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Turf Battles

The Great American Lawn is under siege. Environmentalists have attacked the all-grass lawn as an unnatural monoculture too dependent on dangerous chemicals. How about a nice swath of prairie grasses and regional wildflowers instead, they ask? Proponents of low-water gardening say the lawn as we know it consumes a disproportionate percentage of the nation's water supply. Get rid of the bluegrass and try some buffalo grass, they suggest, or replace it with low-water-use ground covers. And many landscape designers yawn at lawns. Devote more of the yard to something less banal, they recommend. Ornamental grasses, perhaps?

But the turf grass lawn is an entrenched part of our culture, aesthetically pleasing, and practical. In this month's issue we'll look at arguments on both sides, some new trends and alternatives, tips for more environmentally sound care, and the impact of these criticisms on the lawn industry.

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We Come Not to Bury the Lawn



Each spring the ritual begins. Bags and bags of high-nitrogen fertilizer. Gallons of herbicides to be nozzled at the encroaching violets. The whirling of sprinklers.

The National Xeriscape Council estimates that the amount of water used for turf irrigation ranges from 30 percent of total urban water use on the East Coast to around 60 percent in the West. Use of horticultural chemicals varies even more widely, but a 1980 report of the National Academy of Sciences estimated that homeowners annually use five to 10 pounds of pesticide per acre of lawn. Although the extent of the danger from these chemicals is still being hotly debated, the mere charges against them are enough to give anyone pause: nervous system damage from insecticides like dursban and diazinon, a possible link between 2,4-D and lymphatic cancer, the fungicide benomyl as a possible carcinogen. Even people who aren't particularly concerned about the environment are concluding that all that spraying and watering represents time, energy, and money they would rather invest elsewhere.

But wait a minute. Lawns don't use pesticides and herbicides and too much water. People do. It's people moving from New Jersey to Arizona who insist on planting bluegrass. It's people who won't tolerate a patch of brown or the fuzzy yellow head of a dandelion.

Get rid of our grass? Consider, if you will, the alternatives. Imagine playing badminton on a sward of English ivy. Imagine lying on your back in the rose bed and contemplating the stars. Imagine a day in May when it's finally warm enough to wriggle your toes in the creeping juniper.

No, lawns are here to stay. We like to look at them, and this isn't a purely American cultural phenomenon. Studies have shown that the type of landscape most humans—from desert dwellers to

rain forest residents—find pleasing to contemplate contains widely spaced trees and lots of shortly cropped grass.

Grass growers and sellers offer a whole "lawndry" list of benefits: controlling erosion, retarding fires, trapping pollutants from air and water, reducing glare and noise. Like trees, grass absorbs carbon dioxide and other gases harmful to humans and gives off oxygen.

Happily, the Xeriscape Council, horticulturally savvy environmentalists, and environmentally savvy members of the lawn industry are now singing pretty much in harmony. What is needed is for the nation's homeowners and lawn maintenance businesses to learn the tune:

Choose grasses that will grow well in your area with little or no irrigation.

Look to your soil. Well-drained soil alive with microorganisms from the addition of compost and grass clippings will need less fertilizer.

Infrequent deep watering will encourage deep roots and lessen your grass's need for irrigation.

Irrigate deep enough for the water to reach the grass roots. A soil probe will show how much water it will take to accomplish this. Interrupt your watering briefly if the water is running off on driveways or sidewalks.

Mow infrequently. Mowing stresses the grass so that it needs more water.

Mow high; don't remove more than one-third of the blade. Long blades mean more nutrients for the plant and more shade for the roots.

Accept a less than lush lawn. Grasses naturally go dormant during drought, but bounce back and green up when it rains again.

Limit the use of chemicals. Even if you're not concerned about contamination of ground water or health risks to your family and pets, too much fertilizer means more mowing, and too many pesticides can kill the millions of microorganisms in the soil that keep your grass naturally healthy.

A New Look for Lawns

In the quest for a flawlessly uniform lawn, many homeowners spend endless hours, or dollars, trying to eradicate weeds. The environmentally conscious dig the intruders out one at a time. The chemically unafraid spray the undesirables to death.

A solution may be to redefine what makes a beautiful lawn. A new lawn seed mixture developed in Oregon contains seed of both turf grasses and plants that might be called weeds if they were caught growing in a perfectly manicured lawn.

Rose Marie Nichols McGee and Tom Cook say that their Ecology Lawn Mixes (ELMs), which contain a blend of turf grasses, sweet clovers, wildflowers, and herbs, can provide a beautiful, low-maintenance alternative to the conventional lawn. ELMs were developed to resist thatch build-up and to tolerate shade and drought, so that it should be possible to cut watering in half. Because they contain clovers, which are nitrogen-fixing plants, the lawns should have a healthy green color without fertilizer. And under normal growing conditions in the areas for which they were developed, they require mowing only once every three weeks or less.

McGee, co-owner of Nichols Garden Nursery in Albany, Oregon, and Cook, associate professor of horticulture and head of the turf program at Oregon State University, began developing the ELMs in 1983. Their plan was to create an ecologically stable mix of grasses and broad leaf plants. One of the first steps was to develop a list of broad leaf plants that are attractive, low-growing, and do not disrupt turf.

Six broad leaf plants met the criteria: strawberry and Dutch white clovers, yarrow, wild English daisy, Roman chamomile, and baby blue eyes. These are mixed with a combination of colonial bentgrass, perennial rye grass, red fescue, and/or fine fescue. Other wildflowers and herbs may also be included depending on the region in which they are intended to be grown.

By weight, grasses make up 80 to 90 percent of the mix, but the mix of the lawn itself will vary through the seasons. "The lawn has a very cyclical quality to it," McGee says. "That is a great deal of its charm. At times the grass is the dominant feature, but in the late spring and summer the broad leaf plants create a 'calico-sprigged' effect."

Nichols Garden Nursery has developed three mixes for different climatic areas:

♦ The Northern ELM contains colonial bentgrass, strawberry and Dutch white clovers, wild English daisies, roman chamomile, yarrow, and baby blue eyes. This mix reaches a maximum height of six to 12 inches and is suited for areas with mild winters and mild to hot summers with variable humidity, such as the American Northeast.

♦ The Dryland ELM contains perennial rye grass and fine fescue, strawberry and Dutch white clovers, wild English daisies, Roman chamomile, yarrow, and baby blue eyes and grows to 12 to 18 inches if left unmowed. The dryland mix is particularly suited to arid/semi-arid conditions with cold winters and hot dry summers or summers with variable humidity, such as the Midwest.

♦ The Southland ELM includes turf-type tall fescue, strawberry and Dutch white clovers, yarrow, California poppy, pimpernel, baby blue eyes, and creeping thyme. It is for temperate/semi-tropical areas with mild to cold winters and warm arid/semi-arid areas with mild winters and hot dry summers, primarily the Southwest. Unmowed, this lawn can reach two feet or more, but mowing once a year with no additional irrigation should maintain it at a customary height.

McGee doesn't have any immediate plans to create a mix for the Southeastern United States since "grasses tend not to flourish in that area."

McGee said her customers have been very pleased with the mixes and com-

plaints have been few and far between. Most have been from people who can't adjust to the look of a mixed lawn. A few have complained of the lawn being invaded by other weeds. The probable cause of this as McGee sees it is not preparing the soil before planting. Just as in any other garden planting, "preparation really pays off," McGee says. "You'll need to remove everything that's growing in the area now. If you don't it will return. But our feeling is, 'So what if a stray dandelion appears?' It's all part of the pageantry. Our lawn is always in balance, never dominated with just one species. And different things appear at different times. In spring and fall the English daisies really put on a show."

ELM use may become more widespread as more and more local governments restrict or ban the use of chemicals in such places as schools and parks. The mixes should also be a boon to those individuals concerned about the contamination of ground water and air from pesticide use, and who don't feel pressured to have a regulation lawn.

Of course, public acceptance may be slow in coming, and a sudden, huge demand would be difficult to meet: some of the broad leaf seeds are hard to find. But if production grows gradually to meet demand, says McGee, the ELMs should create new opportunities for seed producers as well as a new look for the American lawn.

Fatten Your Lawn in Fall

Why are we writing about turf grass in November? We're not too early for the subject; for some parts of the country, we're a bit late. The prime time to fuss over a prize lawn is late summer and early fall.

Although it would seem at first to defy logic, fall is the best time to fertilize lawns. When days cool and shorten, lawn grasses begin to grow more slowly, explains Eliot Roberts of the Lawn Institute. At this point the well-fed lawn, like someone who consumes too many calories and doesn't exercise, will make more carbohydrates than it needs to sustain itself and some of them will be stored. This continues as long as the blades remain green. If the grass is fed in spring, on the other hand, most of the carbohydrates it produces will be used to replace the foliage that is removed by mowing.

"Fall is the only time of year that lawn grass plants actually gain weight," says Roberts. In the spring, they lose weight.

When summer arrives, carbohydrate reserves will be further taxed as higher day and night temperatures cause the plants' respiration rate to increase.

Fall is best for seeding lawns, too, because the soil moisture is generally ideal for germination and seedling establishment. Four to six weeks before frost is the best time to start a new lawn or overseed an old one. (You can wait a bit longer if you're putting down sod.) Annual weeds, such as crabgrass, will offer no competition because they have finished their growing cycle. For that reason, fall is also a good time to get rid of weeds. Crabgrass can be raked out, but you may need to rent a power rake if you have a large lawn area, Roberts advises.

The Lawn Care Industry Dilemma

Once upon a time, grooming an expansive, finely manicured lawn was tantamount to being a good American.

It was as wholesome as apple pie, as bland and non-controversial as Robert Young's sweater in "Father Knows Best." No one would have thought of challenging the great, green American lawn.

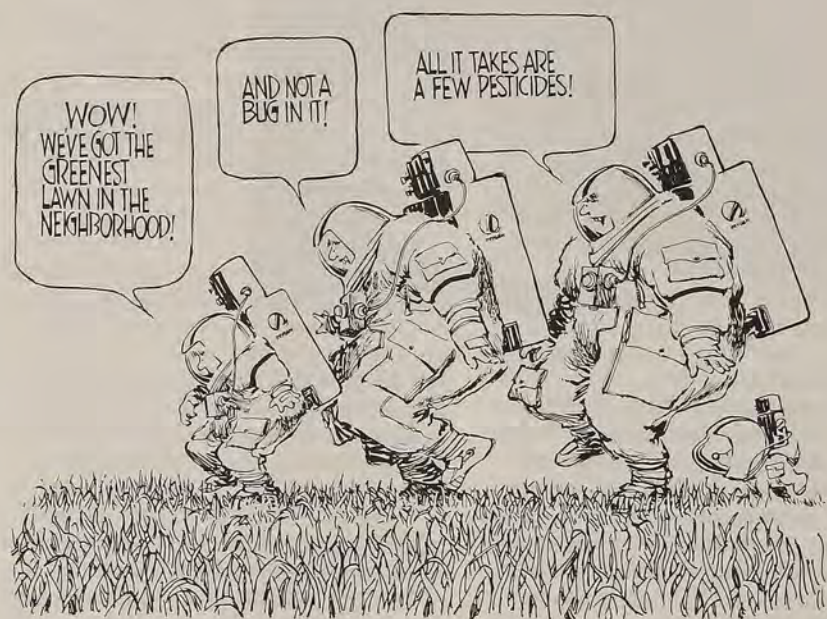
But now there is trouble in suburbia; concerns about the environment and changing tastes in landscaping are challenging this deeply ingrained American habit, and with it, some believe, the lawn industry.

"Most definitely they have been faced with a challenge," says Doug Welsh, extension horticulturist at Texas A&M and president of the National Xeriscape Council (NXC). "They've been faced with the question of whether they can do business as usual—I don't think any of us can do business as usual." Welsh says interest in Xeriscaping—low-water landscaping that in many parts of the country calls for limited turf areas—is burgeoning. He cites hundreds of recent articles on the subject in the national and local press and thousands of requests for information from NXC. After the *New York Times* ran an article on Xeriscaping last fall, Welsh's organization received 2,400 requests for \$1 information brochures.

Welsh feels that if the lawn industry does not incorporate Xeriscaping—through the use of low-water turf grasses and more conservation-conscious cultural practices like lower fertilizer application—many businesses will eventually suffer. "Xeriscaping is an opportunity, not a crisis. The green industry has to be big enough to realize that our marketplace doesn't have a problem with it...Anybody who is fighting it is fighting a losing battle."

Susan Cooper, staff ecologist at the National Coalition Against the Misuse of Pesticides (NCAMP), sees rising interest in nonchemical lawns in the 50 to 200 requests NCAMP receives each week for information on organic lawn care. "People are questioning the water usage [of lawns] out West, they are more interested in having wildlife, birds, and butterflies in their yards, and are questioning whether they want to expose their children to pesticides."

The popularity of the National Wildflower Research Center (NWRC) supports Cooper's assessment. Only eight years old, NWRC has a membership of 17,000 and receives an average of 10,000 inquiries a year. "We try to



change expectations of what an urban landscape looks like," says resource botanist Annie Gillespie. "We're not antigrass, but we do try to get people to understand that it is the most resource-consuming plant in many areas." It is impossible to calculate how many Americans are substituting wildflowers for turf, but Gillespie is buoyant about the increased demand for native plants, pointing to 300 nurseries that now sell American natives.

Do these trends add up to doom for the lawn care industry? There seems to be a consensus among many in horticulture that Americans will always grow lawns. The statistics, so far, bear this out. The 1989-90 *National Gardening Survey* conducted by the Gallup organization for the National Gardening Association shows that the number of households caring for lawns—53 million—has not changed for three years. Many believe that the nature of this care will evolve to include professional preventive maintenance and organic services that emphasize healthy soil and healthy plants rather than quick-fix chemical solutions to pest and weed problems. But they don't see it happening overnight.

Neal DeAngelo, incoming president of the Professional Lawn Care Association of America (PLCAA), does not see much consumer demand for nonchemical lawn care, only small pockets of interest here and there; he anticipates that more firms will provide organic alternatives in time. Tom Delaney, PLCAA's director of

governmental affairs, also sees only spotty demand for alternative lawn services, but feels this will grow. "Those [lawn care providers] that are able to have some foresight and see the future will be able to compete," predicts Delaney. "Those that don't, those that say 'I've always done it like this and I always will' will find themselves out of business." Delaney also feels the industry has to do a better job communicating the environmental benefits of turf.

Eliot Roberts of the Lawn Institute (see page 5) takes a moderate position—between what he calls the misinformation and doom-mongering of environmental activists and the intransigence of many in the lawn care industry who do not see the positives of organic practices. "The lawn care industry has a lot to lose if there is not some measure of rebuttal and some level of confidence restored in the product we're dealing with," says Roberts, observing that the Lawn Institute receives more questions on organic lawn care than on any other topic. "What's happening in the landscape industry is a small part of what's happening in the country as a whole as people are challenging science."

Roberts and others cite PLCAA's new Grasscycling campaign—designed to get mowers to quit bagging their grass clippings—as an example of the lawn care industry's potential to grab the environmental spotlight while promoting excellent lawn culture. "I think there's going to be a quarter-turn—

Reprinted by permission, Don Wright/Palm Beach Post

people are going to compost more, they're going to use mulches, and they're going to leave their clippings on the lawn," predicts Roberts.

On the other hand, Roberts feels it may not be so easy to convince lawn care companies about the horticultural benefits and the economic potential of organic lawn services. "I get the impression that many in the lawn care industry are still nervous about the concept."

One who is not is Bob Riley, president of Green Pro Services in Hempstead, New York, which has been providing nonchemical lawn care and products for 14 years. "We work to get the soil healthy as well as the grass plant healthy, and as a result we can do without a lot of chemicals," says Riley. Riley feels that the demand for alternative lawn care service is mounting; his business has jumped dramatically in the past three years. "The industry is responding to it. Unfortunately the practitioner doesn't know what he is responding to." According to Riley, many lawn care services think "organic" means simply eliminating chemicals and do not strive for what he calls "holistic health for the grass plant." "Where the industry has gone wrong," says Riley, "is that they look to chemicals as short cuts, totally forgetting basic horticulture." He anticipates a diversified industry in the future, with some firms providing a totally organic approach, others using a limited amount of chemicals, and a third group still dousing lawns with chemical fertilizers and pesticides.

Steven Zien, executive director of Biological Urban Gardening Services

The Lawn Institute

Since 1955, the Lawn Institute has been an important source of information on turf grass and lawn care. Funded by the turf grass seed industry, the Lawn Institute provides a variety of resources that should be of interest to both amateurs and professionals. Individuals can obtain Lawn Institute Special Topic Sheets (LISTS) on subjects ranging from organic lawn care to recommended turf cultivars.

Each year the institute's Variety Review Board names what its members deem the best grass cultivars available. This year, they whittled 350 cultivars on the market down to 56 that met their standards for such attributes as texture, color, and tolerance of drought and foot-traffic. These winners included 21 Kentucky bluegrasses, nine turf-type tall fescues, 13 perennial rye grasses, seven fine fescues, and a Bermuda, 'Cheyenne', with two advantages over most others: it can be grown as far north as Pennsylvania and can be started from seed.

The Lawn Institute also publishes a quarterly press kit detailing seasonal lawn care and a more technical quarterly newsletter, *Lawn Institute Harvests*. For a list of LISTS, or for information on any turf topic, send a self-addressed stamped envelope to the Lawn Institute, County Line Road, P.O. Box 108, Pleasant Hill, TN 38578.

(BUGS) in California, a national membership organization devoted to reducing toxic pesticides in urban landscapes, is confident that the conflict between Xeriscape advocates and the lawn industry will fade as researchers develop more drought-tolerant and water-conserving grasses. "People don't want to give up their lawns," says Zien, "but they are willing to learn how to properly irrigate and to use new varieties." He also envisions a rising demand for organic lawn care. "The industry, if not already going over to organic programs, is at least putting it in the back of their minds that they might have to do it someday." Zien adds, "I don't think the industry is changing because they think chemicals are unsafe, but because the public demand is there and they're trying to meet it."

Even the largest lawn care company in North America, whose very name draws attention to the issue, is feeling the shifting ethic. "Back when we were founded in 1969 it was a state-of-the-art name," says public relations manager Deb Strohmaier of the name "ChemLawn." She admits that it might no longer be so useful, and reports that the company is actively considering changing it. Nevertheless, ChemLawn seems confident in the service they are offering, and for good reason. Net sales jumped from \$374.6 million in 1988 to \$394.7 million last year. But just in case lawn owners change their minds, ChemLawn has tested an organic service in three markets and is contemplating taking it national.

Dyeing Dead Lawns

It was bound to start in California, the motherland of movie stars, glitter, and illusion. Since Santa Barbara banned lawn watering last February, landscapers have done a booming business painting lawns green. The most famous is a landscape architecture PhD who calls himself "Dr. Dirt"—he charges \$45 to make up the average lawn.

Santa Barbara is facing the most severe drought and water shortages in the entire West: lawn lovers have been forced to buy water from private water companies, to irrigate with home bath water, or to dye their lawns with the hopes that one day, the rains will return. Walter S. Barrows, a.k.a. "Dr. Dirt," sprays lawns with a potion of vegetable dye, an antitranspirant to reduce water loss, and a little fertilizer. "It's just like a peroxide blonde's hair," he claims. "It doesn't kill the grass." Could this be the wave of the

horticultural future for arid regions of the United States?

Sandy Marting, director of public relations for the Professional Lawn Care Association of America, has never heard of the practice. "As far as I know, we have no position on this subject."

Eliot Roberts, director of the Lawn Institute, says that lawn colorants have been used since the 1950s on lawn and sports turf that turns brown because of injury or summer dormancy. The practice, he adds, has taken on an entirely new life with the advent of regional water shortages.

Roberts cautions that in order for lawn dyeing to work, there must be sufficient foliage to collect and hold the green pigment—thin, weedy strands of grass will not color well. Further, the dye needs to be applied with a high-powered sprayer so that it blasts all the way down to the soil. The treatment must be repeated

once a month or, like "Dr. Dirt's" blonde the lawn will sport telltale brown roots. The one problem with lawn coloration as a solution for dead grass, according to Roberts, is that weeds will still move in; lawn owners will eventually have to use herbicides to eradicate them. "There's no substitute for having a living plant occupy a space on the ground because it prevents other living plants from occupying the same space."

But "Dr. Dirt" doesn't really see coloration as a solution either. He calls it a stopgap measure that will be in demand until the drought ends or authorities develop a more effective water conservation program. When asked how he would respond if a cynical Easterner called lawn dyeing just another frivolous California fad, "Dr. Dirt" replied, "I'd have to agree with that."

The Storm That Laid the Golden Apple

1969 seemed more like an end than a beginning for Ginger and Clyde Harvey, owners of several apple orchards in Lovingson, Virginia. That was the year Hurricane Camille thundered through Nelson County, taking 100 lives, downing houses, and uprooting trees. The Harveys were hit hard. The storm killed seven members of one tenant family and destroyed most of their equipment; three of their orchards collapsed into the river. "The whole mountainside came down and everything was gone," remembers Ginger Harvey.

Despite the great loss and suffering, the Harveys patched things up, retrieved over 70 'Winesap' trees from the river bed, replanted them in an old 'Albemarle Pippin' field, and began anew. "You just don't give up. You keep trying. The Harvey family," says Ginger, "are fighters."

In 1975, nature intervened once again in the beautiful hills of Nelson County. Clyde Harvey, inspecting his hurricane 'Winesaps', discovered something remarkable—one tree growing in the middle of the replanted grove, amidst all of the other deep red winesaps, bore gold apples. In 1979 they called in Dr. George Williams, a Virginia Tech horticulturist, to help identify the apple.

Williams concluded that the tree was not one of the 'Winesaps' that had been washed into the river, but a new



Clyde Harvey with 'Ginger Gold'.

variety, most likely a chance seedling since it was on its own root stock. The Harveys believe the apple is a mix of 'Albemarle Pippin', 'Golden Delicious', and some third variety. Convinced of its commercial viability, they patented it in 1989 and named it 'Ginger Gold'.

According to Dr. Rob Crassweller, associate professor of pomology at Penn State University, new varieties infrequently come from chance seedlings. "The majority of apple varieties come as a result of controlled breeding or from a mutation on a current variety."

Holy Cherimoya, It's the Pits!



Rare Pit & Plant Council display at the New York Flower Show.

"Some people grow trees to eat the fruit, we eat the fruit to grow the trees," says Deborah Peterson, editor of *The Pits*, the newsletter of the New York-based Rare Pit & Plant Council. Their active membership is, as she puts it, "limited to the number of people that will fit into my living room, 25." But their newsletter is sent all over the country, and even to Europe and the Virgin Islands. Why would Texans, for example, join an organization whose main event is a booth at the New York Flower Show? "We have become masters at growing these plants in pots," answers Peterson.

The Rare Pit & Plant Council evolved out of the National Avocado Pit Growers Contest held at the Gramercy Park Flower Show in 1972. After they had seen one avocado too many, a small group of enthusiasts decided there must be more to pit gardening and began growing and experimenting with malangas, taros, and other fruits and vegetables—mostly tropics. They now meet once a month to eat, exchange, and discuss a particular plant. A recent meeting focused on persimmons. Eight different varieties were munched on, a member presented a paper, and

Photos courtesy of the Rare Pit & Plant Council

Courtesy of Clyde Harvey Inc.



Loquat

Pits Continued from page 6

they all enjoyed persimmon cocktail dip and persimmon cake. Occasionally they go on "pit stops"—forays into the numerous ethnic markets to search out, purchase, and devour obscure fruits. They also publish a useful pamphlet (*The Pits*) on the history, culture, and culinary wonders of everything from black sapote (it makes a great mousse) to tamarind (tamarind tea is refreshing, but—beware—also a laxative).

Each spring the Rare Pit & Plant Council mounts an educational exhibit at the New York Flower Show. They display specimen trees; beets, turnips, and other roots in hyacinth glasses; pits in various stages of growth; and a minizoo of china pets standing in fields of sprouts. Members also display their entries for the annual challenge class (this year it is papaya).

Since they've been at pit growing for some time now, some members live in veritable tropical gardens full of mangos, papayas, loquats, cherimoyas, and passion fruits. Occasionally they donate the larger specimens to local botanical gardens. "Sooner or later," sighs Peterson, "you're driven to a greenhouse. Finally my husband said, 'Enough of this' and he built me a greenhouse."

The Rare Pit & Plant Council says that the following should be available in ethnic markets in November and December: canistel, carambola, kumquat, persimmon, pomegranate, passion fruit, and tamarind.

To join, send \$10 to Rare Pit & Plant Council, c/o Marty Biesc, 303 East 37th Street, New York, NY 10016. Members receive 10 issues of *The Pits*.

Apple Continued from page 6

Ginger Harvey describes her namesake as "perfect." 'Ginger Gold' is an early apple, maturing at the end of July. The yellow apples are large, firm, and nearly blemish-free; they reportedly do not discolor after peeling. Williams is also enthusiastic: "For that time of year, it's one of the best apples I've ever seen."

Two nurseries—Adams County Nursery in Aspers, Pennsylvania, and Van Well Nurseries in Washington State—currently propagate 'Ginger Gold'. Adams County shipped the first stock this spring—25,000 trees—to growers all over the United States. The Harveys have also received inquiries from South Africa, New Zealand, and Australia, and a French nursery has applied for the exclusive European rights. "There's a tremendous amount of interest in it," says Adams County sales manager Phil Baugher. "This is an altogether new variety, not just an improvement on an old variety. It has a tremendous potential."

"Typically, summer varieties are soft varieties that ripen unevenly on the tree, don't have firm flesh, and don't have

much shelf life. This variety can be harvested all at once, it ripens evenly, has the firmness of October varieties, and will keep in storage for six months."

Crassweller believes that it is much too early to judge the commercial potential of 'Ginger Gold'. In order to fill a major market niche, not only does a new variety have to be of good quality, but nurseries and growers must get excited about it and plant it *en masse*. It took about 20 years, says Crassweller, for 'Granny Smith'—one of the most famous chance seedling varieties—to become prominent.

Although 'Ginger Gold' will probably have the most impact at a commercial level, Baugher also recommends it for the home orchard. Since it has a six week shorter growing season than fall apples, it can be harvested before the August diseases set in, and offers less opportunity for pest onslaughts. Its open-spreading habit and prolific flowers should also be attractive to home growers.

'Ginger Gold' trees may be obtained next spring at Adams County Nursery, Inc., Nursery Road, P.O. Box 108, Aspers, PA 17304.

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Gardeners' Q&A

Q: Many manufacturers of water dechlorination filters are claiming that dechlorinated water is better for house plants. Is this true?

T. C., Lanham, Maryland

A: There is no evidence that chlorine, in the amount likely to be present in municipal water supplies, will adversely affect house plants. In 1985 Gregory J. Bugbee and C. R. Frink of the Connecticut Agricultural Experiment Station tested 11 species of potted foliage plants, eight species of potted flowering plants, and four species of vegetable seedlings for their responses to chlorinated water. They irrigated the plants with water containing chlorine concentrations ranging from 0 to 77 parts per million (ppm). (Municipal drinking water usually has 1 ppm of chlorine.) They also poured water directly onto the plants.

"I don't think it's a realistic concern," says Bugbee. "Some plants, like spider plants, even seemed to grow better." Only at extremely high concentrations (37 and 77 ppm)—concentrations beyond the range of municipal water supplies—did chlorine begin to stunt plant growth and cause leaf yellowing.

However, the fluoride added to public water supplies in many cities can injure cut flowers and house plants. Researchers at Washington State University found that when cut roses were placed in fluoridated water, their vase life was reduced as much as 40 percent. Fluoride can also cause leaf tips to brown on house plants such as spider plants and dracaenas.

The solution? Use deionized or distilled water, or let treated water stand for two to five days.

Q: Grubs are destroying patches of my lawn. Is there anything that I can do?

C. P., Erie, Pennsylvania

A: Grubs are the larval stage of beetles. They feed on grass roots and can inflict serious damage to a lawn; moles burrowing into your lawn to snack on grubs may do additional damage. Luckily, you can enlist a number of allies—birds, bugs, and bacteria—to help combat grubs.

Brown patches develop in the turf where grubs are feeding. Turn over

this sod every few days until late fall. Birds will find and eat the exposed grubs. If you create habitat for birds in the yard, they will help to control grubs throughout the year. Predatory nematodes, sold in a solution called Scanmask, also attack grubs. Or you can set loose *Bacillus popilliae* on them. This bacteria causes milky spore disease, which is most effective on Japanese beetle grubs. It is available as a powder that can be spread on the ground anytime it is not frozen. Milky spore takes one to three years to kill the grubs, but it remains effective for 10 or more years since the spores stay in the soil.

Next summer you can go after the beetles that produce the grubs. Hand pick them from your plants and plop them into a bucket of water with kerosene floating on top. If you have too many beetles to hand pick, apply rotenone.

To make up for the damage that the grubs have done to your grass roots, water the damaged areas more frequently, but lightly. This helps the grass pick up moisture through its injured roots.

Q: May I use fresh, green grass clippings to mulch my trees?

J. K., Albany, New York

A: You are to be commended for not wanting to bag your lawn clippings. Yard waste is a major part of America's garbage problem. There is no reason for us to be throwing away all of this natural fertilizer.

Fresh grass clippings may be used as a mulch for trees, but according to horticultural consultant Jim Borland of Denver, Colorado, "on a list of good organic mulches, it would come last." Fresh grass can become matted and clump together so that air and water will not penetrate to the roots. To avoid this, Borland recommends that the grass be applied in a thin layer around the tree, and then be allowed to dry completely before more is added. Even better, just leave the clippings on your lawn. By removing them, you are removing a valuable source of nitrogen.

Don't use fresh grass to mulch seedlings or transplants of herbaceous plants. Grass heats up as it decomposes and could damage the plants' roots.

Need advice? Call the AHS Gardeners' Information Service toll free at (800) 777-7931 from 11 a.m. to 3 p.m. EST Monday through Friday.

Give Your Yule Tree Back To Nature

Each holiday season, millions of Christmas trees end up forlorn refugees, destined for the city dump—from family treasure to trash literally overnight.

Why waste a tree, and especially your Christmas tree—a symbol of hope, giving, and life—when it can be put to such good use?

♦ Purchase a balled and burlapped or a potted tree and plant it after the holidays are over. Living trees are more expensive than cut ones, but they will be enjoyed year after year rather than for a few short days. When ready to plant, be careful not to move the tree directly from a warm house into freezing temperatures. First take it to a sheltered area for a few days so it can adjust to colder temperatures.

♦ Use a cut tree for a bird feeder. Place it outside, decorate it with

orange slices, bread, and suet, and watch birds jolly up your winter landscape.

♦ Clip off the boughs into one-foot lengths and use them to protect shrubs and tender perennials from the stress of winter wind.

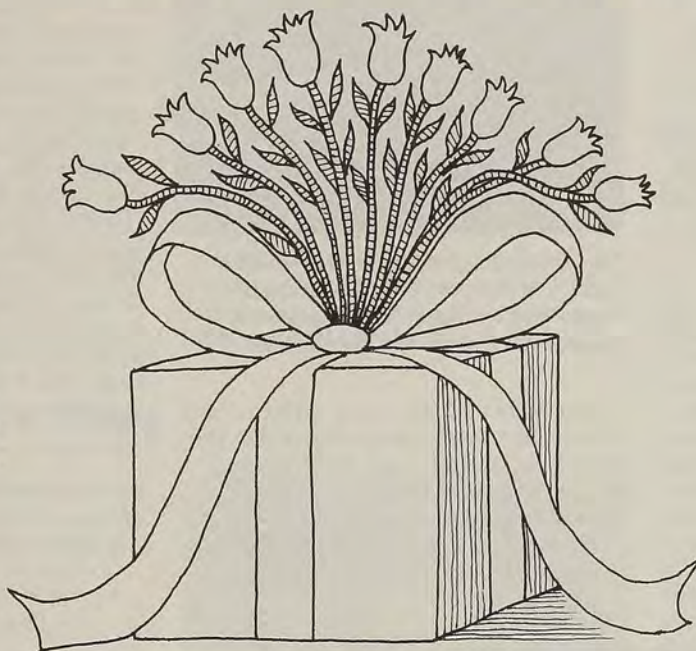
♦ You may use the needles to mulch plants, but add nitrogen along with them since they deplete soil of its nitrogen content. The acidic residue of conifer needles is especially good for azaleas and rhododendrons.

♦ Compost your Christmas tree. Remove the needles, chop up the branches, and shred the trunk to speed up the decomposition process. Many jurisdictions offer Christmas tree collection and composting services. Check with your local department of public works or your arboretum for details.

Delight a Friend this Holiday Season!

Select a gift that lasts all year. Give your green-thumbed gardening friends a membership in the American Horticultural Society (and receive a little something for yourself). The world of gardening opens through membership in the American Horticultural Society. As a member, your fortunate friend will receive a full year of *American Horticulturist* Magazine and News Edition, 12 issues in all, each one packed with valuable insights and beautiful images.

However, *American Horticulturist* is just one part of AHS membership. Your Society provides a Free Gardening Hot Line, Free Seed Program, Discount Garden Book Buyer Service, Symposia, and Travel



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In the same spirit of giving, with your order of AHS Gift Membership(s), we'll send you a free copy of the Taylor Pocket Guide *Perennials for Shade*. A \$5 retail value! This gift is yours as soon as we receive the postage paid

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Regional Notes

Heirloom Gardening at an Iowa Fort

"They just call me the gardener," says Debbie Ireland. But the woman who is creating the heirloom garden at Old Fort Madison, a reconstructed early 19th-century frontier outpost in Fort Madison, Iowa, is also a horticultural sleuth.

Her task is to search out varieties of vegetables, ornamentals, and herbs likely to have been grown at the fort, which existed for a scant six years (1808-1813). She has nothing like the voluminous garden writings of Thomas Jefferson that have enabled horticulturists to recreate his late 18th-century garden at Monticello. The only documentation discovered for the old fort are vague garden drawings and one letter from a man delivering pea and bean seeds to the fort.

Since an accurate replica is impossible, Ireland plants period varieties that were likely to have had a function in the life of the fort—herbs for seasoning, teas, and medicinal uses, early European and native American vegetables, utility plants such as linen flax, and ornamentals. An old rose area was to be planted with heritage roses this fall. "The challenge of it has been to find varieties old enough to fit the fort period," says Ireland.



Old Fort Madison gardener Deb Ireland, right, with visitors Francis Boeding of West Point, his sister Marianna Mori of Seaside, California, and her children.

But little by little—and with the help of heirloom seed organizations like the Seed Savers Exchange, CORNS, and Native Seeds/SEARCH—she has created a garden of pre-1830 varieties.

Ireland is most enthusiastic about "the wonderful world of old-fashioned

vegetables." The 'Paris Cos' lettuce, a pre-1800 romaine-style lettuce, grows in the Old Fort's solid clay with no insect trouble at all, as does the 'White Bush Scallop' squash, a native American variety. In fact, nearly all of her vegetables have thrived in clay, with few pest problems, under organic methods.

Ireland plans to use the garden to instruct visitors at several levels. Costumed interpreters in period dress discuss the agriculture of the frontier and introduce visitors to the heirloom garden. Next year Ireland hopes to teach seed-saving techniques and use the harvest for campfire demonstrations of fort cooking. But one of the most useful lessons she hopes to impart concerns the importance of heirloom varieties for Americans today. "Old plants have a variability," says Ireland. "Over a number of years they adapt to local conditions." Because commercially available hybrid varieties grow well only in certain limited conditions, she considers heirloom varieties as more appropriate for home gardeners. "If they hadn't been so wonderful, they wouldn't have survived."

For more information write Old Fort Madison, City of Fort Madison, 811 Avenue E, Fort Madison, IA 52627.

Prairie Home Companions

The Healy Road Prairie has a new address. On July 7 the Illinois chapter of the Nature Conservancy and an earth moving company moved the top 16 inches of soil, the rare plants, and some of the insects that lived at the prairie near Barrington Hills, Illinois, to Bluff Spring Fen, a protected nature preserve six miles away in Elgin. The Healy Road Prairie, a rare dry gravel prairie remnant, was on the site of an actively mined gravel pit and would have been destroyed during mining of the underlying gravel.

"Since none of the species at the Healy Road Prairie is endangered, there was no legal way to stop the gravel mining," said Jo Rydel of the Nature Conservancy. Relocation is not the best way to preserve a prairie, but in this case it was the only option left.

A few days before the move volunteers trapped jumping mice,

meadow voles, and other small mammals and transported them to Bluff Spring Fen. Sweep nets captured flying insects while pitfall traps provided temporary homes for ground-crawling insects. Then it was moving day for the plants. Pale purple coneflowers, leadplants, shooting stars, yellow star grass, blue-eyed grass, porcupine grass, and other wildflowers and grasses were relocated to their new home.

Once the prairie was moved to Bluff Spring Fen, volunteers from the Chicago area helped repair the prairie sod and adjust the plants by hand. Individual plant and animal species have been relocated in the past, but this is one of the first attempts to relocate an entire natural community.

"Some of the leadplants died immediately," Rydel said. "Leadplants that were dug out with a tree spade had a higher survival rate than those that

were moved with the prairie. With the tree spades we were able to dig down about five feet to reach all of the root. Everything else seems to be doing fine."

Over 450 volunteers helped with the relocation. Moving the prairie "captured the imaginations of many people in the community. A lot of new people showed up to help our most active volunteers so there were some benefits to a bad situation," Rydel said. Williams Nursery in Elgin supplied tools and equipment.

For more information about the Nature Conservancy's programs write: The Nature Conservancy, 1815 North Lynn Street, Arlington, VA 22209. For more information about the prairie relocation write the Illinois chapter at 79 West Monroe, Suite 708, Chicago, IL 60603.

Florida's Animal Friends . . .

You've probably heard of butterfly and hummingbird gardens, but how about mammal landscapes or herptile habitats? These are all elements of a back yard wildlife refuge as conceived by the Landscaping for Wildlife Project, a new program sponsored by the University of Florida's Institute of Food and Agricultural Science (IFAS) and the Nongame Section of the Florida Game and Fresh Water Fish Commission.

"Wildlife habitat is so jeopardized in the state of Florida because of rapid construction," says Joe Schaefer, IFAS urban wildlife extension specialist. "This is the easiest way for people to get involved—on their own property."

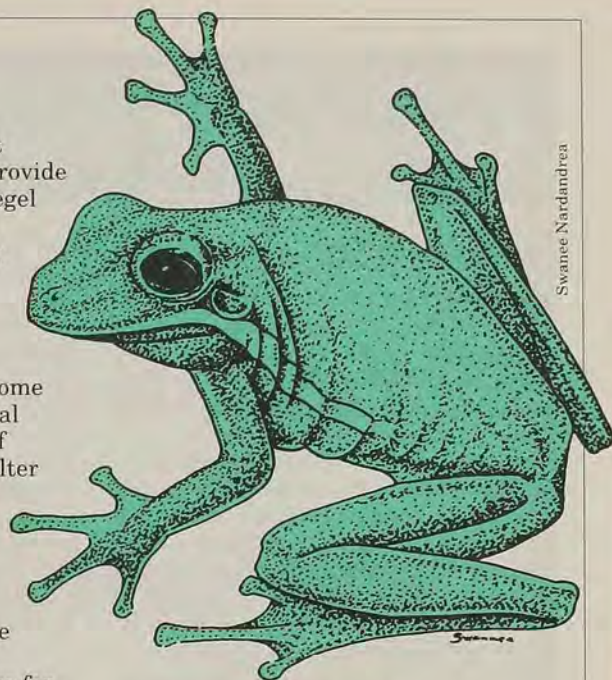
The program works like a correspondence course. Participants receive educational materials by mail, take an examination, and design their own landscapes based on what they have learned. Upon completing the program they are awarded a wildlife habitat certificate.

IFAS recommends a diversity of native plants that attract birds, butterflies, mammals, reptiles, and amphibians. As urban wildlife extension specialist Craig Huegel puts it, "We are looking for people who want to take out a small chunk of their lawn and plant primarily

native species of plants that don't require much maintenance and provide food and shelter for wildlife." Huegel suggests shaping the lawn like a meadow opening, by surrounding the grassy area with native plant species that provide hiding or nesting cover and food.

The program also encourages some radical departures from traditional landscape design aesthetics, all of which are useful in providing shelter for wildlife. One of the greatest services a landowner can do for wildlife, for example, is to leave dead trees standing. More than one-third of all forest-dwelling birds and mammals require a tree hole for nesting or shelter. The project booklet, "Planting a Refuge for Wildlife," also gives instructions on how to construct brush piles—great shelter for birds, rabbits, and other small mammals.

Besides slimy salamanders, squirrel treefrogs, eastern woodrats, shrews, and snakes—all of which help control insects—the program gives detailed instructions on how to attract many different types of birds, the wildlife



Swanee Nardandrea

that, according to Schaefer, participants most hope to attract. But why not a garden for green anoles (sometimes called the American chameleon)? They change colors from a bright green to dark brown, catch insects aplenty, and will entertain you by pumping out their hot pink throat fan—the perfect complement to a perennial border or a conifer collection.

. . . and Fire Ant Foes

A University of Florida entomologist has been awarded a patent for a natural fungus that controls fire ants. Jerry L. Stimac discovered *Beauveria bassiana* in Brazil in 1986. "When we first found it, it worked so well, we couldn't believe it."

Fire ants (*Solenopsis* spp.), small red or black ants that were accidentally introduced from Brazil and Argentina in the 1920s and 1930s, plague the South and the Southwest United States. Their most troublesome aspect is their nests—earthen mounds up to three feet high, containing as many as 300,000 ants. They damage lawns, gardens, parks, pasture lands, and fields and can ruin garden equipment and machinery. Fire ants will also feed on most anything—vegetables, bark, even small animals—and they will protect crop-damaging insects like aphids and mealybugs.

The fungus kills fire ants by producing white spores that fuse to the fire ant's skeleton and then penetrate into the body. The spores reproduce inside of the ant until they break through the body cavity, cover the ant, and thereby provide a means of infecting other ants. The fungus is not



Patented fungus may be a new solution to an old problem. Above, an unidentified worker looks at a fire ant hill in a swamp area of Mobile, Alabama, in this circa 1950 photo.

known to be toxic to humans or other vertebrates and, according to Stimac, is as effective as most chemicals in killing fire ants. He claims that a single application of the fungus could eliminate at least 70 percent of typical fire ant mounds.

A major hurdle must be crossed, though, before a commercial fungal formulation is available. "The trick is, how do you get those spores on the ants down in the soil?" asks Stimac. He anticipates that it will take about two years to develop an effective application technology.

State and federal governments spent over \$200 million between 1950 and 1982 to control or eradicate the prolific pests. Richard S. Patterson, research leader for the Imported Fire Ants and Household Insects Section of the Agricultural Research Service's Insects Affecting Man and Animals Laboratory in Gainesville, Florida, estimates that fire ants cause \$5 million worth of damage annually in Florida alone. Patterson hails the fungus as "a major breakthrough in the biological control of fire ants. It's the first biological control that can suppress ants."

Courtesy of USDA

Members' Forum

Dutch Elm Origins

I much enjoyed your interesting article on the plight of the American elm, "Nightmare on Elm Trees," in the July issue. However, I would like to correct a misconception that is in grave danger of becoming respectable through consistently being repeated in print.

This relates to the question of the geographical origin of Dutch elm disease ("Where Did It Come From?" page 2). You cite Strobel and Gray as having noted, in a recent article in *American Nurseryman*, a theory that the disease originated in Asia and was brought to Europe on the Trans-Siberian Railroad during World War I. They did, indeed, present this hypothesis, and moreover they attributed it to me!

Unfortunately, I proposed no such thing. What I have suggested is that Dutch elm disease may not even have come from China or Japan, but seems on present evidence more likely to have originated in the Himalayas or Europe. Those wanting more information should see my article, "China and the origins of Dutch elm disease: an appraisal," in *Plant Pathology*, 1990, volume 39, pages 5-16.

Dr. C. M. Brasier
Farnham, Surrey, England

Camouflaging Compost

I enjoyed your July stories on composting, but one topic you didn't address has been a matter of concern to me and other members of the Bethesda Garden Club.

We would like to promote composting in our community, but one thing that many people say is, "I have only a small yard. Where can I put a compost?" They don't have room for the huge composts with three separate compartments. And they don't want to put one of the black plastic "tumblers" where it can be seen.

As a landscape designer, I deliberately leave one part of every garden unplanted, and tell my clients that sooner or later, they will need it for a compost. But I would like to give them some more specific ideas about how they can hide a compost.

Irene Sinclair
Bethesda, Maryland

You're right to tell your clients that they will soon become composters. Maryland recently introduced legislation to outlaw yard wastes in landfills. Attractive compost bins can be made of treated

lumber by even inexperienced carpenters. A single bin may not be as efficient as one with several compartments that allow you to sort the raw from the finished material, but it will work (see the next two letters) and it won't take up much room, either. If even that is too distracting in a landscape, some suburb-dwellers tell us they have used two or three evergreen shrubs or tall container plants as a screen.

However, it's important not to reduce air circulation or accessibility to the compost. We would love to hear how other members have kept this gardener's friend from being an eyesore.

Activators: Con

"Pros and Cons of Activators," on page 5 of the September News Edition ends with your request for "controlled, unbiased studies on the subject." The results of a very exhaustive, scientifically controlled study were published in a thorough booklet in 1953: Sanitary Engineering Research Projects, University of California, Reclamation of Municipal Refuse by Composting, Berkeley, Technical Bulletin No. 9, Series 37. The California study tells us that activators are a waste of money.

Being a gardener of many years—and 86 years old—I have consistently composted about 100 construction wheelbarrows per year of finished compost. The leaves, about 50 percent oak, and garden and kitchen refuse are composted in a one-year cycle in a manner I described long ago in a publication of the Missouri Botanical Garden. Leaves must be quite wet when put into the pile. Layers of about two feet of leaves are alternated with rough garden refuse (but no wooden material!). Even in the driest years the compost was ready for garden use in one year without any watering other than rain. Turning the pile is unnecessary and nearly impossible without machinery.

Edgar Denison
Saint Louis, Missouri

While other studies must have been done on this subject in the past 37 years, you may be right that they revealed nothing new, since most experts scoff at the use of activators. Your experience shows that there is more than one way to compost. You can choose one bin or several, slow compost or fast, depending on the space and energy you have available.

Activators: Pro

Re the article "The Pros and Cons of Activators," I find them beneficial. In an above-ground compost bin they hasten decomposition in a compost pile that I do not turn but only poke holes in the top occasionally. (This particular compost pile is almost 100 percent kitchen wastes.)

Mona Brafman
Far Rockaway, New York

Having Water and Saving It, Too

Recently I received a very courteous response to a call about water gardening and want to commend your staff.

I thought you might add to your records the formation of our new Idaho Water Garden Society. Just organized this summer, we had only fifteen members to start, but already have replied to three times that number of inquiries. In this arid climate there is an increased interest in all forms of Xeriscaping; this one affords the ultimate in pleasures: a little like eating yogurt and having it taste like a fudge sundae! Inquiries to me as secretary/treasurer can be sent to 2570 South Swallowtail Lane, Boise, ID 83706.

Carol S. Delay
Boise, Idaho

A water garden requires less water than a lawn, according to John Mirgon, membership chairman of the International Water Lily Society. Colorado, Oklahoma, and Missouri have also established local organizations. For information on starting one in your area, contact John Mirgon, 528 South Alcott Street, Denver, CO 80219, or call (303) 922-9559.

Dry Reading

I thought members might be interested in obtaining the enclosed bibliography on Xeriscaping, or gardening with limited water, published by the Los Angeles Public Library and the State of California Answering Network (SCAN).

C. Fogelstrom
Washington, D.C.

The availability of usable water is a concern from coast to coast. SCAN will let us share the six-page bibliography, published in April, with our members. Send your request to Gardeners' Information Service in care of the AHS address. Please enclose \$2 for postage and handling.



1989-1990 Contributions



**A Report
to
Members
&
Friends
of the
American
Horticultural
Society**



1989-1990 Major Gifts

The American Horticultural Society gratefully acknowledges these major contributions and extends sincere thanks to:

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1989-1990 Annual Appeal

On behalf of the American Horticultural Society, Annual Appeal Chairman David M. Lilly and Co-Chairman Ann Lyon Crammond thank each of you who gave so generously to the 1989-1990 Annual Appeal. Your gifts provide additional operating support necessary to keep the Society vitally alive with new ideas and programs for the future.

While our goal of \$300,000 was an ambitious one, we are encouraged by the level of participation. At the close of the fund drive in June, over \$180,000 had been received from our members and friends. Our sincere thanks to all contributors. Your support is invaluable.

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AHS Bulletin Board

Volunteer Program Gets New Life

The American Horticultural Society has revitalized a volunteer program at its River Farm headquarters. Volunteers are sought to help staff the Gardeners' Information Service (GIS), to tend the grounds, to staff the book program, to handle public relations, to work as docents, and to assist with various clerical tasks.

A number of volunteers have been donating their time and knowledge to AHS for some time now. Alice Bagwell has managed the AHS library since 1982, logging many hours organizing and cataloging. "It's a fascinating collection with many books on horticulture that are not in any other horticultural library in the area, including the National Agricultural Library, the Library of Congress, and the National Arboretum," says Bagwell, the former chief librarian for the U.S. Comptroller of the Currency.

Flo Broussard is now in her fourth year as an AHS volunteer. "I'm the Xerox Queen," says Broussard, who tackles not only photocopying but whatever other task the Membership Department gives her—data entry, assembling new member packets, sending out renewal notices. Why does she come to River Farm? "The ambience and the camaraderie," she says, plus her personal love for plants and gardening.

Jane Paschal recently began working with GIS. A Master Gardener and a veteran of Fairfax County, Virginia, plant clinics, Paschal helps research and answer plant and gardening



New GIS volunteer Neil Pelletier, left, talks with volunteer coordinator Tom Barrett.

questions, from the simple ("Where can I purchase hostas?") to the not-so-simple ("Do you have a list of plants introduced to the United States by African Americans?"). "Most every question is challenging," says Paschal, "because they are all so different. You just don't know what the next question will be. I learn a lot that way."

Experienced gardeners and anyone who has an interest in horticulture are encouraged to join the program. Volunteers can earn free membership in the Society and admission to lectures and workshops.

Says volunteer coordinator Tom Barrett, "We have a very diverse lot of volunteers—young and old, male and female, plant PhDs, Master Gardeners, apartment gardeners, and raw beginners—and each is extremely valuable to our organization."

Affiliate Program Launched

In April 1990 the American Horticultural Society began an exciting new outreach program to the memberships of North America's hundreds of plant and horticultural societies, botanical gardens and arboreta, and native plant societies. These new "Affiliate Members" will be receiving AHS publications, sharing in our information network, and participating in various ways with national and regional AHS programs.

The eleven societies and gardens that have already committed to enroll in the program are: Bok Tower Gardens, Botánica, The Wichita Gardens, Dallas

Arboretum and Botanical Garden, Friends of Fellows Riverside Gardens, Illinois Native Plant Society—Forest Glen Chapter, Kentucky Native Plant Society, Matthaei Botanical Gardens, South Florida Horticultural Society, Texas State Horticultural Society, the University of California Botanical Garden, and Wellesley College Friends of Horticulture.

The Society is extremely pleased to welcome these thousands of new Affiliate Members and we look forward to welcoming many thousands more in the months ahead.

Annual Meeting Speakers Set

Speakers, topics, and private garden visits are falling in place for AHS's 46th Annual Meeting in Birmingham, Alabama. Speakers and their tentative topics include:

♦ Robert Marvin, a landscape architect from Hilton Head, South Carolina, where he has been actively involved in wetlands preservation. He will speak on the design of the Birmingham Botanical Garden, for which he was master planner.

♦ William E. Barrick, executive vice president and director of gardens at Callaway Gardens in Pine Mountain, Georgia, and a new AHS Board Member. Azaleas will be the topic for Barrick, who holds a doctoral degree in landscape horticulture.

♦ Arthur Stewart, known throughout the Birmingham area for his floral oil paintings, will tell members how he develops one of his works.

♦ Sylvia Martin, noted garden photographer, will offer tips on capturing flowers on film.

♦ Virginia Bissell, Beverley Dunn, and Lula Rose Blackwell, whose flower arranging demonstration was a hit at this spring's Colonial Williamsburg Symposium.

Those attending last year's meeting in Seattle told us they like to visit private gardens, and the 1992 meeting will offer some inspiring, smaller scale gardens:

♦ Louise G. "Weesie" Smith has been called "the heart of horticulture in the Mountain Brook area of Birmingham." The winner of AHS's Urban Beautification award to an individual, her garden has been created largely from native wildflowers and shrubs rescued from development sites.

♦ Louise Wrinkle, corresponding secretary of the Garden Club of America, has a naturalistic garden in the midst of a grand natural site.

♦ Fay and Bill Ireland have a breathtaking new garden, featuring an all-white border that creates a stunning view from their kitchen window.

A full program for the meeting, which will be held April 17-20 at the Birmingham Botanical Garden, will appear in the January News Edition along with this year's Seed Catalog. Watch for it!

Kathleen Fisher

Making a Difference

Lois Buonopane and the Rest of New England's Best

Plant rustlers strolling the New Hampshire woods should look out for Lois Buonopane. Her tangle with three Massachusetts plant robbers led to the development of the New Hampshire Native Plant Protection Act, passed in 1987.

Buonopane lives on a private back-country road in Manchester, New Hampshire. When she heard a car stopping and starting along the road one day, she was curious to know who the visitors were and how they managed to get through the locked gate. Buonopane, who suffers from a severe breathing problem, walked slowly down the driveway to find three men and a station wagon with Massachusetts license plates near the edge of the woods. The car was filled with pink and white lady's slippers.

The men bragged that they had entered the woods by unscrewing the bolts on the gate. Buonopane pointed out that the rustlers were trespassing on private property and threatened to get her "two sons who are both six feet tall." She later told *Forest Notes*, the publication of the Society for the Protection of New Hampshire Forests, that her "one son, who is somewhat less than six feet tall, was not even home at the time." When Buonopane and her son, Larry, reported the incident to police, they discovered New Hampshire had no laws to protect rare native species.

In 1986, Buonopane sat next to Sen. Susan McLane (R-Concord) at the annual meeting of the Audubon Society of New Hampshire and related her experience with the plant thieves. That chance meeting prompted McLane, who was shocked to find that the law did not protect plants, to sponsor a bill that would protect native wildflower species from exploitation. The bill was based on a model plant protection act written by Bruce Manheim of the Environmental Defense Fund and Linda McMahan of the World Wildlife Fund.

"When Lois Buonopane, a small but spunky woman, testified at the hearings, no one doubted her outrage at the thought of New Hampshire's wildflower heritage being on the market block in other states," *Forest Notes* reported. "And no one opposed the bill, from either the public or the legislature. For hardened environmental lobbyists used to a

blizzard of objections from many quarters, it was both an amazement and a welcome respite!"

For their concern for New Hampshire's native flora, Buonopane and McLane will receive the New England Wild Flower Society's state award for New Hampshire this month. The society, founded in 1922 and based in Framingham, Massachusetts, is dedicated to the conservation of temperate North American flowers. Each year it honors individuals, groups, or organizations that have promoted the preservation or appreciation of natives.

Other state award recipients this year include:

♦ Henry Woolsey for his work as program coordinator of the Massachusetts Natural Heritage and Endangered Species Program in Boston. The program, a division of the U.S. Fish and Wildlife Service, documents plants

and animals, researches native plant habitats, and works with the legislature to protect the endangered species of Massachusetts.

♦ Liz Thompson, a botanist with the Vermont Natural Heritage program, for her role in identifying and preserving the rare plants and significant plant communities of Vermont. Thompson has conducted surveys of Vermont's native flora, lectures frequently on native plants, and has written a booklet, *Plant Communities of Vermont*.

♦ Marilyn Dwelley of China, Maine, for writing and teaching that has promoted better understanding and appreciation of native plants. Dwelley, a naturalist, lectures frequently for the New England Wild Flower Society, the Josselyn Botanical Society, and other conservation groups. She has also written three books, *Trees and Shrubs of New England*, *Spring Wildflowers of*

Nurturing Young Gardeners In Detroit

"It's unfortunate, but for our children in Detroit, their only contact with the earth is when they go to the cemetery to bury a friend who's been killed," says Clementine Barfield, founder of Save Our Sons and Daughters (SOSAD), a community organization created by mothers of children killed by street violence. SOSAD is working to instill a different appreciation of the land, and of life, by teaching Detroit children vegetable gardening, landscape gardening, food preservation, and tree planting.

This year, the SOSAD Harvest Program's third year, it employed 41 children ages 11 to 17 for eight weeks to plant a variety of vegetables, herbs, and flowers (they built a bed that said "love"), and to attend workshops on character building, self-esteem, and conflict resolution. The children also made chow-chow and other preserves with their harvest and celebrated their good work with an annual Harvest Ball. "They really feel good about it," says youth coordinator Marsha Jones, who thinks gardening teaches children lessons they can apply to life. "They learn a lot about patience—that things don't happen overnight—and about consistency, work ethics, and hard work."

This year SOSAD also launched a massive tree planting program. The goal: to plant 6,000 trees in commemoration of the 6,000 Detroit residents who have died from street violence in the last decade. Over 800 have been planted already, at schools, apartment complexes, churches, and at homes; some mark the spot where the victim was slain.

SOSAD has received increasing support from the community for its horticultural work. It is funded by memberships, donations, and a few grants; the garden land was donated by a local church; trees have come from the city and nurseries. Jones feels the group has struck a responsive chord by connecting a solution to the city's social problems and the activities of gardening. "The land gives us an idea of what we've got to do as a people. As long as we were nurturing plants they were able to grow and we got a great harvest. We, as a society, have got to get back to nurturing our children, we've got to weed out everything in our environment that's detrimental to their well being."

Send contributions to SOSAD, 453 Martin Luther King Boulevard, Detroit, MI 48201.

New England, and Summer Wildflowers of New England.

Other awards will go to:

♦ The Center for Plant Conservation in Jamaica Plain, Massachusetts, for its role in protecting the endangered flora of the United States. The center directs the National Collection of Endangered Plants, maintained by a nationwide network of 20 botanical gardens and arboreta. The center's database contains over 7,000 rare and endangered plants.

♦ *Sanctuary*, the Journal of the Massachusetts Audubon Society, for excellence in producing an educational publication promoting environmental awareness.

♦ Alexandra and Paul Olafson of Tolland, Connecticut, chairpersons for the society's Connecticut chapter, for their service to the society.

♦ The Botany Trail at the Flanders Nature Center in Flanders, Connecticut, for establishing, interpreting, and maintaining the native plants throughout its varied terrain. The Botany Trail features herbaceous wildflowers, ferns, and mosses.

♦ Ted Childs for his Norfolk, Connecticut, hillside garden. Childs has collected plants and trees from all over the world, and his garden includes rare and unusual ferns and orchids.

The deadline for the society's 1991 awards program is January 15. Individuals in the New England states may be nominated for a state award; the conservation and education awards are national in scope. Write or call the New England Wild Flower Society, Garden in the Woods, Hemenway Road, Framingham, MA 01701, (508) 877-7630.



1991 AHS CALENDAR

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Using native plants in the garden is time-saving and ecologically and aesthetically sound. *Native Plants*, the 1991 official calendar of the American Horticultural Society, shows you how to put American annuals, perennials, shrubs, and trees to work in the garden. The 10½-by-14-inch calendar features 12 spectacular full-color photographs. Order today for yourself and for holiday gifts!

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AAS Winners Include Three Vincas

Ten new cultivars—seven flowers and three vegetables—will be wearing the All-America Selections red, white, and blue winner's emblem in 1991.

Flower Award Winners

AAS flowers are started in the greenhouse then moved outdoors for trial. Each cultivar is judged for color, blossom form, fragrance, and resistance to insects and disease.

♦ While the flowers of other *Gaillardia pulchella*s come in several colors or are available only in a color mixture, 'Red Plume's' single-color blossoms should be easier for gardeners to incorporate into a garden color scheme. This annual species is compact and branching and does not need plant support. Planted in full sun, 'Red Plume' is tolerant of heat, drought, and severe weather and flowers throughout the growing season. It is also a low maintenance plant—it requires no pinching, pruning, or fussing. 'Red Plume' was bred by Sluis & Groot in Enkhuizen, Holland.

♦ Geranium 'Freckles' is a unique bicolored geranium featuring five pink petals each with a rose-colored "freckle." It is the first bicolor to be bred with superior garden qualities. The full flower heads are held above the foliage and make an excellent fresh cut flower. When grown in a nutrient-rich soil or properly fertilized, plants will grow to about 12 to 15 inches. Scott Trees bred 'Freckles' for the PanAmerican Seed Company in West Chicago, Illinois.

♦ Pansy 'Padparadja' takes its name from a rare and valuable orange sapphire found in Sri Lanka. The pansy was bred by Konrad Wagner for Ernst Benary Seed Growers in Hann Munden, West Germany. Its two-inch, bright pumpkin orange blooms do not have a contrasting "face" and keep their color through the stresses of summer. 'Padparadja' grows only six inches tall in full sun or semishade and blooms continuously.

♦ The deep rose blossoms of vinca 'Pretty In Rose' add a new color to the vincas. 'Pretty In Rose' performs best in a full sun garden. Mature plants reach about 16 inches high and spread about 14 inches. Once established in the garden this vinca is heat and drought tolerant and blooms continuously through hot summers. Dr. Ronald Parker of the University of Connecticut bred 'Pretty In Rose' as



Flower winners, clockwise from upper left, *Gaillardia pulchella* 'Red Plume', geranium 'Freckles', pansy 'Padparadja', and vinca 'Pretty In Rose'.

well as the two other vincas in this year's selection, 'Parasol' and 'Pretty In Pink'. The cultivars were entered by Denholm Seeds in Lompoc, California.

Bedding Plant Winner

AAS bedding plants are judged while still in the greenhouse for the same qualities sought in the flower category.

♦ The flowers of pansy 'Maxim Marina' are an unusual combination of light purple-blue petals shading to a deep purple face outlined in white. The delicate flowers bloom throughout the growing season, flowering freely in the sun when given adequate moisture. 'Maxim Marina' adapts to spring or fall gardens and is easily grown in beds or containers. The Sakata Seed Corporation of Yokohama, Japan, bred this cultivar.

Flower & Bedding Plant Winners

The vincas below were stars in both the flower and bedding plant arenas and will be a welcome addition to flower gardens.

♦ At 1½ to 2 inches, the blooms of vinca 'Parasol' are the largest of the vincas. Overlapping white petals feature a red center and will exhibit more color in the full-sun garden. 'Parasol' is easy to grow, heat and drought tolerant, and requires little garden care. Plants grow to 12 inches tall and work well in containers and garden beds.

♦ Vinca 'Pretty In Pink' is the first pastel pink vinca. Dr. Ronald Parker bred 'Pretty In Pink' with germplasm of native species from Madagascar. This vinca will flower profusely in full sun. It is also heat and drought tolerant and reaches a height of about 12 inches.

Photos courtesy of All-America Selections



Vinca 'Parasol', left, and vinca 'Pretty In Pink', right, were winners in both the flower and bedding plant categories. Pansy 'Maxim Marina' won in the bedding plant category.

Vegetable Award Winners

Vegetables in the AAS trial gardens are judged on flavor, texture, disease and heat resistance, yield, and space efficiency.

♦ 'Tivoli', an improved vegetable spaghetti squash, boasts a compact bush habit rather than a vigorous vine. Plants can be spaced two feet apart and adapt to small space vegetable gardens. The oblong squash matures about 100 days after the seed is sown and will weigh from three to five pounds. 'Tivoli' was also bred by Sakata Seed Corporation.

♦ The rind of 'Golden Crown' watermelon ripens to a rich golden yellow, making it easy to find among the vigorous green vines. Bred by the Known You Seed Company in Taiwan, Republic of China, the inside flesh is watermelon red with small black seeds. 'Golden Crown' matures early—about 60 days from transplanting or 80 days from sowing seed. The sweet-tasting fruit weighs in at six to eight pounds. Plants are tolerant to powdery mildew and anthracnose.

♦ A new pole bean, 'Kentucky Blue', combines the qualities of the two most popular pole beans, 'Kentucky Wonder' and 'Blue Lake'. Healthy, vigorous vines will produce round, straight pods.

Vegetable winners, clockwise from upper left, included a spaghetti squash, 'Tivoli'; a new pole bean, 'Kentucky Blue'; and a yellow watermelon, 'Golden Crown'.



The AAS History

Founded in 1932, All-America Selections is a nonprofit organization that tests new, unsold cultivars grown from seed and introduces those with significant horticultural value as AAS winners. Breeders from all over the world enter cultivars in the AAS trials, in which each entry is grown side-by-side with the most similar cultivar on the market. To earn the AAS emblem, professional horticulturists must find that the new introduction exhibits truly improved or unique qualities.



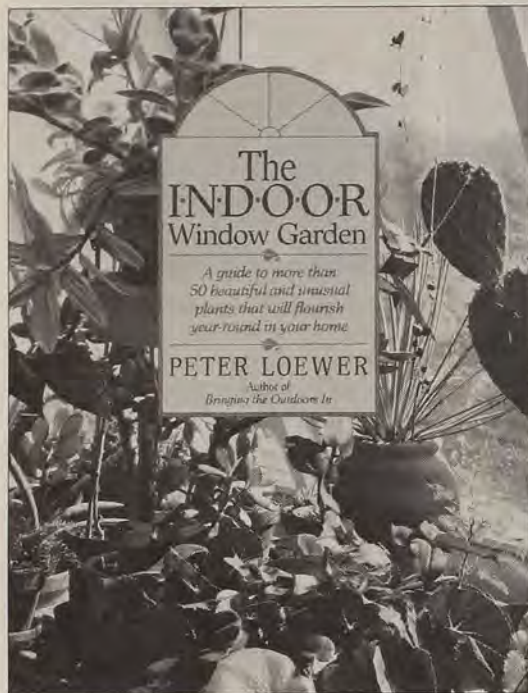
Dr. Calvin Lamborn bred the new pole bean for the Rogers Brothers Seed Company in Boise, Idaho. He is no stranger to the AAS winner's circle; Dr. Lamborn also bred 'Sugar Snap' pea, a gold medal winner in 1979.

The AAS flower and vegetable award winners will be featured in mail order seed catalogs this winter and plants will be available next spring at garden centers and nurseries. Seed packets and plant labels will wear the AAS emblem.

For more information about All-America Selections write AAS, 1311 Butterfield Road, Suite 310, Downers Grove, IL 60515, or call (708) 963-0770.



Gardeners' Bookshelf



The Indoor Window Garden

Peter Loewer. Contemporary Books, Chicago, 1990. 145 pages. Black-and-white drawings. Publisher's price: softcover, \$9.95. AHS member price: \$8.45.

Just in time for winter, the prolific Peter Loewer has produced the perfect book for gardeners like myself who gave up indoor gardening when white walls and Boston ferns faded from fashion in the '70s.

This is "A guide to more than 50 beautiful and unusual plants that will flourish year-round in your home," and for those with limited window space, the difficulty will be in choosing which of them to begin with. They include the common—the avocado started from a pit (the price is right) and the heart-leaf philodendron ("Just because a plant is thought by many to be a cliché is no reason to ignore it, especially if it works," says Loewer) to exotics like the voodoo lily and the shrimp plant. You can choose from among plants that are outstanding for fruit or flowers or foliage, ornamental grasses, vines, or succulents. The information in the appendix includes sources, a guide for making a greenhouse window, and the best ways to reproduce 179 different house plants, just in case those profiled here aren't enough to keep you busy.

There is cultural information on each plant, of course, but what makes the book fun to read as well as informative are the histories Loewer includes, sometimes relating to the plant's discovery, other times to the origin of its common name or the literature and lore surrounding it. (Loewer is an unstinting proselytizer for wider use of botanical names and delivers a brief plea to that effect in his introduction. But while in the body of the book plants are listed alphabetically by the scientific name, the heading always refers to the most fanciful of many common names. Thus we learn about "The Pregnant Onion," "Beautiful Dizzy," and "The Drunkard's Dream.")

The book is illustrated with full-page, black-and-white drawings by the author. A few plants aren't illustrated at all, and those who like to see realistic, four-color photos may not find this approach to their liking.

But the combination of Loewer's friendly writing style and exuberant, close-in, detailed sketches convey a more infectious passion for these plants than a literal rendering would.

—Kathleen Fisher

A Paradise out of a Common Field

Joan Morgan and Alison Richards. Harper & Row, New York, 1990. 256 pages. Color illustrations and line drawings. Publisher's price: hardcover, \$22.50. AHS member price: \$19.00.

Today's gardener does not exactly face the same challenges that troubled those who gardened for Britain's 19th-century aristocrats: sculpting the perfect parterre with thousands of uniform bedding plants; supplying quantities of fresh fruits, vegetables, and cut flowers the year round; maintaining mammoth conservatory complexes full of exotics; and appeasing the extravagant and horticulturally unreasonable whims of their employers (subtropical beds in Scotland?!). Their scale of operation was monstrous and even the "pests" were extravagant. The "abesom of destruction," said one gardener, was the crinoline of the 1860s, since "armour plated ladies" could lay waste to finely crafted parterres and knock blooms off by the dozen in the narrow confines of conservatories. But

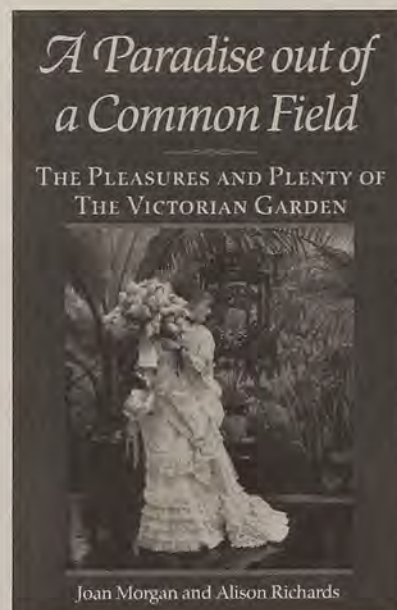
this difference is what makes *A Paradise out of a Common Field*, a history of the upper class Victorian garden and gardener, so fascinating.

The twin pillars of Victorian gardening were the conservatory and the exotic, and each needed the other. Because of new cast iron production techniques, and the availability of larger and cheaper panes of glass, the private conservatory became a normal part of country-house life from the 1850s on. "It was under glass," write Morgan and Richards, "that the Victorian head gardener made his ultimate conquest of Nature"—raising pineapples and grapes in winter, and recreating tropical lands with newly arrived exotics.

Exotic plants streamed in from all corners of the globe and hybridization began in earnest. The first hybrid orchid, for example, flowered in 1856; by the end of the century there were 200 hybrids on record. The basket of orchids presented to Queen Victoria for her Diamond Jubilee in 1897—with species from the West and East Indies, Burma and India, Africa and British Guiana, and many British hybrids—reflected the incredible horticultural and botanical wealth of the era.

Like all good garden historians, Morgan and Richards situate the plants and the landscapes in the context of culture and society at large: how could we understand Victorian gardens without delving into eating habits, architecture, recreation, economics, technological change, and social history?

—Thomas M. Barrett



BRILLIANT GARDENS

A CELEBRATION OF ENGLISH GARDENING



CANDIDA LYCETT GREEN
AND
ANDREW LAWSON

Brilliant Gardens

Candida Lycett Green. Photographs by Andrew Lawson. Chatto & Windus, London, 1989. Distributed by Trafalgar Square/David & Charles, North Pomfret, Vermont. 104 pages. Color photographs. Publisher's price: softcover, \$19.95. AHS member price: \$16.95.

According to author Candida Lycett Green, "Color and jollity lift the spirits." If her premise is true you'll spend many happy days browsing through this small book, which celebrates English gardening traditions. Green and photographer Andrew Lawson set out to chronicle the small gardens of England—gardens that

make you "stop in your tracks or fall off your bicycle or crash into the car in front" when you come upon them unexpectedly. Some gardens are wildly romantic, some are truly bizarre, but almost all will bring a smile to your face.

There's a garden with a perfect replica of Stonehenge and gardens filled with brilliant flowers. There are formal beds and container gardens, gardens of shells and gardens filled with gnomes or Disney characters or carved wooden animals. There are topiary gardens populated with large birds,

zoo animals, and even ships and trains.

Lawson's photographs capture the joyful spirit of each garden and the gardeners themselves make appearances in a few of the photos; their faces are as fascinating as the gardens they have created. Each photo is accompanied by a brief description of the garden and its owner.

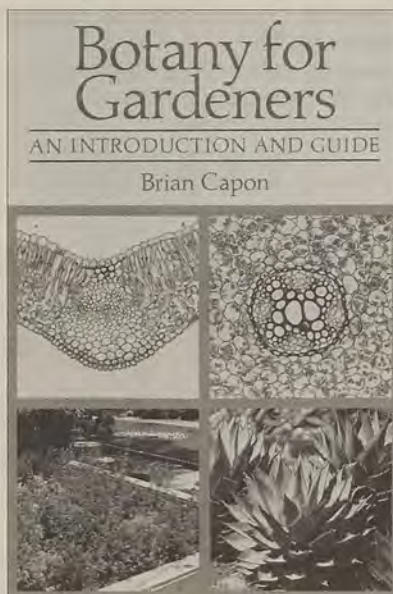
This is not a book to read for gardening tips and how-to methods or even lengthy descriptions, but a lighthearted look at the art of gardening. Green says in her introduction, "I never look for one particular style of garden because that would make life so dull. All the gardens in this book have made me happier for seeing them."

—Mary Beth Wiesner

Botany for Gardeners

Brian Capon. Timber Press, Portland, 1990. 220 pages. Color photographs and line drawings. Publisher's price: hardcover, \$29.95. AHS member price: \$25.45.

Most gardeners, I suspect, shy away from the study of botany because they find the subject too difficult, uninteresting, or irrelevant. All such folk, and anyone wanting to learn more about the workings of plants, will find *Botany for Gardeners* an eye-opening experience. Capon treats the entire breadth of botanical science: the structure, function, and evolution of plants; how plants are constructed from cells and how they grow; responses to environments and adaptations; the process of photosynthesis; and plant reproduction and genetics. He is forever solicitous toward the beginner, taking pains to explain the Greek and Latin roots of most technical terms and to illustrate botanical points with horticultural examples. The text is peppered with 121 color photos and 53 illustrations—all produced by the author—and a useful glossary of botanical terms. So now that the vegetables have been harvested and the perennial bed is dormant, what better time to crawl inside your plants and learn the wonders of botany? —T. M. B



Wildflowers in Cross Stitch

Jane Iles. Chronicle Books, San Francisco, 1990. 139 pages. Color photographs and color graphs. Publisher's price, hardcover: \$24.95. AHS member price: \$22.00.

Gardeners who enjoy needlework will find plenty of projects to keep their stitching fingers busy in *Wildflowers in Cross Stitch*. The book contains 23 wildflower designs for cross stitch and needlepoint ranging from hand towels, sachets, and pillows to gift cards, covered boxes, napkins, and frames. The primrose and forget-me-not design is especially fine. Detailed directions are included along with fabric and DMC embroidery floss requirements, a color graph of the design, and a photo of the final product.

—M. B. W.

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Gardeners' Dateline

Mid-Atlantic

♦ Nov. 4, 7. Symposium: Fall Back/Spring Forward to 1991, How to Perennialize Dutch Bulbs.

Friendship Garden, U.S. National Arboretum, Washington, DC. Information: U.S. National Arboretum, 3501 New York Ave., N.E., Washington, DC 20002.

♦ Nov. 13. Symposium: The Japanese Garden in America. National Wildlife Federation, Vienna, Virginia. Information: Education Department, The New York Botanical Garden, Bronx, NY 10458-5126, (212) 220-8720.

♦ Through Nov. 25. The 57th Annual Chrysanthemum Show. U.S. Botanic Garden Conservatory, Maryland Ave. and First St., S.W., Washington, DC. Information: (202) 225-7099.

♦ Nov. 27-29. Evergreen Workshops. Maymont Foundation, 1700 Hampton St., Richmond, Virginia. Create wreaths for Maymont's holiday celebration. Information: (804) 358-7166.

♦ Dec. 2, 5. Symposium: Masters of Floral Design for the Holidays. Michael Polychromes and Thomas Powell. U.S. National Arboretum, Washington, DC. Information: U.S. National Arboretum, 3501 New York Ave., N.E., Washington, DC 20002.

North Central

♦ Nov. 17-Jan. 6. Holiday Poinsettia Show. Foellinger-Freimann Botanical Conservatory, 1100 S. Calhoun St., Fort Wayne, Indiana. Information: (219) 427-1267.

♦ Nov. 21-Dec. 2. Wonderland of Wreaths Display and Sale. Foellinger-Freimann Botanical Conservatory, 1100 S. Calhoun St., Fort Wayne, Indiana. Information: (219) 427-1267.

Northeast

♦ Nov. 12. Dessert/Illustrated Lecture: Birds, Plants, and Conservation. Longwood Gardens, Kennett Square, Pennsylvania. Information: Continuing Education, Longwood Gardens, Kennett Square, PA 19348-0501, (215) 388-6741.

♦ Nov. 13-16. New York State Turf and Grounds Exposition. Rochester Riverside Convention Center, Rochester, New York. Information: (800) 873-TURF, (518) 783-1229, or write to NYSTA, P.O. Box 612, Latham, NY 12110.

♦ Nov. 15. Symposium: The Japanese Garden in America. New York Botanical Garden, Bronx, New York. Information: Education Department, The New York Botanical Garden, Bronx, NY 10458-5126, (212) 220-8720.

♦ Nov. 16. Symposium: Looking Ahead: American Landscape Preservation Studies in the Next Century. Wave Hill, 675 W. 252nd St., Riverdale, New York. Information: Chris Panos (212) 549-3200.

Yule Open House

The American Horticultural Society's annual holiday open house will be held at River Farm on Saturday, December 8 from 11 a.m. to 4 p.m. Come see the house decorated for the holidays and enjoy seasonal music and refreshments. Christmas trees, River Farm boxwood wreaths, special plants, books, and unusual gifts will be available for sale. Call (800) 777-7931 or (703) 768-5700 for more information.

♦ Nov. 17. Conservation Gardening Symposium. Boston, Massachusetts. Information: Massachusetts Horticultural Society, 300 Massachusetts Ave., Boston, MA 02115, (617) 536-9673.

♦ Nov. 17. Symposium: The Japanese Garden in America. Arnold Arboretum, Cambridge, Massachusetts. Information: Education Department, The New York Botanical Garden, Bronx, NY 10458-5126, (212) 220-8720.

♦ Dec. 1. Tropical Rainforest Adventure. Boston, Massachusetts. Rainforest exhibits tour and lecture by Peter Ashton. Information: Massachusetts Horticultural Society, 300 Massachusetts Ave., Boston, MA 02115, (617) 536-9673.

Northwest

♦ Nov. 3-4. Annual Fall Fruit Show. Center for Urban Horticulture, 3501 N.E. 41st St., Seattle, Washington. Presented by the Western Cascade Fruit Society. Information: (206) 723-9009 or (206) 364-0161.

Southeast

♦ Nov. 3-4. Chrysanthemum Show. Atlanta Botanical Garden, Piedmont Park at The Prado, Box 77246, Atlanta, Georgia. Organized by the Georgia Chrysanthemum Society. Information: Lisa Frank or Carol Morgan (404) 876-5859.

♦ Nov. 10-14. Landscape and Grounds Management Conference. Hyatt Regency, Nashville, Tennessee. Information: Associated Landscape Contractors of America, 405 N. Washington St., Suite 104, Falls Church, VA 22046, (703) 241-4004.

♦ Nov. 11-14. Southern Symposium and National Meeting on "Conservation, Research and Gardens." Mobile, Alabama. Sponsored by the National Garden Writers Association of America. Information: Pat Ryan, 12401 Bellingrath Hwy., Theodore, AL 36582.

♦ Nov. 12-15. Professional Lawn Care Association of America's '90 Educational Conference. Nashville Convention Center, Nashville, Tennessee. Held in conjunction with the new Green Industry Expo. Information: Professional Lawn Care Association of America (404) 977-5222.

♦ Nov. 16-17. Fall Conference and Workshop: People, Plants, and the Human Experience. Atlanta Botanical Garden, Piedmont Park, Atlanta, Georgia. Presented by Mid-South Chapter of the American Horticultural Therapy Association in cooperation with the University of Georgia Center for Continuing Education, the Garden Clubs of Georgia, and the Master Gardeners Association of Georgia. Keynote speaker: Charles Lewis. Information: Mid-South Chapter, AHTA, c/o Diane Buch, P.O. Box 190064, Atlanta, GA 30319, (404) 237-9823 after 6 p.m. EST.



Elaborately decorated trees—and some surprisingly different holiday displays—can be seen at Tennessee's Cheekwood Gardens in December.

♦ **Nov. 29-30, Dec. 1. Great '90s Equipment Show and Conference.** Holiday Inn-Sabal Park, Tampa, Florida. Sponsored by the Landscape Maintenance Association. Information: Landscape Maintenance Association, P.O. Box 728, Largo, FL 34649, (813) 584-2312.

♦ **Dec. 1-27. Trees of Christmas.** Cheekwood—The Tennessee Botanical Gardens and Fine Arts Center. Presented by the Horticultural Society of Davidson County. Information: (615) 353-2150.

♦ **Dec. 17-19. The 103rd Annual Meeting of the Florida State Horticultural Society.** Grosvenor Resort Hotel, Lake Buena Vista, Florida. Information: M. A. Ismail, Secretary, 700 Experiment Station Rd., Lake Alfred, FL 33850, (813) 956-1151.

Southwest

♦ **Nov. 4-8. The 87th Annual Meeting of the American Society for Horticultural Science.** Tucson Convention Center, Tucson, Arizona. Information: Norman F. Oebker, General Chairperson (602) 621-7614 or ASHS Headquarters (703) 836-4606.

♦ **Dec. 12-14. The 1990 Desert Turfgrass/Landscape Conference and Show.** Bally's Casino Resort, Las

Vegas, Nevada. Information: Desert Turfgrass Show, P.O. Box 94857, Las Vegas, NV 89193-4857, (702) 739-8500.

West Coast

♦ **Nov. 3-4. Japanese Flower Arrangement Show.** Descanso Gardens, La Canada Flintridge, California. Presented by Ikebana International. Information: (818) 790-5571.

♦ **Nov. 3-4. Chrysanthemum Show.** South Coast Botanic Garden, Palos Verdes Peninsula, California. Show will feature container-grown chrysanthemums. Information: (213) 772-5813.

♦ **Nov. 10-11. Japanese Flower Arrangement Show.** Los Angeles State and County Arboretum, Arcadia, California. Presented by the Los Angeles Branch of the Sogetsu School of Ikebana. Information: (818) 446-8251.

♦ **Nov. 17-18. Flower Design Show.** Descanso Gardens, La Canada Flintridge, California. Information: (818) 790-5571.

♦ **Nov. 25. Lecture: African Violet Care and Culture.** South Coast Botanic Garden, Palos Verdes Peninsula, California. Sponsored by the South Coast African Violet Society. Information: (213) 772-5813.

♦ **Dec. 6. Garden Talk: Garden Books for Holiday Gift-giving.** The

Look Ahead to '91

For an extensive listing of gardening and horticultural events, send for the *AHS National Calendar of Gardening Events*, a 56-page, 18-month directory covering events and activities through December 1991. Send your name and address plus \$3 to: AHS, Calendar of Events, 7931 East Boulevard Drive, Alexandria, VA 22308. Quantity discounts are available.

Huntington, San Marino, California. Talk by Virginia Gardner, a well-known expert on horticultural books. Information: (818) 405-2141.

International

♦ **Nov. 3-18. Mums-Touchdown.** Greenhouses at Gage Park, Hamilton, Ontario. Features more than 60,000 blooms. Information: Parks Division, Department of Public Works, City Hall, 71 Main St. W., Hamilton, ON L8N 3T4.

♦ **Feb. 3-5, 1991. International Garden Centre Conference '91.** Burswood Convention Centre, Perth, Australia. Information: John Stanley Associates, 142 Hummerston Rd., Kalamunda, Western Australia 6076, Telephone: +619 293 4533, FAX: +619 293 4561.

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HELP WANTED

LANDSCAPE DIVISION MANAGER: Well established, rapidly growing company seeks individual to take over for retiring manager. Individual must be able to run both a maintenance and a planting division simultaneously. Requires exceptional organizational/management skills as well as complete command of plant materials and maintenance techniques. For consideration contact David Gorter, 855 Skokie Hwy., Lake Bluff, IL 60044. (708) 615-0800.

We at the American Horticultural Society are often asked to refer individuals for significant horticultural positions around the country. We are not in a position to offer full placement services to candidates or employers. However, as a service to our members, both individuals and employers alike, we would be very glad to receive résumés and cover letters of individuals seeking job changes and employers seeking candidates. All responsibility for checking references and determining the appropriateness of both position and candidate rests with the individuals. AHS's participation in this activity is only to serve as a connecting point for members of the Society. Inquiries and informational material should be sent to: Horticultural Employment, American Horticultural Society, 7931 East Boulevard Dr., Alexandria, VA 22308.

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OREGON SELECT HOLLY FOR AN OLD FASHIONED SENTIMENTAL CHRISTMAS. Charming decorated box (size 15"x7"x3-1/2") of the choicest variegated and green berried holly sprays. A fragrant nosegay of cedar, mistletoe, and juniper included. \$12.50 airmail postpaid. Specify greeting and date desired. All orders acknowledged. Write or phone for complete brochure. Mrs. Richen (503) 625-6682. OREGON SELECT HOLLY FARM, Sherwood, OR 97140.

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ORCHIDS, GESNERIADS, BEGONIAS, CACTI & SUCCULENTS. Visitors welcome. 1990-91 catalog \$2. LAURAY OF SALISBURY, 432 Undermountain Rd., Salisbury, CT 06068. (203) 435-2263.

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OVER 1,000 KINDS OF CHOICE & AFFORDABLE PLANTS. Outstanding Ornamentals, American Natives, Perennials, Rare Conifers, Pre-Bonsai, Wildlife Plants, much more. Descriptive catalog \$2. FORESTFARM, 990 Tetherow, Williams, OR 97544.

Trees, shrubs, perennials. Container grown, outdoors. Catalog \$2. OWEN FARMS, Rt. 3, Box 158-AAH, Ripley, TN 38063-9420.

RARELY OFFERED SOUTHEASTERN NATIVES, woody, herbaceous, nursery-grown. Many hardy northward. Also newly introduced exotics selected for Southern gardens. Send 50 cents for extensive mail order list. WOODLANDERS AH, 1128 Colleton Ave., Aiken, SC 29801.

PUBLICATIONS

Explore the great gardens and countrysides of the world for two months, absolutely free...with your paid subscription to "Gardens & Countrysides." Preview selected gardens and visit the world's most scenic countrysides, before leaving home, through the pages of the only newsletter written especially for nature travel enthusiasts. Subscribe now and receive TWO MONTHS' FREE ISSUES with your full paid subscription. That's ten issues for just \$60 (regularly \$75). What a great gift idea! (800) 531-5314, Visa/MasterCard or check: GARDENS & COUNTRYSIDES, Dept. E, 401 Austin Hwy., Suite 209, San Antonio, TX 78209. Complimentary issue sent upon request.

ROSES

HORTICO ROSES: Over 600 varieties: Antique roses; new Austin English Garden Roses; hardy Canadian Explorer roses; HT's; FL's; climbers; old garden varieties; thornless roses from Harvey Davidson; Peter Beales English garden roses; show roses from Astor Perry; Bruce Rennie's new miniature varieties; and many others in our excellent stock selection. Catalog \$2. HORTICO INC., 723 Robson Rd., Waterdown, ON L0R 2H1. (416) 689-6984 or 689-3002. FAX: (416) 689-6566.

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Free catalog: unusual seed varieties. Giant Belgium, evergreen, pineapple tomatoes, and more. We make gardening fun. GLECKLER SEEDMEN, Metamora, OH 43540.

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Beautiful balsam 18-inch double-faced wreaths from Balsam Ridge. Red bow, cones, and berries. Will ship to you or as gift. Send check or money order for \$16.95 each to BALSAM RIDGE, P.O. Box 53, Sinclair, ME 04779.

TRAVEL/STUDY TRIPS FOR THE AHS GARDENER

JANUARY 23-FEBRUARY 5, 1991 EGYPT AND NILE CRUISE

Explore the earliest of the Western civilizations and the life-giving influence of the Nile River. The itinerary includes Cairo, Luxor, and Abu Simbel as well as a five-day cruise on the Upper Nile from Luxor to Aswan on board the *Nile Goddess*. Visit numerous historic gardens, including the Manial Palace Gardens in Cairo and the botanical garden on Lord Horatio Herbert Kitchener Island at Aswan. Program leaders are Carolyn Marsh Lindsay and Bob Lindsay. Mrs. Lindsay is the Immediate Past President of the American Horticultural Society.

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

APRIL 21-28, 1991 GARDENS OF THE MISSISSIPPI

Experience the grandeur of the Mississippi from New Orleans to Memphis on board the *Mississippi Queen*. Ports of call along the river include Houmas House, Saint Francisville, Natchez, Vicksburg, and Greenville. Experience true Southern hospitality as AHS members and friends along the river open their homes and gardens for this horticultural adventure.

Leonard Haertter Travel Company

MAY 12-23, 1991 ENGLISH COUNTRYSIDE GARDENS AND THE CHELSEA FLOWER SHOW

AHS members will have the unique opportunity to meet noted horticultural author, Rosemary Verey, and visit her home and garden—Barnsley House—during this visit to the rolling hills of the Cotswolds and Kent. The program visits include the gardens of Hidcote Manor, Sudeley Castle, Oxford. Denmans near Arundel, Nymans Gardens, Wakehurst Place, Great Dixter, Sissinghurst Place, and Isabella Plantation before transferring to London to enjoy the Chelsea Flower Show. Guest lecturer for this program is David Wilson, popular panelist on the BBC's series, "Gardener's Corner." The tour will be led by Elvin McDonald, noted lecturer and author and an AHS Board Member.

Leonard Haertter Travel Company

JUNE 10-20, 1991 GARDENS OF THE COLORADO ROCKIES AND CANYONLANDS OF THE SOUTHWEST

Explore the diverse contrasts of plant materials from the alpine meadows of the Colorado Rockies to the desert plains of the Southwest. Explore unique, out-of-the-way parks like Arches National Park, the Goosenecks of the San Juan and Canyon de Chelly National Monument. See firsthand the varied use of native plants as AHS members and friends open their gardens and homes for our special visit.

Leonard Haertter Travel Company

AUGUST 14-27, 1991 GARDENS OF THE MEDITERRANEAN

Cruise aboard Sun Line's yachtlike *Stella Maris* along the northern coast of the Mediterranean Sea from Nice to Venice. En route we visit magnificent private and public gardens of France, Italy, and Yugoslavia as well as the wildflower meadows among ancient ruins and botanical gardens in Greece. The itinerary includes two nights in Nice and three nights in Venice as well as calling at the ports of Portofino, Elba, Sorrento, and Messina, Italy; Katakalon and Corfu, Greece; and Dubrovnik, Yugoslavia. The BBC's David Wilson will be guest lecturer for this memorable summer tour.

Leonard Haertter Travel Company

OCTOBER 2-20, 1991 GARDENS OF ASIA

Join AHS Executive Director Frank Robinson on a program that encompasses the eastern world of Thailand, China, and Japan. Highlighted are excursions to the ruined city of Ayutthaya; hill-town villages near Chiang Mai; a jungle safari on elephant-back to the Karen Village near Mae Hong Son; Beijing and the forbidden city; Xi'an and the tomb of Emperor Qin Shi Huangdi with its army of terra cotta figures; Shanghai's Yu Garden and Museum of Art and History; the beautiful gardens of Suzhou; Kyoto's holy Saiboji Moss Temple, Nijo Castle and Ryoanji Rock Garden; and Nikko's botanical gardens. And by special invitation, we will visit the Imperial Palace Gardens as well as the Jindaiji Botanical Gardens in Tokyo.

Leonard Haertter Travel Company

AHS STUDY TOURS

Bulb Agreement Reached

After several months of negotiation with U.S. and British environmental organizations, the Dutch bulb industry has agreed to a labeling program that requires growers to mark bulb packages with the origin of the bulbs. A group of Dutch researchers, growers, plant health authorities, and exporters met with officials of the Natural Resources Defense Council, the World Wildlife Fund (TRAFFIC USA), and the Flora and Fauna Preservation Society of England to develop the program, designed to protect threatened or endangered plants from collectors.

Since July the Dutch Commodity Board for Ornamental Horticultural Products—the chief regulatory board of the industry—has required all Dutch growers and exporters to put the phrase "Bulbs from Wild Sources" on all packages of certain bulbs harvested from the wild (see box). In 1992 the Dutch industry must label *all* minor bulbs as to origin. Propagated minor bulbs will be labeled "Bulbs Grown from Cultivated Stock." That same label will be placed on major bulbs—tulips, hyacinths, and daffodil hybrids—which are all cultivated, beginning in 1995. However, there is some concern that the term "cultivated" will be confusing since it has been misused by some U.S. nurseries.

Of the nearly 10 billion flower bulbs sold annually by Dutch exporters, 95 percent are propagated and grown within the borders of Holland; 4.5 percent are purchased from growers in other countries; and 0.5 percent are collected from the wild, mainly in Turkey.

In addition to the labeling agreement, the Dutch industry supports a Flora and Fauna Preservation Society proposal that will stimulate propagation

of native bulb species in Turkey, and has volunteered to monitor trade of *Galanthus* (snowdrop) bulbs to determine whether rare species are being included in Turkish shipments.

Propagated Dutch stocks of the species listed may continue to appear without labels until 1992. Wild-collected bulbs from nurseries not subject to the Dutch

regulations may also appear without warning labels. When purchasing species bulbs, make certain suppliers and sellers are Dutch (not just using a Dutch-sounding name) and that they are complying with the regulations. Some American bulb distributors and nurseries now refuse to sell wild-collected bulbs.

The following bulbs are solely or primarily collected from the wild. Last July the Dutch bulb industry began to label packages of these bulbs with the phrase "Bulbs from Wild Sources." Some of these bulbs are also cultivated in Holland. Those grown from propagated stock will not be labeled until 1992.

Other countries may also trade in these bulbs but they are not bound by the labeling agreement.

Anemone blanda
Arisaema spp.
Cardiocrinum giganteum
Cyclamen spp. (except *C. persicum*)
Cypripedium spp.
Dracunculus spp.
Eranthis cilicica
E. hyemalis
Galanthus spp. (except *G. nivalis*)
Iris acutiloba
I. kopetdaghensis
I. paradoxa
I. persica
I. sibirica ssp. *elegantissima*
I. tuberosa
Leucojum aestivum
L. vernum
Narcissus asturiensis
N. bulbocodium ssp. *conspicuus*
N. bulbocodium ssp. *tenuifolius*



Narcissus cyclamineus 'Peeping Tom', a miniature with reflexed petals, is grown from cultivated stock but will not be labeled as such until 1992.

N. cyclamineus
N. juncifolius
N. rupicola
N. scaberulus
N. triandrus var. *albus*
N. triandrus var. *concolor*
Pancratium maritimum
Sternbergia spp.
Trillium spp.
Urginea maritima
Uvularia spp.

Courtesy of the Netherlands FlowerBulb Information Center



American Horticultural Society

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