachemiriaca*, *G. grossheimii*, and *G. paradoxa*. Unique in effect are the drumsticklike mauve flower heads of *Primula capitata* subsp. *mooreana*, which open in late summer or early fall on plants covered with a powdery silver—technically, farinose—coating. —G.T.

Many North American natives make good companions for dwarf rhododendrons. Worthy candidates include the 'Nana' cultivar of bog rosemary, far left, white heather, top left, and crimson bramble, right, a vigorous, hardy spreader. Primroses such as *Primula modesta*, bottom left, add a splash of color in early spring.



JESSIE M. HARRIS

alpine roses. A specimen started from seed six years ago has grown sleek and healthy, in vivid contrast to a sickly nursery specimen growing nearby. Friends who grow the dwarf semi-evergreen azalea *R. kiusianum* in places colder than here have induced me to give it another try. Finally, it's been "so far, so good" with seeds of *R. fragrans* acquired from Halda last winter.

They germinated quickly and seem to be growing well, somewhat camouflaged in a sea of live sphagnum.

Looking forward to species not yet tried or just coming into cultivation, I see a future full of small happy, hardy surprises.

Free-lance writer Gerald Taaffe maintains a rock garden in Ottawa, Ontario.

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My American Cousin

by Judy Glattstein

Civil war was brewing, but Asa Gray was intrigued by a different kind of union.

In the latter half of the 18th century, French botanist André Michaux spent 11 years exploring the plant life of North America. He collected not only living plants to enhance the gardens of his native country, but also herbarium specimens for taxonomists to refer to. Gardeners often think taxonomy is a dusty subject, useful only for changing the names of plants we have finally memorized. But in this case, taxonomy would unravel a mystery of globe-spanning proportions.

Among Michaux's unknowns, collectively labeled *Plantae Incognitae*, was a sheet of a little ericaceous plant he thought might be a species of *Pyrola*, or wintergreen. The prepared specimen included a piece of the rhizome with a few roots and a single shoot, consisting of five mature leaves and three juvenile leaves. The two flowering stems apparently had finished blooming and dropped their petals, leaving only the five sepals and leafy bracts. Accompanying the herbarium sheet was a label that read, "*Hautes montagnes de Caroline. Un pyrola spec. Un genus novum?*" Little did Michaux guess that



the mystery specimen would be a key piece in a scientific puzzle that would not be solved for almost a century.

In Paris, in Michaux's herbarium, the specimen sat. And sat.

In 1838, more than 35 years after Michaux's death, Asa Gray was appointed to the botany department at the University of Michigan. This was somewhat premature, as the building intended to house the botany department was not completed in time for the start of the academic year. Granted a year's sabbatical (a neat trick before he'd even begun teaching), Gray made a trip to Europe. Naturally, he visited the notable herbaria at various institutions, focusing primarily on specimens of American flora. And naturally, when he reached Paris, Michaux's collection was of particular interest. To then find

Botanist Asa Gray, opposite, was the first to recognize close ties between the Japanese flora and that of eastern North America. *Arisaema sikokianum*, left, is an exotic relation of our common Jack-in-the-pulpit.

the sheet of an unknown specimen, which might even be a new genus, was very exciting. Gray claimed the right to name this plant and christened it *Shortia galacifolia*, the genus name honoring Kentucky botanist Charles W. Short, the specific epithet referring to the plant's resemblance to *Galax*, another ground cover native to the southeast United States. This plant is known by the common name of Oconee bells.

While it may have been ironic that Gray had to cross the Atlantic to discover an American plant, it was no challenge to cross French borders. Not so with mid-19th-century Japan, where other pieces of the puzzle lay waiting.

West Meets East

For two centuries Japan had existed in self-imposed isolation, trading only with China, Korea, and the Netherlands. Then in 1853, U.S. Navy Commodore Matthew Perry led a squadron of four ships to the China Sea with the express purpose of opening Japan to western commerce. Accompanying the expedition were S. Wells Williams, of the American Mission at Macao, and James Morrow, a physician and agronomist from South Carolina. When Japan agreed the following year to open her shores to westerners, the two men did some botanizing, collecting plants both at Shimoda, a harbor in the southern part of the Izu Peninsula, and at Hakodate, on Japan's northernmost island of Hokkaido.

At the time of the Perry expedition, Gray was eminent in his field and well on the way to becoming the botanical authority on American plants. When the collected specimens from the expedition were brought to the United States, he was chosen to examine this new material. Imagine his excitement when, among those specimens, he saw something similar to Michaux's unknown. It would be given the name *Shortia uniflora*, commonly called Nippon bells.

Gray's report on the Perry expedition plants, titled with scientific directness "List of Dried Plants Collected in Japan by S. Wells Williams, Esq., and Dr. James Morrow," was published in 1856 in *Narrative of the Expeditions of an American Squadron to*



Accompanying the expedition was James Morrow, a physician and agronomist from South Carolina.



Among the plants collected in Japan by James Morrow, top, was a relative of our rare eastern native Oconee bells, above. *Camellia japonica*, opposite, has no American cousins, but thrives in our Southeast.

the China Seas and Japan, Performed in the Years 1852, 1853, and 1854, Under the Command of Commodore M.C. Perry, United States Navy. In it he remarked: "...[I]t was naturally anticipated that it would add to the Japanese Flora a considerable number of species identical with, or closely allied to, those already known to inhabit Kamtschatka [Kamchatka peninsula in Russia] and Northwest America. This proves to be the case; and at the same time it has brought to view an equal number of Eastern United States forms, no insignificant portion of which are specifically identical."

Curiouser and Curiouser

At Hakodate, in pine woods, Williams and Morrow had collected a trillium that Gray took to be our native *Trillium erectum* var. *album*. He commented: "I see no difference between this and the plant of the Northern United States, except that the leaves are remarkably large and broad, the largest being 5 inches wide and 4 long. That the genus, although not before recorded, should be represented in Japan, is what we were prepared to expect, but the recurrence in that country of one of our own species, and in its rarer form, is remarkable."

What they had actually collected was *Trillium kamtschaticum*, another white-flowered trillium that bore remarkable similarities including the presence of a peduncle, or stalk, between the flower and stem. All three species of trillium native to Japan are pedunculate. Several of the 25 or so American species lack such a stalk and therefore are referred to by botanists as sessile.

Gray was not ready in 1856 to explain these findings. He wrote: "I refrain from commenting upon these relations until another and perhaps a larger collection of Japanese plants shall be made known, namely, that made by that excellent and most assiduous collector, Mr. Charles Wright, in the North Pacific Exploring Expedition, under Commodore Rodgers."

Wright, a native of Fairfield, Connecticut, had worked with Gray earlier, sending him specimens collected along the Texas-Mexico border, and Gray had lobbied for his inclusion in the three-year voyage begun under



the command of Cadwalader Ringgold and completed in 1856 under John Rodgers.

Radical Theory

It was not until 1859 that Gray presented his theory, in an article published in the *Memoirs of the American Academy of Arts and Sciences II*. It too had an explicit title: "Diagnostic Characters of New Species of Phaenogamous Plants, collected in Japan by Charles Wright, Botanist of the U.S. North Pacific Exploring Expedition... With Observations upon the Relations of the Japanese Flora to that of North America, and of other Parts of the Northern Temperate Zone."

Today the paper is considered a classic. In some genera, such as *Shortia*, Gray found plants from Japan and the eastern United States that were distinctly separate species yet clearly related. But in other cases, he found plants from these widely separated regions so alike that the American and Japanese taxa could be distinguished only with great difficulty.

How could this be? Gray proposed that before the ice ages of the Pleistocene, the flora across the temperate regions of North America and Eurasia were relatively the same. When glaciers began spreading southward, they essentially chased these species to warmer ground, where the terrain allowed it. When the glaciers melted, the plants in some cases were able to repopulate their former habitat with minor adaptation, but the formation of new mountains and other geological changes prevented their return in such places as the American West and parts of Europe and Central Asia.

Gray was influenced in his thoughts about common origins by a frequent correspondent, Charles Darwin, who would publish his own concept-shattering classic, *The Origin of Species*, the same year.

Floral Floodgates

The collections of Williams and Morrow and Wright were only the beginning of our recognition of the close botanical relationship between the eastern United States, Japan, and eastern Asia. In many cases the relatives have been mixed in our gardens. Some of them have been hybridized to develop new forms, flower colors, cold hardi-



Wright had worked with Gray earlier, sending him specimens collected along the Texas-Mexico border.



Charles Wright, top, collected plants in Japan from 1856 to 1859. Above, the eastern dogwood of North America and the kousa dogwood of eastern Asia.

ness, or pest resistance. In yet other cases, the Japanese species has become predominant.

For example, most people are surprised to learn that the popular, ubiquitous, exotic ground cover Japanese pachysandra (*Pachysandra terminalis*) has a perfectly good North American relative, Allegheny spurge (*P. procumbens*). How the Japanese relative gained a landscape edge over the home-grown version still puzzles me. Japanese pachysandra is evergreen, with glossy foliage and an inconspicuous spike of flowers. The creeping stems sneak over any neighboring walk or path, and scramble in an ascendant manner into any azaleas whose ground they happen to be covering. Allegheny spurge, though often called deciduous, has been quite evergreen in my Connecticut garden. New growth is a fresh apple green, maturing to a mat-finished, darker, silver-spotted green. The American plant also has showier flowers, which are attractive bottlebrushes of white. And, though spreading, our native could hardly be called invasive.

Arisaema is another genus shared by the eastern United States and eastern Asia. There are approximately 40 species in Japan but only two or three in the United States. Our familiar Jack-in-the-pulpit (*Arisaema triphyllum*) has a three-part leaf. Mature plants send up two leaves and a curiously hooded flower that consists of a pencil-like green spadix wrapped in a green or brown spathe. The green dragon (*A. draconitum*) of the southeastern United States has a leaf-green spathe closely rolled around a spadix that emerges like some rude child sticking out its tongue.

While interesting enough, both species are plain vanilla when compared to their Japanese cousins, whose flowers you might call exotic or even bizarre. They are undeniably striking. Yuki mochi-so or snow rice cake plant (*A. sikokianum*) is a show stopper. An elegantly flared, chocolate brown spathe wraps around an ivory white, club-shaped spadix—the assemblage complemented by attractive, silver-blotched foliage. Easy to grow, untouched by deer, this exquisite woodland plant is high on the "want" list of every gardener who sees it.

Another favorite of mine among the Japanese *Arisaema* species is urashima-so (*A. thun-*

bergii subsp. *urashima*). It is handsome enough in leaf, with numerous dark green leaflets spread in a horseshoe pattern. In flower, mature plants have a very dark, purplish brown spathe that narrows to a long tail-like point. Even more unusual is the spadix it encloses, with a thin extension that continues across the ground like the cast of some fly fisherman.

Right at Home

These are not isolated examples, exceptions proving some obscure botanical rule. Our blue cohosh, *Caulophyllum thalictroides*, has Japanese kin in *C. robustum*; the mayflower, *Epigaea repens*, in *E. asiatica*; the maidenhair fern, *Adiantum pedatum*, in *A. aleuticum* var. *japonicum*; and our royal fern, *Osmunda regalis*, in *O. japonica*. Probably even better known are the native North American woody plants with Japanese relatives such as dogwood (*Cornus*), witch hazel (*Hamamelis*), sweetspire (*Itea*), magnolia, stewartia, yew (*Taxus*), hemlock (*Tsuga*), and wisteria.

Ponder, too, the many excellent Japanese plants that figure so largely in our landscapes but have no surviving relations on our shores: perennials such as daylilies, epimediums, hostas, and peonies; trees and shrubs such as ginkgo, flowering cherries and crabapples, cryptomeria, umbrella pine, camellias, and flowering quince. These plants like it here when a match is found, pairing their native haunts in Japan with growing conditions along the East Coast.

This preadaptation is precisely the reason why some problem plants on our shores are also of Japanese origin. Originally introduced for animal fodder, erosion control, hedgerow use, or simply as ornamentals, kudzu, multiflora rose, and Japanese honeysuckle are just a few examples of plants that have naturalized without benefit of a green card. The converse also holds true. Both a goldenrod and an erigeron from North America have similarly made themselves at home in Japan.

Do these problems, and the current enchantment with American natives, mean that the days of plant hunting in foreign lands are over? Not at all, says Galen Gates. He's director of plant collections for the Chicago Botanic Garden and also explores for new and promising plants with representatives of four other ar-



Gray was astounded to find the Asian *Trillium kamschaticum*, above, almost indistinguishable from our *T. erectum* var. *album*.

boreta as a member of the Midwest Plant Collecting Collaborative.

Today's plant hunters, he says, are unlikely to set off seeking mere novelty. They look for plants with all the attributes they'll need to succeed in a particular American environment. "We know that what we see above ground depends on what is going on below, so soil is important, as is atmospheric moisture. With perennials, the amount of snow cover is important. Do they receive their moisture in spring or fall? If you reverse that, the plants may be more susceptible to leaf spot. What are the temperature extremes, and how rapidly do they change?"

In some cases, plant hunters may be looking for species tougher than current landscape plants, as they did on a 1993 expedition to Siberia, two years after a November cold snap disfigured many of Chicago's Scotch pines. They may seek a new color variation, as with a Russian chokecherry described as having golden bark.

A public garden's primary responsibility, Gates

believes, is to serve as a Noah's Ark of plant genetic material. "In the days of Chinese Wilson [E.H. Wilson, 1876-1930], we would often plant out a single specimen, which was then distributed by cuttings. Today we grow things from seed so that we have as broad a genetic base as possible."

Gates predicts that imported plants will continue to have a major role in American landscapes. "In our cities and suburbs, we're no longer dealing with native soils but subsoils. We need plants with roots that are adapted to survive in those conditions, in the ecosystems we have created. In many cases, those will be exotics."

Today a new tool called the Global Positioning System allows plant hunters to take position readings off satellites, so that they can locate the exact spot in which they first found a plant.

It's a sophisticated science, and a far cry from the days of Michaux, Wright, and Gray, and the *Plantae Incognitae* that turned out to be long-lost relatives.

Judy Glattstein is a horticultural consultant, lecturer, and author. Her latest book is Enhance Your Garden With Japanese Plants. (See page 57 for ordering information.)

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"Thoroughly Modern Williams," *continued from page 38*

Baltimore simply because he thought its landscape was too bleak. And he tells one on himself about a memorial rose that he essentially gave away.

"These two sisters—one was from California and the other was living in Scotland—called and said that the conditions of their mother's will stipulated that the estate couldn't be settled until they had a rose named for her gardener." They chose a nice burgundy, which Williams registered and later took to the gardener's home for a dedication ceremony, complete with bagpiper. "I'd never met a family so nice. This man obviously knew his roses, and he was so touched..." Williams let the sisters have the rose at cost. Later he got a post card from the sister in Scotland, thanking him and inviting him to drop in if he were ever in the country. "On the other side of the post card was a picture of their home on the Island of Mull," he said, spreading his hands apart like a fisherman describing the one that got away. "If they had been kicked out of Buckingham Palace, they never would have noticed."

If winning the AARS was Williams' most notable triumph, his biggest disappointment has to be the failure of the growing world to adopt Mini-Flora roses—a name he registered and promoted heavily in the '80s—as a separate class. A cross between miniatures and floribundas, they're well-suited for containers and small gardens, but offer bigger flowers. "I always thought there was no reason that only people with big gardens could enjoy roses." In Europe they're called patio roses, and if you see a cultivar with "patio" in the name, it's likely a Williams Mini-Flora.

But a man who spent years working with politicians is bound to be a realist, and Williams never stops looking for the next novelty. He's been working with stripes since his first hybridizations in the early '50s, he says, and he has two new variegated, trademarked shrub roses in the trade: 'Spinning Wheel', a shrub whose cherry red flowers have ivory on the outside of each petal, and 'Windmill', whose five widely spaced red petals recurve to show the white backside. The effect is exactly like the pinwheel toy that whirls when a child blows on it.

Then there's the next generation to coach. Son Ben and grandsons Van and Scott grew up with roses and can wield a pollen brush, and are frequent road companions.

This year that road will doubtless lead to another round of trade shows and display gardens around the country—"You've got to know what else is on the market"—as well as frequent visits to his own trial gardens in Pennsylvania.

What keeps Williams going? Here's how he put it in a 1990 chapter in a Brooklyn Botanic Garden handbook on roses: "When you create a new rose you're making a dream come true, and witnessing something no other person has ever seen. Just to see the glistening beauty of a well-formed bud of your own plant, or smell the haunting fragrance of a stately open bloom, gives pleasure enough to keep one's heart young and pride enough to pop the buttons on any vest.

"Rose breeding is also the people, the warmth, the friendship, the opportunity to associate with the best hybridizers in the world. It's the medium for the exchange of ideas in an area of pleasure which is not overcrowded, and where the opportunity for research and new discovery is always at hand."

Kerry Hart is a free-lance writer based in Reedville, Virginia.



book reviews

- 🌿 *salvias*
- 🌿 *passionflowers*
- 🌿 *rambles with Thoreau*
- 🌿 *gardening gaffes*

A BOOK OF SALVIAS

Betsy Clebsch. Timber Press, Inc., Portland, Oregon, 1997. 250 pages. 6 × 9". Publisher's price: hardcover, \$29.95. AHS member price: \$26.95. **TIM 090**

Those of us who have been fending off salvia-incited temptation are about to find ourselves in serious hot water.

And anyone who has used the dearth of information about the lesser-known salvia species as a pretext for keeping those plants to a minimum will no longer be able to invoke that excuse, because *A Book of Salvias* offers a fairly complete profile of more than 100 species and cultivars. Not only does it discuss the flower colors and leaf sizes of more salvias than anyone can possibly accommodate, it describes all of those plants in the most mouth-watering terms.

From the first pages of her book onward, it's obvious that Clebsch has an appalling intimacy with salvias. Lest you accuse her of total tunnel vision, she does



grow other plants in her San Francisco Bay garden. But it is apparent that Clebsch has long had a special fondness for salvias, since she reveals all the quirks of character that only become apparent after years of living closely with a plant. If a salvia tends to drop foliage in its later years, she warns us. If a plant seeds itself shamelessly, that trait is mentioned. Flowering times, flowering heights, eagerness—or the lack of it—to bloom are all noted. Granted, not all of us have a San Francisco Bay climate to play with, but her observations certainly help tell us which salvias might be appropriate for our own gardens. And Clebsch includes hardiness data garnered from fellow salvia aficionados around the world.

In addition to keeping her own records, the author has meticulously researched the history of each plant. The bulk of the book features an A-to-Z dictionary, which—as the author readily admits—does not cover all the salvias in existence but does discuss the best of the lot. Following the lead of Victorian horticulturists, who prefaced their botanical descriptions by discussing where each plant preferred to sink its roots, Clebsch begins most of her entries with a description of that particular salvia's native habitat, including the elevation at which it's usually found, the type of soil it generally prefers, and the ecosystem wherein most reside. To this she adds her own experiences and recommends companion plants.

Clebsch does tend to look at the sunny side of salvias. For example, I have often wondered if *Salvia uliginosa* earned its name due to its preference for marshy soils

or because the foliage smells something like a bog. In this case, Clebsch skirts the smell issue entirely. Instead, she writes of the fairylike, graceful appearance of the flower wands, describes the way they dance easily in a breeze, and points out the white beeline few of us have noticed in the throat of the azure blue flowers.

Never mind. Love is blind. Or at least its nostrils are indulgent. And there are so many nice things to say about salvias. Furthermore, there are appendices that list places to see salvias, sources of salvias, a flowering guide by season, cold

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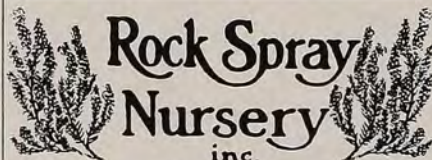
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and shade tolerance, salvias with handsome foliage, salvias for containers, and concise color designations. But perhaps the most dangerous element of this book is the 87 color photographs that render salvias we've never seen before totally irresistible. Gardeners, beware.

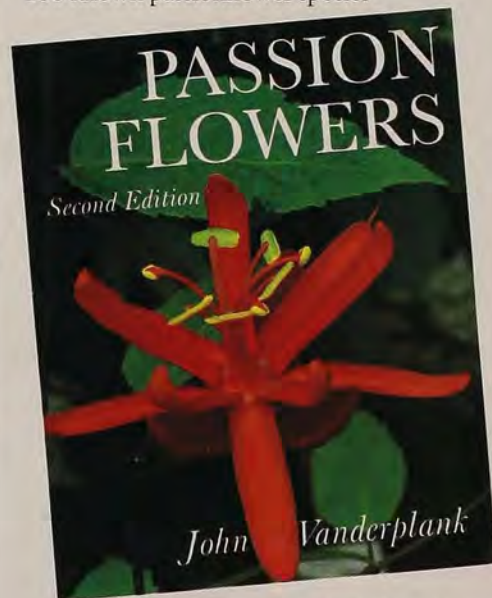
—Tovah Martin

Tovah Martin is a writer and horticultural consultant living in Roxbury, Connecticut. Her most recent book is Taylor's Weekend Gardening Guide: Window Boxes.

PASSION FLOWERS

John Vanderplank. The MIT Press, Cambridge, Massachusetts, 1996. 224 pages. 8 5/8 x 11". Publisher's price: hardcover, \$40. AHS member price: \$36. MIT 001

While I admit being a bibliophile, a second edition of any book has to be really better than the first for me to spend good, hard-earned money. Vanderplank has so expanded and improved upon his great first edition—reviewed for *American Horticulturist* by Steven Foster in April 1992—that I can honestly state that even if you already own the first edition, this one is worth acquiring for any library, private or public. The full-page color photograph of 'Sunburst', a hybrid developed by Patrick Worley, in itself justifies the price! While only 150 of the 460 known passionflower species



and hybrids are included in this book, it makes an excellent accompaniment to the botanical works of E.P. Killip, John MacDougal, and others.

The sequence of chapters has been re-organized in this edition. Changes include an expanded section on the legend of the passionflower, as well as new black-and-white photographs illustrating seeds. As in

the earlier edition, each passionflower species or cultivar is thoroughly described, along with its botanical classification into subgenera and sections. Included are 45 new "pure" species, ranging from *Passiflora allantophylla*—which looks like a tiny mimic of *P. caerulea* 'Constance Elliott'—to *P. zamoriana*. I especially appreciated descriptions of rare and newly described species, such as *P. xiihzodz*, which earns its specific epithet from the Mayan for "bat-wing," in reference to its leaves. I am thankful that the author has clarified the status of hybrid taxa *P. xbelotii* and *P. xalardii*, which were lumped together under *P. xalato-caerulea* in the first edition.

With 59 new color photographs to look at in this edition, I was struck by the number of species that mimic other genera. *P. holosericea* looks like a passionflower dressed up as a sunflower. Conversely, the red *P. perfoliata* mimics catchfly (*Silene* spp.), and *P. citrina* might be mistaken by the novice for a yellow clematis. With the largest stigmas in the genus, the indescribable flower of *P. cirrhiflora* has to be seen to be believed.

This book may cause you to order that greenhouse kit you've been eyeing in a catalog. With this updated edition, Vanderplank has inspired me to try growing the above passionflowers and even more!

—Arthur O. Tucker

A research professor at Delaware State University in Dover, Dr. Arthur O. Tucker was the 1996 recipient of the American Horticultural Society's Scientific Award.

THOREAU'S GARDEN

Peter Loewer. Stackpole Books, Mechanicsburg, Pennsylvania, 1996. 192 pages. 5 x 8". Publisher's price: hardcover, \$22.95. AHS member price: \$20.50. STA 007

Those who view gardening as an extension of a broader interest in nature usually have a shelf of books devoted to authors whose writings examine and embrace the continuum of these interrelated disciplines. On that shelf one is likely to find books by timeless authors such as Aldo Leopold, Neltje Blanchan, Donald Culross Peattie, and John Muir, as well as works by contemporary writers such as Roger Swain, Gary Paul Nabhan, and John Eastman.

With *Thoreau's Garden*, Loewer has adapted the writing of another of America's favorite naturalist-philosophers into a book destined to be added to many such shelves. Using *The Journal of Henry D. Thoreau* as a base, Loewer painstakingly collected Thoreau's scattered observations

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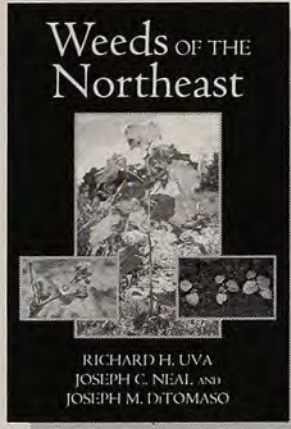


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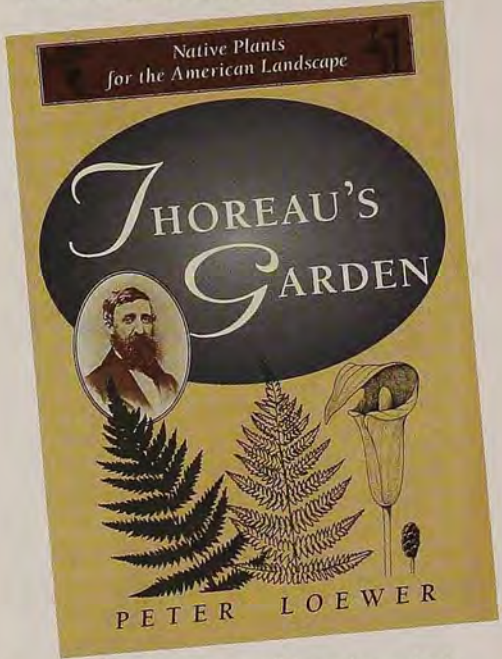
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on various plants he came across in his rambles through the Massachusetts woods. Loewer updated the nomenclature, where needed, and fleshed out Thoreau's comments into seamless short vignettes on plants ranging from Jack-in-the-pulpits to puffballs and from ferns to hemlocks. The book is beautifully illustrated with Loewer's own detailed black-and-white



drawings, a graceful touch to which I suspect even the misanthropic Thoreau—who liked to draw sketches in his notebooks—would offer grudging approval.

Loewer's conversational writing style offers an ideal counterpoint to Thoreau's more formal prose. Writing about the common barberry, Thoreau says, "That barberry bush near the bars on Conantum is methinks now the most beautiful light, and graceful bush that I ever saw in bloom. It is shaped like a haycock, broad and dense, yet light as if some leaven had raised it." By contrast, Loewer writes, "I've always liked barberries and it turns out that... Thoreau did too. Although the yellow flowers of the common barberry do have a disagreeable smell, the plant more than makes up for this minor flaw with a number of positive traits."

Loewer laces his analysis of Thoreau's comments with observations on each plant's lore, edible and medicinal qualities, garden-worthiness, and relationships with other plants and animals. Loewer also quotes liberally from the works of other garden writers and naturalists, including Blanchan and Liberty Hyde Bailey.

Loewer has thoughtfully included a map of the Concord area to acclimate readers to places Thoreau mentions in his journal. Despite all the references to other



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writers, however, I was disappointed to find that the book lacks a bibliography. An index to common and botanical names would also have been useful.

Many of us would like to have experienced the less trampled America of Thoreau's day. Loewer sums up this feeling well when he writes, "Thoreau's Garden thrives in the imagination. Here we can enjoy the plants that he wrote about in the journal... and learn their history, their uses, and their charms. Perhaps in a world where oceans are rising, summers are hotter, winters colder, and a beneficent sun has become a bit crueler, the best garden is a garden of the mind."

—David J. Ellis

David J. Ellis is assistant editor of *The American Gardener*.

REAL GARDENERS' TRUE CONFESSIONS

Pat Stone. *Storey Communications, Inc., Pownal, Vermont, 1997. 168 pages. 7³/₈ × 9³/₁₆". Publisher's price: softcover, \$12.95. AHS member price: \$11.50. STO 045*

The tabloid-style cover is a radical departure from the garden-book genre, but both novice and experienced gardeners will find much to enjoy in *Real Gardeners' True Confessions*. Stone, editor of *GreenPrints*—a.k.a. "The Weeders Digest"—a quarterly publication that features essays on gardening-related topics, has produced a lively, humorous guide to gardening based on real-life examples of what not to do. Stone interviewed dozens of experienced gardeners around the country and somehow convinced them to reveal their biggest gardening gaffes. These "true confessions" are included in sidebars scattered throughout the book.

The body of the book discusses important gardening concepts in terms geared to novice gardeners. The emphasis is on organic gardening methods and vegetable gardening. Stone distills many seemingly complex garden tasks down to a few simple steps. The goal, as he points out in his introduction, is "to make you feel a little less foolish and garden a good bit more successfully by helping you avoid all of the most common home gardening faux pas." Chapters have titles such as "Site with Foresight" and "Fertility for the Feeble-minded." Black-and-white illustrations, many of which also use humor to get the point across, demonstrate techniques such as double digging and creating a compost pile.

—The American Gardener staff

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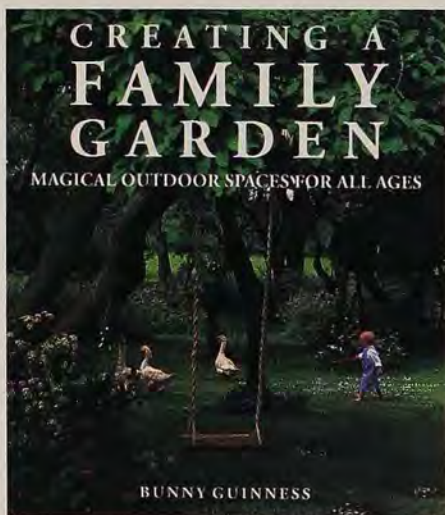
Books are chosen for the AHS Horticultural Book Service based on perceived reader interest, unusual subject matter, or substantive content. The following descriptions are not intended to be critical reviews, but are written to give an overview of the books' contents. For further information about these or other gardening books—or to order books—please call Barbara Catherwood at (800) 777-7931 ext. 36.

PLANTS AND DESIGN

AMERICAN HORTICULTURAL SOCIETY'S COMPLETE GUIDE TO WATER GARDENING NEW

Peter Robinson. 1997. 216 pages. Publisher's price: hardcover, \$34.95. AHS member price: \$29.95.

This definitive, beautifully illustrated guide is designed to encourage novices to take the plunge into water gardening, and to inspire those who have already tested the waters to expand their plant and design horizons. Every aspect of water gardening is discussed, from design and construction to the latest plants and products. A special section covers more than 150 moisture-loving plants. **Book code: DK 017**



CREATING A FAMILY GARDEN: MAGICAL OUTDOOR SPACES FOR ALL AGES NEW

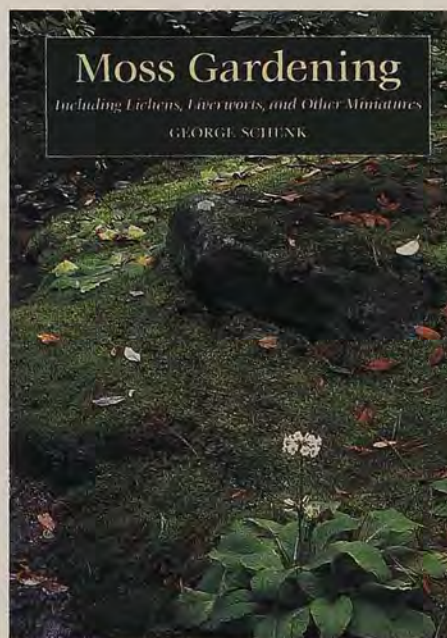
Bunny Guinness. 1996. 168 pages. Publisher's price: hardcover, \$29.95. AHS member price: \$22.45. Winner of gold medals at the Chelsea

Flower Show in both 1994 and 1995, the author is a landscape architect renowned for designing wonderfully creative and attractive gardens that can be enjoyed by all generations. This book presents many designs, along with directions on how to create them. Includes more than 200 color photographs. **Book code: ABV 012**

ENHANCE YOUR GARDEN WITH JAPANESE PLANTS NEW

Judy Glattstein. 1996. 226 pages. Publisher's price: softcover, \$25. AHS member price: \$22.50.

Glattstein, a best-selling American garden writer, offers a valuable guide to the wealth of Japanese plants available in North America. Along the way she tells the story of how they got here and explains how climate and geography shaped the relationship between many plants from Japan and North America. From trees to perennials to water-garden plants, this book provides plant-by-plant descriptions complete with nursery sources and a bibliography. Included are 16 pages of color photographs and line drawings. **Book code: KOD 001**

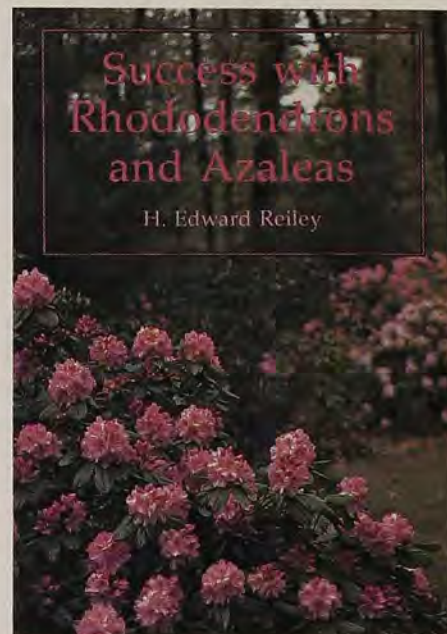


MOSS GARDENING: INCLUDING LICHENS, LIVERWORTS, AND OTHER MINIATURES NEW

George Schenk. 1997. 264 pages. Publisher's price: hardcover, \$34.95. AHS member price: \$31.45.

This much anticipated book covers the gamut of moss gardening with information on propagating, cultivating, and transplanting these tiny plants in gardens of practically any climate. The author, a retired American nurseryman, offers land-

scape recommendations for using mosses in rock gardens, in borders, as lawn substitutes, and in containers. Includes nearly 100 color photographs. **Book code: TIM 100**



SUCCESS WITH RHODODENDRONS AND AZALEAS

H. Edward Reiley. 1992. 285 pages. Publisher's price: softcover, \$22.95. AHS member price: \$20.

Recently reissued in paperback, this popular reference covers every aspect of growing these wonderful flowering shrubs, from soil preparation and landscape design to advanced propagating and hybridizing techniques. The index contains lists of hybrids and species recommended for different growing areas in North America. Includes both color and black-and-white photographs. **Book code: TIM 071b**

ROSES

EYEWITNESS GARDEN HANDBOOKS: ROSES

Linden Hawthorne. 1996. 160 pages. Publisher's price: softcover, \$17.95. AHS member price: \$16.25.

Filled with more than 350 color photographs, this attractive and sturdy handbook is an ideal reference for identifying, selecting, and growing more than 300 rose varieties. **Book code: DK 013**

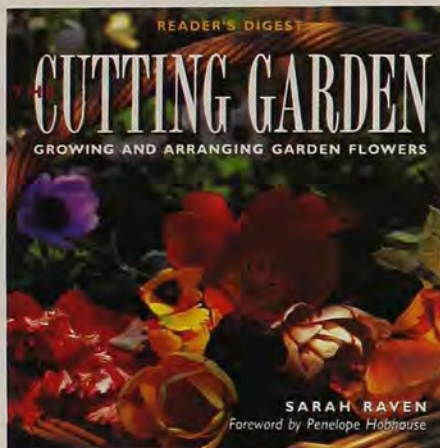
A YEAR OF ROSES NEW

Stephen Scanniello. 1997. 187 pages. Publisher's price: hardcover, \$25. AHS member price: \$22. This hands-on guide offers advice on grow-

ing roses throughout North America. From buying and planting to protecting and pruning, Scanniello, rosarian for the Brooklyn Botanic Garden, presents a month-by-month schedule of environmentally sound techniques for rose cultivation. Illustrated with line drawings.

Book code: HOL 007

FLOWER ARRANGING



THE CUTTING GARDEN: GROWING AND ARRANGING GARDEN FLOWERS

NEW

Sarah Raven. 1996. 168 pages. Publisher's price: hardcover, \$32.95. AHS member price: \$29.50.

The colors and scents of freshly cut garden flowers make a house come alive. Raven, an acclaimed British flower arranger and garden writer, walks us through the entire process of growing cut flowers—from design of a cutting garden to methods for

growing, cutting, conditioning, and arranging flowers of more than 500 recommended plants. Includes 300 color photographs.

Book code: RAN 020

FRESH CUTS: ARRANGEMENTS WITH FLOWERS, LEAVES, BUDS AND BRANCHES

NEW

Edwina von Gal. 1997. 144 pages. Publisher's price: softcover, \$25. AHS member price: \$22.50.

This elegantly illustrated book reveals that flower arranging need not be limited to flowers alone. The author encourages gardeners to look for the unusual, suggesting plants with stems, buds, berries, leaves, and fruit that make wonderful yet simple natural arrangements. Includes 100 color photographs.

Book code: WOR 002

BEST PLANTS BOOKS

PLANTS THAT MERIT ATTENTION, VOLUME 1: TREES

Janet Meakin Poor and Nancy Peterson Brewster, editors. 1984. 349 pages. Publisher's price: hardcover, \$59.95. AHS member price: \$52.50.

Book code: TIM 082

PLANTS THAT MERIT ATTENTION, VOLUME 2: SHRUBS

Janet Meakin Poor and Nancy Peterson Brewster, editors. 1996. 364 pages. Publisher's price: hardcover, \$59.95. AHS member price: \$52.50.

Book code: TIM 081

These useful and popular companion books introduce 143 trees and more than 700 shrubs and vines selected because they

are beautiful, unusual, pest- and disease-resistant, tolerant of a variety of environmental conditions, and underused in the American landscape. Lavishly illustrated with color photographs, both books have helpful appendices that cover a wide range of plant characteristics and that include public gardens where the plants may be seen and mail-order sources.

80 GREAT NATURAL GARDEN PLANTS

NEW

Ken Druse. 1997. 128 pages. Publisher's price: softcover, \$15. AHS member price: \$13.50.

Drawn from his classic, *The Natural Garden*, this pocket-size guide covers Druse's choice of annuals, perennials, shrubs, vines, bulbs, and grasses for beautiful, unconstrained gardens. Beautifully illustrated with more than 130 color photographs, the book describes 80 plants, including special characteristics, companion plants, design possibilities, and mail-order sources.

Book code: CRN 007

80 GREAT NATURAL SHADE GARDEN PLANTS

NEW

Ken Druse. 1997. 128 pages. Publisher's price: softcover, \$15. AHS member price: \$13.50.

Based on Druse's highly acclaimed *Natural Shade Garden*, this pocket-size handbook covers the author's favorites among ornamental shrubs, perennials, ground covers, and vines for spectacular shade gardens. It includes a list of top hostas and ferns, along with design ideas and mail-order sources. Includes more than 130 color photographs.

Book code: CRN 008

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regional happenings

a look at what's happening around the nation

MID-ATLANTIC

MAY 3 ■ Herb Fair and Sale.

Oatlands Plantation, Leesburg, Virginia. (703) 777-3174.

MAY 3 ■ Marjorie Merriweather Post Garden Party.

Hillwood Museum and Gardens, Washington,

D.C. (202) 686-8500.

MAY 3-7 ■ Maryland Homes and Gardens.

Smithsonian study tours. Baltimore, Annapolis, and Eastern Shore, Maryland. (202) 357-4700.

MAY 4, 10, 17, 18 ■ Maryland House and Garden Pilgrimage.

Various locations throughout Maryland. (410) 821-6933.



MAY 10 ■ Market Day.

Cylburn Arboretum Association, Cylburn Park, Baltimore, Maryland. (410) 367-2217.

MAY 10 & 11 ■ Spring Plant Sale.

Historic Annapolis Foundation. William Paca Garden, Annapolis, Maryland. (410) 267-6656.

MAY 17 & 18 ■ Virginia Peninsula Rose Show.

Coliseum Mall, Hampton, Virginia. (757) 245-3167.

MAY 24 ■ Thomas Jefferson Center for Historic Plants Open House.

Tufton Farm, Charlottesville, Virginia. (804) 984-9816.

MAY 25 ■ Delaplane Strawberry Festival.

Sky Meadows State Park, Delaplane, Virginia. (540) 384-2772.

JUNE 15-29 ■ Preserving the Landscapes and Gardens of Thomas Jefferson.

Class. Historic Landscape Institute. University of Virginia, Charlottesville, Virginia. (804) 982-5313.

NORTH CENTRAL



MAY 2-4 ■ Orchard in Bloom.

Show and sale. Holliday Park, Indianapolis, Indiana. (317) 290-ROSE.

MAY 3 & 4, 10, 17 & 18, 24 & 25 ■ Garden Expo.

Missouri Botanical Garden, St. Louis, Missouri. (314) 577-5125.



MAY 3 & 4 ■ May Day Festival.

Powell Gardens, Kingsville, Missouri. (816) 566-2600.



MAY 8-17 ■ Tulip Time Festival.

Holland, Michigan. (800) 822-2770.

MAY 10 & 17 ■ Wildflower Identification and Ecology.

Class. Shaw Arboretum, Gray Summit, Missouri. (314) 451-3512.

JUNE 6 & 7 ■ Hosta Extravaganza.

Iowa Arboretum, Madrid, Iowa. (505) 795-3216.

JUNE 6-8 ■ Cultivation and Preservation of Medicinal Plants.

United Plant Savers Conference. Equinox Botanical Sanctuary, Rutland, Ohio. (802) 479-9825.

JUNE 6-15 ■ 48th Annual Lilac Festival.

Mackinac Island, Michigan. (800) 454-5227.

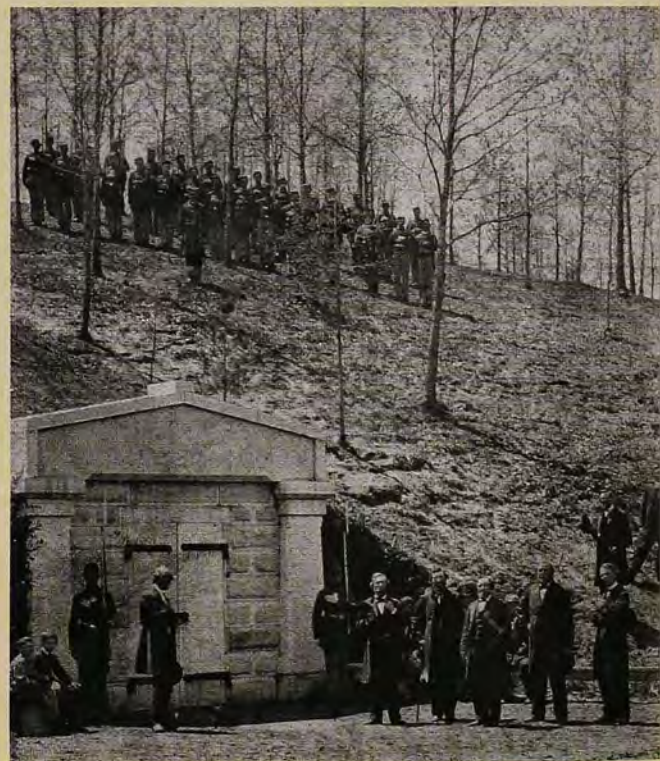
JUNE 13-15 ■ 26th Annual Meeting of the International Lilac Society.

Learning from Others' Mistakes

In the fall of 1992, Illinois arborists, horticulturists, and historians lost their battle to save a healthy oak tree that had been witness to the burial of Abraham Lincoln in 1865. The white oak grew on the side of a hill at the Lincoln Tomb State Historic Site in Springfield, a few feet from the vault in which the assassinated president's body was held from the time of his funeral until a permanent tomb was built on top of the hill eight months later. When cut down, the tree was 38 inches in diameter and was assessed by arborists as worth \$25,000—without any consideration of its historic significance.

But architects and state officials who were planning to restore the vault claimed the tree was in the way of their project, and that its roots or falling limbs could someday damage the structure. The battle raged for more than a year, with would-be saviors of the tree providing testimony that the tree posed no danger to the vault, as well as presenting photographs showing the tree at the time of Lincoln's funeral. But the tree's fate was sealed when skeptical state officials sent a partial core from the Lincoln vault oak to a forestry professor who, without benefit of any other evidence, estimated that the tree had not sprouted until after Lincoln's death.

A local professional arborist refused to cut down the tree, so the deed was done by a general contractor, who hauled off the 30-foot main trunk worth an estimated \$100,000 as an historic



Includes lilac auction, June 14. Mackinac Island, Michigan. (800) 454-5227.

JUNE 14 ■ Garden Walk '97. Quad City Botanical Center, Rock Island, Illinois. (309) 794-0991.

JUNE 21 & 22 ■ Summer Solstice: Changing of the Season. Standard flower show. Chicago Botanic Garden, Glencoe, Illinois. (847) 223-0905.



JUNE 22 ■ Gardens of Pleasant Valley. Tour. Friends of Vander Veer and Davenport Parks and Recreation. Davenport, Iowa. (319) 326-7894.

NORTHEAST

MAY 2-11 ■ Chestnut Hill Garden Festival. Philadelphia, Pennsylvania. (215) 248-8600.



MAY 3 ■ Wilmington Garden Day. Tour. Wilmington, Delaware. (302) 368-8626 or 428-6172.

MAY 7 ■ Urban Composting and Vermiculture. Lecture and outing. Horticultural Society of New York. New York City. (212) 757-0915.

MAY 7-13 ■ Spring Gardens of the Delaware Valley. Smithsonian study tours. Longwood Gardens, Chanticleer, Mount Cuba Center, Winterthur, and Longview Farm. (202) 357-4700.

MAY 11 ■ Spring Garden Fair. Bartlett

Arboretum, North Stamford, Connecticut. (203) 322-0971.

MAY 13 ■ Bartlett Arboretum Tour and Talk. Sponsored by the Westchester Fairfield Horticulture Society. Bartlett Arboretum, North Stamford, Connecticut. (203) 869-8786.



MAY 15 ■ Hidden Gardens of Beacon Hill. Tour. Beacon Hill Garden Club. Boston, Massachusetts. (617) 227-4392.

MAY 17 ■ Container Gardening Workshop. Nancy Gingrich Shenk Floral Design. Lancaster, Pennsylvania. (717) 392-2841.

MAY 28-31 ■ Annual Conference of the American Association of Botanical Gardens and Arboreta. Hotel Millennium, New York City. (610) 688-1120 ext. 15.

MAY 31 ■ Plant Sale. Tower Hill Botanic Garden, Boylston, Massachusetts. (508) 869-6111.

JUNE 3-29 ■ Newport Designers Showhouse and Gardens. Swanhurst, Newport, Rhode Island. (401) 841-5382.

JUNE 7 ■ Herb and Garden Festival. Hill Top Nursery and Herbal Garden, Egg Harbor, New Jersey. (609) 965-0337.

JUNE 7 ■ Plant Sale. New England Wild Flower Society, Garden in the Woods, Framingham, Massachusetts. (617) 877-7630.



Events marked with this symbol are official "Diamond Anniversary Gardening Events" chosen as regional sites where AHS members can help us celebrate our 75th anniversary during 1997. Look for others in your area throughout the year.



JUNE 21 ■ An Evening in the Arboretum. Scott Arboretum of Swarthmore College, Swarthmore, Pennsylvania. (215) 328-8025.

JUNE 21 ■ Zwaanendael Heritage Garden Tour. Lewes, Delaware. (302) 645-8073.

JUNE 28 ■ City/Country Garden Tour. Delaware Center for Horticulture, Wilmington, Delaware. (302) 658-6262.

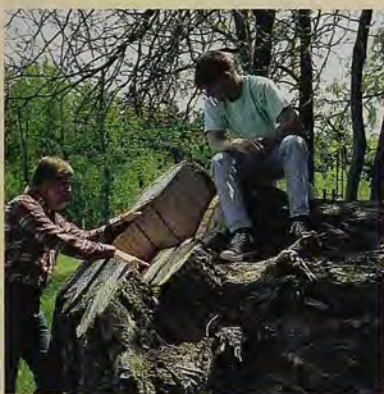
JUNE 29 ■ City Spaces, Country Places. Self-guided garden tour. Worcester County, Massachusetts. (508) 869-6111.

NORTHWEST

MAY 4 ■ Formal Upright Style Bonsai. Lecture. Pacific Rim Bonsai Collection. Federal Way, Washington. (206) 924-5206.

MAY 9 & 10 ■ Spring Plant Sale.

The Lincoln vault oak shown as a sapling in May 1865, near the top right corner of the vault in the far left photo. Left: Sternberg (at left) with the dissected stump of the tree in May 1994.



orabilia, and a cross section from the tree is on permanent display at the Lincoln Memorial Garden Nature Center at Lake Springfield. Remaining root pieces were made into gavels by a Springfield woodcrafter, Emmett Riley, and in cooperation with the conservation organization American Forests, sold to help reforest the city cemetery that surrounds the state-owned tomb.

Some of the funds have recently been used to buy a tree-transplanting machine that Sternberg—retained on a pro bono basis by the Springfield City Council—will use to plant "biologically and historically significant" seedlings and grafts that he has selected from trees at the cemetery and elsewhere around the world. Most are oaks, appropriately, since the site is called the Oak Ridge Cemetery.

Sternberg adds that nothing can really compensate for the loss of the original tree. "The people who ordered the tree cut down had training in other areas and probably didn't realize what damage they were doing," he says. They failed to understand that the tree was healthy and posed no real threat to the tomb, and failed to appreciate it as a living and spiritual link to history, he adds. "I think the most important thing that can come from this is to be more aware of our other historic trees and any possible threats to them, so that this doesn't happen again. And when a tree falls or really must be removed, the historical information included within its rings should be read like a book and conserved like any other historic artifact, not consigned to the sawmill or the woodpile."

—Kathleen Fisher, Editor

artifact. Although a handful of seedlings from the tree were rescued, most were trampled during the course of the restoration.

Guy Sternberg, president of the International Oak Society with his own arboretum in Petersburg, Illinois, was determined to make something positive of the loss. Along with preservationists and others, he salvaged the 14,000-pound stump and used dissection and X-rays to reveal a number of historical features, including a scar made in 1865 when the hillside on which the oak grew was cleared for the choir that sang at Lincoln's funeral. It was determined that the tree had sprouted in 1844.

Portions of the dissected stump will be donated to the National Park Service for inclusion in its collection of Lincoln mem-

Descanso Plans Rejuvenation of Camellia Forest

Managers of Descanso Gardens have decreed 1997 “The Year of the Camellia Forest” and are embarking on a campaign to ensure long-term optimum care for the garden’s unique camellia collection, one of the largest in North America. To launch the campaign they appointed Tim Thibault, a Seattle landscape designer, as camellia curator.

The camellia forest comprises 25 acres within the 160-acre public garden in La Cañada Flintridge, California. Some of the shrubs soar 20 feet tall within the century-old California live oaks that surround them. Altogether the mature shrubs, seedlings, and sports represent close to 800 species and cultivars, some growing only at Descanso Gardens.

“This is long overdue,” says Richard Schulhof, executive director for Descanso Gardens. “The current collection is dated because the last major plantings occurred in the 1970s.”

The Descanso camellia collection began in 1937 when E. Manchester Boddy, a newspaper publisher, bought an undisturbed woodland of California live oaks and other native vegetation that he named Rancho del Descanso. He recognized that the dappled shade and acidic soil created by oaks leaves would provide the perfect habitat for camellias, shrubs native to Asia that were introduced to Europe in the late 18th century. Camellias had drifted out of favor among American gardeners by the early 1900s, and Boddy’s efforts were in-

strumental in the resurgence of their popularity.

When his first camellia plantings thrived, he hired J. Howard Asper, a noted camellia specialist of that era, to develop more extensive plantings. Asper assembled a collection of *Camellia japonica*, *C. sasanqua*, and the first American introductions of *C. reticulata*. Some *C. reticulata* cultivars are believed to be growing only at Descanso Gardens.

Boddy operated a thriving nursery and cut-flower business on the property until 1953, when the neighbors whose new homes were encroaching on Rancho del Descanso complained about the busy enterprise. Boddy sold the property to the County of Los Angeles, and it was operated by the Department of Arboreta and Botanic Gardens until 1993, when the Descanso Gardens Guild assumed management.

Restoration will focus on cataloging and labeling the current collection, preserving it as a historic landscape, and creating a management plan that balances the cultural requirements of the camellias with those of the surrounding oaks. Restoration of the species walk and enhancement of the Camellia Information Center are also planned. “We plan to add more cultivars to display the best ones for Southern California gardens,” says Schulhof, as well as a demonstration garden to aid visitors with their home landscapes.

Descanso Gardens is open from 9 a.m. to 5 p.m. daily except Christmas Day. For information, call (818) 952-4401.

—Karen L. Dardick, special from Los Angeles



Above: The camellia forest at Descanso Gardens grows beneath a canopy of California live oaks.



Left: *Camellia japonica*.

South King County Arboretum, Maple Valley, Washington. (206) 432-6181.

MAY 10 ■ Native Plant Symposium. Center for Urban Horticulture, Seattle, Washington. (206) 685-8033.

MAY 29-JUNE 22 ■ Portland Rose Festival. Portland, Oregon. (503) 227-2681.

JUNE 7 & 8 ■ Spring Plant Sale. Metro Park District of Tacoma. W.W. Seymour Conservatory, Tacoma, Washington. (206) 591-5330.

JUNE 14 ■ Bonsai Biology: Understanding How Trees Function. Lecture. Pacific Rim Bonsai Collection. Federal Way,

Washington. (206) 924-3153.

JUNE 27-29 ■ Visit the Eastern Colonies: Badlands to Plains.

Montana Native Plant Society annual meeting. Makoshika State Park, Glendive, Montana. (406) 385-2579.

JUNE 28 & 29 ■ Annual Tour of Private Gardens. Whatcom In Bloom Garden Society. Bellingham, Washington. (360) 738-6833.

SOUTH CENTRAL

MAY 9 & 10 ■ Spring Herb Extravaganza. Ozark Folk Center, Mountain

View, Arkansas. (501) 269-3851.

MAY 10 ■ Spring Wildflower Tour. Medicine Lodge/Barber County. Botanica, the Wichita Gardens, Wichita, Kansas. (316) 264-0448.

MAY 30-JUNE 8 ■ Garden Glory Days. Ozark Folk Center, Mountain View, Arkansas. (501) 269-3851.

SOUTHEAST

MAY 3 & 4 ■ Glorious Garden Tour. Birmingham Botanical Gardens, Birmingham, Alabama. (205) 879-1227.



MAY 3 & 4 ■ Habitat Helpers Weekend. TVA's Land Between the Lakes,

Golden Pond, Kentucky. (800) LBL-7077.

MAY 7 ■ Peonies, the Queen of the Garden. Lecture. Memphis Botanic Garden, Memphis, Tennessee. (901) 685-1566 ext. 106.

MAY 10 & 11 ■ Gallery of Gardens. Self-guided tour of gardens. Mobile Botanical Garden, Mobile, Alabama. (334) 342-0555.

MAY 11-JUNE 8 ■ Plantation Florals. Display. Charleston Place, Drayton Hall, Charleston, South Carolina. (803) 766-0188.

JUNE 14 ■ Botanical Medicines and Plant Poisons. Lecture. Tryon Palace, New Bern, North Carolina. (800) 767-1560.

JUNE 14 & 15 ■ Kenilworth Gardens Tour. Asheville, North Carolina. (704) 274-2831.

JUNE 14-JULY 31 ■ Art for the Garden. Exhibit. New Morning Gallery, Asheville, North Carolina. (704) 274-2831.



JUNE 21 & 22 ■ Park Seed Trial Gardens at the South Carolina Festival of Flowers.

Park Seed Company, Greenwood, South Carolina. (864) 223-8555.

SOUTHWEST

MAY 9 & 10 ■ Annual Plant and Book Sale. Denver Botanic Garden, Denver, Colorado. (303) 423-9017.

MAY 31 & JUNE 1 ■ Iris Society Region 20 Show. Denver Botanic Garden, Denver, Colorado. (303) 423-9017.



JUNE 6-JULY 13 ■ Vail Valley Festival of Flowers. Betty Ford Alpine Gardens, Vail, Colorado. (970) 476-0103.

WEST COAST

MAY 4 & 5 ■ Baldwin Bonanza Weekend. Plant sale. The Arboretum of Los Angeles County, Arcadia, California. (818) 447-8207.

MAY 8-11 ■ Carmel Garden Show. Quail Lodge Resort and Golf Club, Carmel, California. (408) 649-7649.

MAY 10 & 11 ■ Geranium Show and Sale. Descanso Gardens, La Cañada Flintridge, California. (818) 794-7744.



MAY 11 ■ Mother's Day Open House. National Tropical Botanical Garden, Lawai, Hawaii. (808) 742-2623.

MAY 17 & 18 ■ Plant Show and Sale.

New Garden Directory

The 1997 Garden Conservancy *Open Days Directory* is now available. The directory lists more than 250 gardens in 16 states that will be open to the public on various weekends from April through September. Admission to each garden is \$4 per person. Proceeds will benefit the Garden Conservancy's preservation programs, or can be split between the Garden Conservancy and another nonprofit organization of your choice. The directory costs \$10 and is available through the Garden Conservancy at (914) 265-2029.

Tree Lilac Honored

The Society of Municipal Arborists has named *Syringa reticulata* 'Ivory Silk' their 1997 Urban Tree of the Year. This tree lilac is hardy in USDA Zones 3 to 8 and grows to 25 to 35 feet, making it a good selection for planting under utility wires. It blooms generously with large white flowers from mid-June to July. For more information on 'Ivory Silk', contact the Society of Municipal Arborists at (617) 431-7569.

San Diego Geranium Society. Casa del Prado, Balboa Park, San Diego, California. (760) 726-9269.

MAY 18 ■ Plant Sale. Huntington Botanical Garden, San Marino, California. (818) 405-2160.

MAY 24 & 25 ■ Bromeliad Show. Descanso Gardens, La Cañada Flintridge, California. (818) 952-4401.

MAY 24 & 25 ■ Chrysanthemum Plant Sale. Descanso Gardens, La Cañada Flintridge, California. (818) 952-4401.

JUNE 17-JULY 6 ■ Del Mar Fair Flower and Garden Show. Del Mar Fairgrounds, Del Mar, California. (619) 793-5555. *AHS members admitted free.*

CANADA

MAY 7-11 ■ American Rhododendron Society Annual Convention. Westin Bayshore Hotel, Vancouver, British Columbia. (604) 654-7504.

MAY 22-25 ■ International Conference on Sustainable Urban Food Systems. Ryerson Polytechnic University, Toronto, Ontario. (416) 979-5000.

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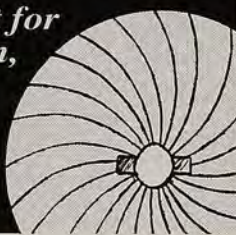
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pronunciations

a simple speaking guide to plants found in this issue

Adiantum aleuticum

ad-ee-AN-tum uh-LOO-tih-kum

Aesculus parviflora

ES-kyew-lus par-vih-FLOR-uh

Agapanthus africanus

ag-uh-PAN-thus af-rih-KAN-us

Alliaria petiolata

al-ee-AR-ee-uh pet-ee-o-LAY-tuh

Amsonia tabernaemontana

am-SO-nee-uh
tuh-bur-nee-mon-TAN-uh

Andromeda polifolia

an-DROM-eh-duh pah-lih-FO-lee-uh

Arisaema draconitum

air-ih-SEE-muh drak-o-NY-tum

A. sikokianum

A. sih-ko-kee-AN-um

A. thunbergii subsp. *urashima*

A. thun-BUR-jee-eye
subsp. yew-RASH-ih-muh

Arundinaria gigantea

ah-run-dih-NAIR-ee-uh
jy-GAN-tec-uh

Asclepias tuberosa

as-KLEE-pee-us too-bur-O-suh

Caryopteris × clandonensis

kair-ee-OP-tur-iss xklan-doh-NEN-siss

Cassiope mertensiana

kas-SY-o-pee mur-ten-see-AN-uh

Caulophyllum thalictroides

kaw-lo-FIL-lum thal-ik-TROY-deez

Cephalotaxus harringtonia

sef-uh-lo-TAK-suss
hair-ring-TOH-nee-uh

Ceratostigma plumbaginoides

sur-at-o-STIG-muh
plum-baj-ih-NOY-deez

Cercidiphyllum japonicum

sur-sid-ih-FIL-lum jah-PON-ih-kum

Chionanthus retusus

ky-o-NAN-thus reh-TOO-suss

Chorisia speciosa

chor-ISS-ee-uh spee-see-O-suh

Chrysogonum virginianum

krih-SOG-on-um vir-jin-ee-AN-um

Cyphomandra betacea

sigh-fo-MAN-druh beh-TAY-see-uh

C. crassicaulis

C. kras-sih-KAW-lis

Daphne arbuscula

DAF-nee ar-BUS-kew-luh

Desmanthus illinoensis

des-MAN-thus ill-ih-no-EN-siss

Epigaea repens

ep-ih-GEE-uh REP-enz

Feijoa sellowiana

fay-YO-uh sel-lo-we-AN-uh

Gentiana cachemirica

jen-she-AN-uh
kah-shuh-MEER-ih-kuh

G. grossheimii

G. gross-HIME-ee-eye

Lagerstroemia indica

lag-ur-STROH-me-uh IN-dih-kuh

Metasequoia glyptostroboides

met-uh-suh-KWOY-uh
glip-toh-stro-BOY-deez

Passiflora allantophylla

pass-ih-FLOR-uh al-lan-toh-FIL-luh

P. cirrhiiflora

P. seer-ih-FLOR-uh

P. xikkzodz

P. SHIG-sots

P. zamoriana

P. zam-or-ee-AN-uh

Perovskia atriplicifolia

peh-ROF-skee-uh
at-rih-pleh-sih-FO-lee-uh

Phyllostachys nigra

fil-lo-STAY-kiss NY-gruh

Pistacia chinensis

pis-TAY-shuh chy-NEN-sis

Primula capitata subsp. *mooreana*

PRIM-yew-luh kap-ih-TAY-tuh
subsp. moor-ee-AN-uh

P. yuparensis

P. yup-uh-REN-sis

Rhaphiolepis indica

raf-ee-o-LEP-iss IN-dih-kuh

Rhododendron bureavii

ro-doh-DEN-dron bew-RO-vee-eye

R. calostrotum subsp. *keleticum*

R. kal-o-STRO-tum
subsp. keh-LET-ih-kum

R. camtschaticum

R. kam-SHAT-ih-kum

R. catawbiense

R. kuh-taw-be-EN-see

R. degronianum subsp. *yakushmanum*

R. deh-gro-nee-AN-um
subsp. yak-oo-shih-MAN-um

R. fastigiatum

R. fas-tij-ee-AY-tum

R. hippophaeoides

R. hip-po-fee-OY-deez

R. impeditum

R. im-peh-DY-tum

R. keiskei

R. KEES-kee-eye

R. kiusianum

R. kee-yew-see-AN-um

R. × laetevirens

R. xleet-ee-VY-renz

R. lapponicum

R. luh-PON-ih-kum

R. recurvoides

R. re-kur-VOY-deez

R. telmateium

R. tel-may-TEE-um

R. trichostomum

R. try-ko-STO-mum

Ruellia humilis

rew-EL-ee-uh HEW-mih-lys

Salix hylematica

SAY-lik hy-luh-MAY-tih-kuh

Shortia galacifolia

SHOR-tec-uh
guh-lah-sih-FO-lee-uh

Trillium kamtschaticum

TRIL-lee-um kam-SHAT-ih-kum

Zelkova serrata

zel-KO-vuh sair-RAY-tuh

What's in a Name: *Cassiope mertensiana*

Native to western North America from Montana and Idaho to northern California and Alaska, white heather is one of 12 species in this genus of low-growing evergreen shrubs in the heath family (Ericaceae), restricted to mountainous and Arctic regions of the Northern Hemisphere. The genus is named after Cassiopeia, who according to Greek mythology was wife of King Cepheus of Ethiopia and mother of Andromeda. Her daughter's name fittingly graces the closely related genus *Andromeda*. Cassiopeia is also immortalized in a constellation located between Andromeda and Cepheus in the northern sky.

The species name refers to the resemblance of white heather's bell-shaped flowers to those of plants in the genus *Mertensia*, our common bluebells. *Mertensia* was named in honor of Franz Karl Mertens (1764-1831), a botanist in the German city of Bremen.

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- **ZERO LOSS IN 3000-ACRE PROJECT FOR USDA, VERSUS 3% SURVIVAL: NEXT BEST.** — California Polytechnic State University.
- **PLANTED 10,000 TREES, Seattle World's Fair, WITH ZERO LOSS.**
- **SAVED ALL OF HUGE SHIPMENT OF PALMS FROM FLORIDA TO 48 Taiwan GOLF COURSES. LOSE OVER HALF WITHOUT.**
- **PUSHES BACK DESERTS, LANDSCAPES SHEIKS' PALACES, Saudi Arabia.**
- **PLANTED OVER 600,000 BARE-ROOT ROSES, 16 YEARS, LOSS FEWER THAN 1 IN 1,000, Albuquerque, New Mexico.**
- **SAVED ALL TREES TRANSPLANTED by U.S. Corps Of Engineers, FOR CAMOUFLAGE, WORLD WAR II.**
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- **SAVED ALL CELERY TRANSPLANTED IN 17 LARGE HOUSES, before and after one without, IN WHICH ALL LOST.** — California.
- **1200 TREES WITH 4" CALIPER TRUNKS BARE-ROOTED IN DESERT JUNE. NO LOSS.** — Tucson, Arizona, City Parks Department.
- **BIGGEST TRANSPORTATION OF LANDSCAPE MATERIALS, CALIFORNIA TO FLORIDA, TO PLANT Disney World.® NO LOSS.**
- **KEPT ALL PALM SPRINGS DESERT GOLF COURSE'S GREENS PERFECT, SUMMER WHEN ALL OTHER COURSES WITH BENT GRASS GREENS IN AREA LOST 6 TO 14 GREENS.**
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