

American Horticulturist

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News Edition

Rot Is Hot, Bins Are In

Composting is in. Extension offices, public works departments, and environmental groups are spearheading composting programs; Congress addressed the need for research on the topic in its 1990 Farm Bill; even trash collection agencies are publishing composting guidelines. Who would have thought that this ancient method of recycling organic material would be so trendy in the last decade of the 20th century?

Several factors have converged to encourage homeowners, gardeners, and farmers to take a fresh look at composting:

- ◆ A new environmental awareness coupled with mounting solid waste disposal problems has made composting an essential part of municipal waste management. The Environmental Protection Agency estimates that yard waste composes 18 percent of municipal solid waste and as much as 50 percent in the summer and fall. Incineration and landfilling are expensive and environmentally harmful; composting is cheap, easy, and good for the environment.

- ◆ Compost is free. As peat and fertilizer become more costly, compost seems a more attractive material with which to improve soil structure and fertility. It lacks the drawbacks of chemical fertilizers and is not mined from sensitive wetlands as is peat.

- ◆ A new generation of chippers and attractive compost bins has made urban composting simpler, less space-consuming, and easier on the eyes and nose.

- ◆ Professional and nonprofessional composting experts are spreading the word and helping people learn how to create successful backyard composts.

In this issue we have pulled together some compost research, reminders, and rationale. Soon we will launch a compost demonstration site at the Society headquarters at River Farm, and through the *News Edition* we'll keep you posted on what we learn from that experience and the experts who help us.



Jean Jenkins

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Fungus Cure for Nurseries

According to research by Dr. Harry Hoitink, professor of plant pathology at the Ohio Research and Development Center of Ohio State University in Wooster, compost can prevent some types of root diseases. As reported in *BioCycle*, a recycling trade publication, composted pine bark has the ability to suppress *Pythium* fungal organisms that cause damping-off disease and root rots, which are major problems in the container plant industry.

This is how it works: When a plant root grows, it leaks sugars and nutrients into the growing medium. This is the stuff that the disease-causing pathogens feed on. The microflora that are present in compost have the same diet as the fungi, and if they are active enough—as they

are in compost that has begun to break down but has not decomposed completely—they can get to the nutrients first. This prevents the pathogens from germinating and thus keeps them inactive. Hoitink says the *Pythium*-suppressing power is present in all bark composts and in composted sludge.

However, plants grown in compost low in microflora activity can be very quickly infected with the *Pythium* disease. Therefore, it is critical to know when microbial activity is at its peak and how to maintain it. Hoitink believes that in the near future, growers will be able to send compost to commercial laboratories to be analyzed for microflora content and disease-suppressing potential.

Catskill Hot Spot

There is a composting mecca in the middle of the Catskill Mountains. Tons of the stuff are being produced and used for horticultural education at the Frost Valley YMCA Environmental Education Center in Claryville, New York, the largest resident environmental field center in the country.

This innovative teaching facility recently began an ambitious composting program where all food waste (one ton a day in the summer) is collected, shredded, composted, and used as a potting medium in a new educational greenhouse.

The program will provide many ways in which students can learn about waste management, composting, and horticulture. All staff, students, and visitors are instructed to separate their food wastes into special containers. Wastes are then shredded, mixed with wood chips and water, aerated, screened to remove large particles, and composted, all under the inquisitive gaze of students in the adjacent classroom and laboratory. The final compost is used to teach students about horticulture in the greenhouse, where they will grow herbs, vegetables, ornamentals, and tree seedlings for Frost Valley's forestry program.

The composting project is a part of an environmental education curriculum at Frost Valley that includes acid rain studies, tree identification, and forest ecology. Some 35,000 people—summer camp students from second grade through college, Elderhostel students, and participants in on-site conferences—visit the environmental education center each year. They will now take home seedlings planted in compost as living testaments to sensible, and horticultural, waste management.

Black Gold in a Bucket

The San Francisco League of Urban Gardeners (SLUG) recommends bucket composting for apartment dwellers who do not have the space to put a bin in their back yards. It's as simple as this: use a five-gallon container, chop up the kitchen waste before adding, layer with dry matter like sawdust or soil, and keep the mixture as wet as a moist sponge. Mix in soil at least once a week. To aerate it, stir the compost once or twice a week, or put small holes in the lid.

Compost No-Nos

Most organic material may be added to your compost pile. Several items, though, should be avoided:

- ♦ Coal ashes—they have enough sulfur and iron to be toxic to plants.
- ♦ Charcoal—it resists decay.
- ♦ Meat, grease, oil, and bones—they decay slowly and attract pests.
- ♦ Beginners may want to avoid citrus rinds; corn cobs, stalks, and husks; palm fronds; and walnut, pecan, and almond shells. They break down slowly, especially if they have not been shredded.
- ♦ Diseased plants—such as cabbage with club root, onions with onion mildew, or root crops with dry rot—should be burned and their ashes added to the compost, especially if you do not have a rapidly decomposing compost pile with a temperature over 90° F.

A Thousand Points of Compost

Spurred on by bulging landfills and pollution-belching incinerators, various groups—environmentalists, extension agents, city administrators, activists, politicians—are trying to get North Americans to compost their yard and kitchen wastes. There are two fronts in this war on waste: the municipal lot and the back yard—really a catch phrase for anyplace individuals compost. The former are central facilities where workers compost yard waste that is collected separately from other garbage by the city or contracted haulers. In Omaha, Nebraska, for example, residents rent from the city 90-gallon plastic yard waste bins. A special truck picks up the yard waste and transports it to a composting site where it is mixed in a grinder, wet down, piled into windrows, and then turned once a year. The finished compost is used by the county as a soil amendment at county parks and as a substitute for landfill topsoil.

At the other end of the scale are the small, back yard composting educational programs. These programs seek to make individuals responsible for their own leaves and grass clippings and to teach them how to compost. Back yard composting is much more efficient than municipal composting—the only cost is for the compost bin; if you build it from scraps or just make a compost pile, it's free. No trucks, no hauling, no municipal works supervisors or composting overseers, no grinders, no wetters, and no fancy mechanized compost turners. It's as simple as chicken wire.

The main drawback of do-it-yourself composting is that it is difficult to inspire large numbers of people to make a commitment to compost. It seems much easier to sweep leaves in the street, burn them, or set them out for the city to deal with. But a whole slew of composting education programs are cropping up that aim to teach people differently.

Although community composting education is nothing new, Seattle Tilth, a nonprofit organic gardening organization in Seattle, Washington, has come up with a novel and very influential twist—the Master Composter program. Modeled after the Master Gardener program of the Department of Agriculture's Cooperative Extension Service, the Master Composter program gives participants detailed instruction on composting and then requires them to volunteer a number of hours teaching composting techniques



Steve Horvath, a member of Cornell Cooperative Extension of Broome County's Master Gardener program, turns compost in one of thirteen composting units at Extension's back yard composting demonstration site in Binghamton, New York.

Courtesy of Cornell Cooperative Extension of Broome County

to school children, community groups, garden clubs, and anyone else that is interested. The first Master Composter program began in 1986 after Seattle Tilth won a city contract to develop the program. Master Composters, after completing 36 hours of formal instruction and practical training at a bin-building workshop, fulfill their volunteer obligation by participating in on-site demonstrations, slide shows, fair exhibits, and other educational projects. Seattle Master Composters have built six compost demonstration sites that display up to 16 different types of composting systems, including holding bins, turning units, worm bins, and other basic and specialized composting methods.

Since the program began, Seattle Tilth has been swamped for requests for information, from Washington county governments, at least 46 states, Canadian provinces, and other countries. "It caught people's imagination," says Madelon Bolling, the program's public information specialist. "The idea that people can do something for the earth on their own, in a small way, appeals to a lot of people." Gardeners, she feels, have been especially important in the success of their program. "I'm quite sure that the gardening community is the backbone."

Seattle Tilth is only one of many such examples. Down the coast in California, the San Francisco League of Urban Gardeners (SLUG) has initiated a composting education program at its newly created "Garden for the Environment," a demonstration site with various composting systems, a water conservation garden, a children's garden, and a learning garden. SLUG composters conduct workshops twice a month. They are also putting together a series of composting fact sheets that will be distributed throughout the city.

In New York, Cornell Cooperative Extension has helped build 22 composting demonstration sites, and started numerous educational programs throughout the state. Broome County began its composting program in 1989. It includes several composting classes a year, lectures to garden clubs and other community groups, composting exhibits at fairs, wide distribution of composting brochures, and a demonstration site showing 13 different composting methods. Master Gardeners have been instrumental in establishing and maintaining the program. "The community is enthusiastic, interested, and coming to us for information in

Continued on page 4

Resources

The following resources provide more detailed information on various aspects of composting:

Let It Rot. By Stu Campbell.

Publisher's price: softcover, \$5.95.

AHS member price: \$4.95.

The BioCycle Guide to Yard Waste Composting. Articles on community composting from *BioCycle* magazine.

Publisher's price: hardcover,

\$59.95; softcover, \$49.95. AHS

member price: hardcover, \$51.00;

softcover, \$42.45.

The Art of Recycling: A Community Recycling Handbook. Send \$1.25 to

METRO Recycling Information Center, Metropolitan Service District, 2000 S.W. 1st Ave., Portland, OR 97201.

"Composting: Waste to Resources."

Materials from Cornell Cooperative Extension including an educator's guide, posters, and compost designs.

Send \$7.70 to the Distribution Center, 7 Business and Technology Park, Ithaca, NY 14850.

EPA Solid Waste Hotline telephone number (800) 424-9346.

Don't Bag It, Don't Dump It . . .

Bob Whitney describes himself as a bit of an evangelist when it comes to wasteful American lawn care habits. Prophet might be a better word. The Tarrant County Texas agricultural extension agent was tired of seeing people squander time, money, and landfill space by bagging their grass clippings, so he and turfgrass specialist Bill Koop developed "Don't Bag It," a low-maintenance lawn care plan. Their program has spread like a prairie fire—first through the county, then through Texas, to Saint Louis and Phoenix; now the Professional Lawn Care Association of America has adopted it as the basis for their "Grasscycling" campaign. "There was just no reason for people to be bagging those clippings," says Whitney.

The plan is simple: make scheduled applications of low-release nitrogen fertilizer to slow the growth of the lawn, water less frequently and more efficiently, remove no more than one-third of the leaf surface when mowing, and don't bag it—let the grass clippings return to the earth. The plan is also seductive: it promises the same quality lawn or better with less work and less money.

The pilot program began in 1989 with 184 Fort Worth demonstration lawns. Participants received free fertilizer, the use of a Toro lawn mower for a year, technical assistance from Master Gardeners, and a demonstration yard sign to promote the program. The results were overwhelming. Demonstration lawns took 38 percent less time to

mow and were rated 30 percent improved in appearance. Before they enrolled in the program, 80 percent of the participants regularly bagged their grass. After their experience with the "Don't Bag It" system, 98 percent stopped collecting their clippings.

And perhaps best of all, now the grass is not going to the dump. According to the *Fort Worth Star-Telegram*, 18 percent of the solid refuse dumped in the city landfill in 1988 was grass clippings, entombed in plastic bags that don't decompose.



Grasscycling U.S.A.

The Professional Lawn Care Association of America recently began a "Grasscycling" campaign to encourage Americans to leave grass clippings on their lawns when mowing. The program includes the development of a community action program for governments, professionals, and others dealing with landfill problems. For more information, write the Professional Lawn Care Association of America, 1000 Johnson Ferry Rd., N.E., Suite C-135, Marietta, GA 30068-2112.

. . . Let It Fly

How is it that leisure-loving Americans spend so much time and energy raking cut grass, bagging it, and then lugging the ugly lumps to the trash can? Not only is this a cumbersome process, it is also unnecessary.

Cut grass clippings are good for the lawn and they should be left where they fall. A myth persists that they contribute to thatch buildup, but in fact, thatch is made up of roots, dead leaf sheaths, and rhizomes. Clippings decompose rapidly and recycle nitrogen, potassium, and phosphorous back into the soil. They also reduce water evaporation and stimulate growth by keeping the soil temperature cooler.

Several guidelines should be followed to facilitate no-bag lawn care:

- 1) Make sure the mower blade is sharp, or use a mulching mower or manual rotary mower. Finely chopped grass will decompose more rapidly than coarse clippings.
- 2) Mow when the grass is dry. Wet clumps of grass take a long time to biodegrade.
- 3) Mow when the grass is three to four inches tall, and cut only an inch or an inch and a half. Again, the finer the clippings, the more quickly they will decompose. This height also allows the lawn to build a larger and deeper root system and strengthens it against weeds and drought.

- 4) Do not over-fertilize your lawn. A dense lawn makes it more difficult for the clippings to reach the soil. If you let your clippings fly, they will reduce the need for nitrogen fertilizer anyway.

What You Can Do With Your Leaves

In addition to composting, there are many things gardeners can do with their leaves besides sending them to the dump.

- ♦ In summer, chop them up and use them to mulch perennials, annuals, or vegetables. Thick layers will protect roses and tender perennials from the cold and wind of winter.

- ♦ Pulverize dry leaves and store them in the garden over winter in tomato cages. Cover them with plastic to slow decay, and then use them as mulch in the spring.

- ♦ Chop up small amounts of leaves on your lawn with the lawn mower. Larger amounts may be shredded with the new mulching lawn mowers.

- ♦ Apply leaves to an empty garden bed (or a field) and turn them under. They will add humus and increase the fertility of the soil.

- ♦ Dry leaves may be used for outside animal bedding.

- ♦ Use them as mulch in woodland. This is what trees do with their leaves.

Continued from page 3

large numbers," says Broome County Cooperative Extension Environment Team Leader Claudia E. Stallman.

The Cooperative Extension Services of Washington, D.C., and Arlington and Alexandria, Virginia, have taken the Master Composter concept one step further. In September, they began a Master Natural Resource Managers program that includes instruction not only in composting, but also in other conservation measures such as low input gardening, integrated pest management, urban forestry, water management, air pollution, and recycling. "We feel that in an urban setting the whole environment needs to be taken into account," says Pamela Marshall, extension agent at the University of the District of Columbia. "The idea behind this program is to train citizens to make informed choices as to how to change undesirable environmental practices."

The Pros and Cons of Activators

Many garden supply companies offer bacterial compost activators that are supposed to simplify and expedite the composting process. They sound as easy as Shake 'N Bake: get a bag, add organic material, throw in the activator and, poof! quickie compost. Composting purists tend to turn their noses up at such stuff, but they forget that beginning composters may not be able to build the ideal pile. So what is the real scoop on the usefulness of activators?

Activators are made up of various substances that add bacteria and fungi to the compost. If you can't get the proper carbon-to-nitrogen ratio in your compost—that is, if you have an abundance of either nitrogenous green matter (such as grass or vegetable scraps) or more carbonous material (like leaves, pine needles, or straw)—you need to add something. But Tom Richard, biological engineer at Cornell University, says activators won't help. "All studies indicate that they are of no use. Nobody has been able to demonstrate any advantage to adding microorganisms to a compost pile."

Activators may help balance carbon, nitrogen, and other nutrients, but a number of materials that are cheaper

(and sometimes free) may be used instead. These include finished compost, bone meal, well-rotted animal manure, and loamy soil. Says Richard, "The best activator for compost is old compost." George B. Wilson, president of George B. Wilson Associates, composting consultants in Laurel, Maryland, recommends manure for piles with a high carbon-to-nitrogen ratio, and sawdust or wood chips for

piles with a low ratio. He also dismisses commercial activators as useless: "It is my opinion that the primary value of such activators is the instructions that come with them."

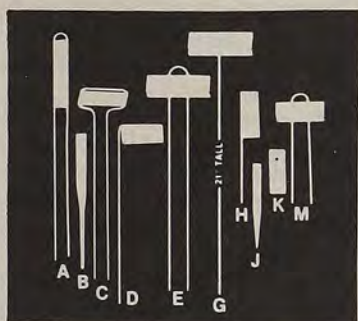
We were not able to find controlled, unbiased studies on this subject. We would love to hear from members who have experimented with activators.



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Making a Difference

Healing After Hugo

One year ago this month Hurricane Hugo left a path of broken buildings and crumbled homes across the lowcountry of South Carolina. Of the 12 million acres of commercial timber in South Carolina, over one-third was lost to Hugo and 23 counties suffered significant tree damage. More trees were lost to Hugo's wrath than to the eruption of Mount Saint Helens, Hurricane Camille, and the Yellowstone fire combined. Twenty-five percent of South Carolina's urban trees were lost and 36 percent of the state's forests were damaged or destroyed.

New tree seedlings are beginning to appear in Hugo's wake, due largely to Lowcountry ReLEAF, an organization formed to fund replanting of South Carolina's Charleston, Berkeley, and Dorchester counties. Thirteen organizations have combined to form Lowcountry ReLEAF, which is working with the American Forestry Association's Global ReLeaf in its efforts. Participating organizations include Berkeley, Charleston, and Dorchester counties, the American Society of Landscape Architects, Charleston Beautification Fund, City of Charleston, Clemson Extension Service, Junior League of Charleston, Lowcountry Open Land Trust, LS3P Architects, South Carolina Coastal Conservation League, South Carolina Forestry Commission, and Trident Community Foundation.

Lowcountry ReLEAF accepts donations of trees, dollars, and physical help; since last October the organization has received 60 full-size trees, thousands of seedlings, and over \$140,000. The money is used to purchase trees that are then distributed to government and nonprofit agencies to plant in public areas left bare by the storm. The first tree planting efforts—aided by the Junior League, 4-H Clubs, and the Boy Scouts—were held on South Carolina's Arbor Day, December 1. Since then the organization has distributed red maples, white and pink crape myrtles, live oaks, magnolias, tulip poplars, leland cypress, and river birch throughout many lowcountry communities.

Lydia Evans, Lowcountry ReLEAF executive director, says the organization is run by four major committees. The technical review committee receives and reviews requests for trees from local groups. After sites are chosen the



Photos courtesy of Lowcountry ReLEAF



Above: Drayton Hall, a property of the National Trust for Historic Preservation in Charleston, after Hugo. **Left:** The crew of the Navy fast frigate *Elrod* has helped plant almost every new tree in Berkeley, Charleston, and Dorchester counties.

plant "just about every tree and seedling we've received," Evans says. "That includes a half million tree seedlings and about 900 large trees."

The 200-member crew of the *Elrod* had spent the summer before Hugo in the Persian Gulf, where the temperatures routinely exceeded 120 degrees and the view from the ship was a barren, dusty landscape. When they arrived home five days after the storm they were greeted by another empty landscape. This disheartening arrival led to their alliance with Lowcountry ReLEAF.

◆ On the recommendation of landscape architect Rudy J. Favretti, the Garden Club of Virginia sponsored ceremonial tree plantings in 35 communities to begin reforestation efforts. Each community received a 12- to 15-foot tree; they were given a choice of magnolia, live oak, red maple, or white or pink flowering crape myrtle. The garden club donated all the trees and planting expenses.

"Lowcountry ReLEAF is an organization with a lot of heart," Evans says. "We're really trying to make a difference."

education committee teaches groups how to take care of the trees while the resource committee orders appropriate trees, arranges for planting, and follows up on maintenance. A fourth organizes public relations and fund raising.

Outstanding contributions have arrived from a variety of sources:

◆ The South Carolina Forestry Commission has donated 439,000 seedlings to schools in Charleston County. Ten seedlings were available to each school child. Students from kindergarten to high school were encouraged to plant the seedlings at their schools, homes, parks, and recreation centers while learning about tree species, planting techniques, and the environmental significance of trees.

◆ Crew members from the Navy fast frigate *Elrod* volunteered to distribute seedlings and help plant trees. They have delivered, unloaded, and helped

Donations may be sent to Lowcountry ReLEAF, P.O. Box 1812, Charleston, SC 29402. For more information call (803) 723-9470.

Good Neighbors

Participants in the first residential horticultural therapy program of the Chicago Botanic Garden receive the same physical and mental benefits as those in other horticultural therapy programs. But there has been an added bonus: it has eased the traditional struggle for acceptance by neighbors that group homes often face. "It's been a wonderful experience for the residents," says Sally Hoover, a staff horticultural therapist at the Chicago Botanic Garden. "And the garden has really beautified the house and helped forge a closer link with the neighbors."

The Chicago Botanic Garden has the oldest horticultural therapy program in the United States. In 1976, the Learning Garden for the Disabled was created on the garden's grounds, and gardening classes for people with disabilities were held in this barrier-free area. In 1980 the program branched out to off-site locations such as hospitals and other health care facilities.

In 1989, the Victor C. Neumann Association contacted the botanic garden about starting a horticultural therapy program at two of its residential group homes for adults with developmental disabilities. To get them under way, the garden's horticultural therapists helped Neumann staff members establish goals and plan programs; provided horticultural training through hands-on workshops and phone advice; and designed and built barrier-free garden areas. The intent was to prepare the Neumann staff and the residents to garden on their own after the first year.

Help for Charleston

The Virginia Garden Club has donated two trees to Charleston, South Carolina's Confederate Home and College, originally a home for confederate widows and now a low-rent apartment complex for elderly persons. The home's courtyard garden—which is open to the public and annually receives over 12,000 visitors—was almost completely destroyed by Hurricane Hugo last September. The club replaced a huge elm and deodar cedar with sizeable trees and smaller plants. Donations may be sent to Confederate Home and College, 62 Broad Street, P.O. Box 1609, Charleston, SC 29402.



A Neumann group home resident tends the container garden.

For some residents the garden is a new adventure; others are already skilled participants. The program gives them physical exercise, through the bending and stretching required to plant and care for ground-level beds; enhances their vocabulary skills as they learn the names of plants; and teaches responsibility—one of the primary goals of the group home setting—by requiring them to water, care for, and harvest the garden plots.

The garden also creates an opportunity for creative self-expression and sensory awareness; containers may include fragrant plants like heliotrope and textured ones like dusty-miller.

But benefits have gone beyond the confines of the homes, say program leaders. The plants enhance the residential neighborhoods where they are located, and provide a common ground for neighbors and residents to share their gardening experiences.

The program was so successful in 1989 that when the first contract ran out the Neumann Association started the therapy program in two more of its group homes. Residents of two more are expected to start gardening next year. "I haven't heard any negative feedback from the residents or staff," says Larry Hollie of the Neumann Association. "Everyone seems to enjoy the gardens."

This year's program has had another effect on the local neighborhood. After seeing the residents work to make their back yard gardens beautiful, the next-door neighbors began fixing up and planting their own yard.

For more information on establishing horticultural therapy programs at sites serving people with developmental disabilities write the Chicago Botanic Garden, Horticultural Therapy Services, P.O. Box 400, Glencoe, IL 60022-0400 or call (708) 835-8250.

Please! Pick Some More!



Bern Keating

Imagine a garden that requires no effort on your part—no planting, weeding, or mulching—but provides you with brilliant blooms all summer. Impossible? Such a garden exists for residents of Greenville, Mississippi. When they need lush homegrown blossoms for flower arrangements they make a pilgrimage to Bern Keating's garden where bright zinnias, tithonia,

marigolds, and sunflowers are theirs for the picking.

Keating calls himself a "compulsive mega-gardener. I just can't stop myself from planting outrageously too many plants. There are only two of us here, my wife and I, and I've got 42 tomato plants and 18 eggplants." His cutting garden began when Keating's wife asked him to plant a dozen zinnia plants; over 300 plants later, Keating was begging the neighbors to start picking.

Flowers from the 2,600-square-foot garden grace the altars of every church in town—no matter what denomination—throughout the summer. Neighbors have picked flowers for weddings, showers, christenings, and parties.

"I simply can't think of a more peace-loving enterprise on my part," Keating told *New Choices* magazine. "Seeing people come from all around to gather my flowers reminds me of 'going to the well' in the biblical sense. When I think about the violence rampant in the world, watching people freely come to pick my flowers has a healing effect on my spirit."

Members' Forum

Thigmomorphogenesis

The July article "Shake It! Shorten It!" implies that controlling a plant's growth by shaking it is a newly discovered phenomenon, and that nothing is known about the mechanism involved. Both are untrue.

The responses of plants to mechanical stress have been documented since 1881 when Charles Darwin noted the phenomenon with regard to pea root growth. In 1973, Jaffe coined the term "thigmomorphogenesis" to describe the response of plants to mechanical perturbation ("thigmo" is from the Greek for "touch"). Since that time, more than 100 papers have appeared in the scientific literature describing various aspects of the phenomenon.

It is now widely known that this is a common plant response to mechanical stress (wind, touch, vibration), that it occurs very rapidly, and that it appears to be a plant's method of strengthening itself to withstand further stresses. The effect can also be seen in woody plants, in which the wood of stems and branches often becomes reoriented in a way that braces the plant against prevailing winds. It is also known that these effects are a hormonal response mediated by ethylene. More recently, progress reportedly has been made toward learning the molecular biology involved.

I have studied thigmomorphogenesis and believe it should be more widely known by the horticultural community, as it has many influences on the growth and development of plants.

Kenneth A. Bridle
Walnut Cove, North Carolina

Defending Containers

As a nurseryman, I need to respond to the July article "The Root of the Problem," about the root problems of some container-grown trees and shrubs.

Most consumers do not distinguish between container-grown and field-grown or bare-root potted, and the article never makes this critical distinction. If customers at my nursery took the author's advice to "pull the plant from the container and examine the root ball," they would most often end up yanking the plant from its soil and possibly causing it harm. In short, not all containerized plants are container grown, and it is difficult to distinguish between them without inquiring.

Another problem was the advice to choose balled and burlapped trees. Besides the inherent drawbacks of weight, messiness, and vulnerability to drying out, there are many varieties of woody plants that simply are unavailable in balled and burlapped form.

The advice about dealing with root problems when they are encountered was generally sound, except that it lacked a caution to use common sense when attempting to alter the root form: too much slicing and dicing will reduce a plant's vigor and indeed, can kill it.

Chad McGrath
Schofield, Wisconsin

Thanks for the Columbine

I would like to thank the person or company who contributed the *Aquilegia vulgaris* to the seed program in 1989. The columbine performed beautifully in my wild garden and in the perennial bed. They were very hardy and to my amazement, stayed green all winter. It was not a cold winter but we did have a few 20-degree days. The blooms this spring were plentiful and beautiful and I will be sharing the plants with friends and neighbors.

Lucy Fuchs
Ambler, Pennsylvania

We regret that we no longer have the records relating to the donor of those particular seeds. But thank you for giving us the opportunity to thank all

California Cliffhanger

Through a last-minute poke at the wrong button on our desktop publishing system, we managed to lose the last three lines of the last story in our July News Edition. We apologize to the readers we left up in the air for two months. The story, about two alternative environmental proposals that Californians will vote on in November, should have ended by saying: "If both measures pass in the November election but CAREFUL wins more votes, the pesticide provisions under Big Green would be void." Of course, we won't have the real end of the story until after November.

the donors to our annual Seed Program, and to remind members to start sending seed for the 1991 program. The deadline for contributions is November 1.

Moon Nights and Roses

I am writing to let you know of a gardening research project that may be of interest to your members.

Last year, in the course of preparing an entry in a nationwide competition to design an advanced moon base capable of supporting one to three thousand pioneers, our Milwaukee Space Studies Team (MiSST) realized that one of the most critical bits of information was missing. How much electricity will be needed during the two-week-long lunar nights to provide enough light to keep crops alive and able to produce an eventual harvest in the alternating two-week periods of uninterrupted sunshine? Survival of such a settlement may well depend on keeping nighttime agricultural lighting to a minimum. Will six hours of light every 24 hours of the night-span do the trick? Or will 12 hours every second or third day do better? Or some other pattern?

We need to know the degree of "moon-hardiness" of a wide range of crops and plants. MiSST has drawn up some experiment guidelines that would help zero in on the needed data by running modest experiments in their garages or basements—wherever the lighting can be fully controlled to mimic lunar settlement conditions.

As this is one very important area of research that has been totally neglected by NASA and its contractors, it is one of the few areas where the average person can still make a yeoman contribution towards the dream of establishing not only humanity but earthlife in general in various oases off-planet.

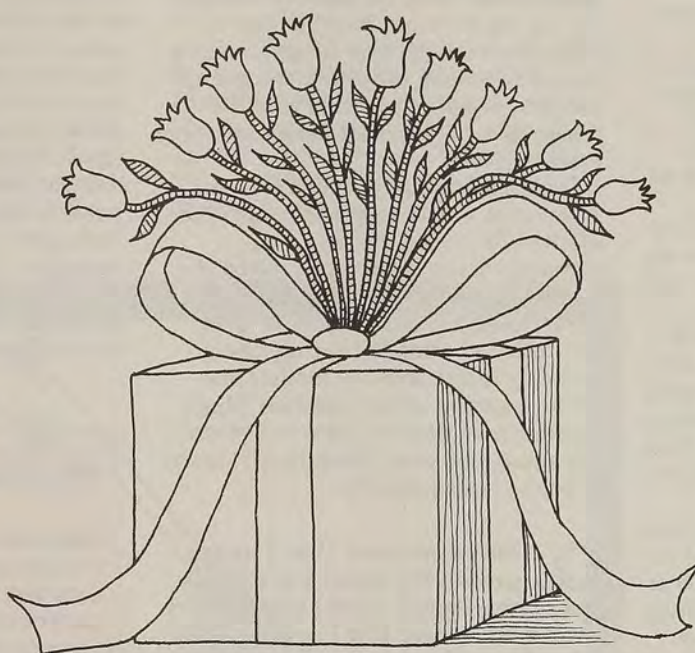
Peter Kokh, Director
Milwaukee Space Studies Team

The Milwaukee Space Studies Team supports the goals of the Space Studies Institute of Princeton, New Jersey, a network of individuals interested in space exploration. MiSST members conduct, as hobbyists, studies related to human survival in space. To receive guidelines for the project write Milwaukee Space Studies Team, P.O. Box 2102, Milwaukee, WI 53201-2102.

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



Program along with many other member benefits.

Plus a Free Gift for You.

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

card with the names and addresses of your gift recipients.

To announce your gifts, we'll send you beautiful holiday greeting cards to personalize and present to the lucky recipients.

Send no money with the reply card. We'll bill you later. Or include Visa/MasterCard information and we'll charge your account.

Hurry! This offer expires January 1, 1991.

AHS Gift Membership Order Form

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Mail to: AHS, P.O. Box 0105,
Mount Vernon, VA 22121.

Gardener's Q&A

Q: A friend who left this area gave me two rhododendrons that had been growing in her yard. They are both overgrown and leggy. Will they fill out if I prune them? They have a bit of healthy growth low down on the shrub, but I hesitate to take the loppers to them.
D. H., Coupeville, Washington

A: You may prune your rhododendrons, but wait until early spring. Prune back to just above the growth buds (small bumps on the stem) so that there will be no dead wood when the plant breaks into growth. If you can't find any dormant buds, cut the branch to shape the plant, and then once new growth starts, remove all stubs above it. You may also prune back to a side branch as you would with other ornamental shrubs. Cut out old weak stems entirely.

Although some species and cultivars may stand a radical pruning, even back to a stump, you will lose all of the flowers for a couple of years and risk losing the plant entirely. Instead, cut back about one-third of the overgrowth each year. With the new growth from the bottom and the dormant buds, you should have a nicely shaped shrub at the end of three years.

Once the pruned plants produce new growth in the spring, you may need to pinch out some of the terminal buds to further check particular branches from becoming leggy. Incidentally, this is good preventive maintenance—if your friend had done this you wouldn't need this advice.

Q: I am very concerned about a pin oak that is leaking a great deal of sap from a wound where it was pruned years ago. The tree is fairly healthy otherwise. Is this something I can take care of myself?
W. W., Charleston, West Virginia

A: Your tree has wetwood (also known as slime flux). This bacterial disease is common in elm, but also affects oak and many other trees. The bacteria infects the spring wood of trunks and large branches causing fermentation. This builds up pressure and the infected material begins oozing out of wounds, cracks, or crotches. Oozing commonly occurs from the spring through

the fall. Wetwood contributes to the general decline of trees.

Keep the tree in good health by watering and fertilizing regularly. Fertilization will stimulate growth and may help overcome the adverse effects of the infection. If the ooze is unacceptable to you, you may risk boring a drain hole into the tree to relieve the pressure and reduce or stop sap flow. Drill a one-half inch diameter hole, six to 14 inches below the point of ooze. The hole should go through the heartwood to within two to four inches of the bark on the opposite side. Slant the hole downward so the sap can drain out. Insert a piece of tubing wide enough to fit snugly, and long enough so the sap will drip on the ground and not the bark. The winter after the oozing stops, replace the tubing with a plug to seal the hole.

Dr. Alex L. Shigo of Shigo & Trees, Associates warns against the bore hole method. Wetwood, he says, is a symptom of a wounded tree (often the result of improper pruning, insect borer holes, animal wounds, or even self-inflicted wounds); boring a hole will only injure the tree further and invite a spread of the infection. Shigo recommends that we learn to live with the slime, and more importantly, learn to prune trees correctly.

Q: Some oregano that I have grown for years has gotten out of hand and I would like to start over next spring. But I suspect that what I have been growing is not the culinary oregano. Can you give me the correct botanical name for the most flavorful kind, and is it widely available?
B. R., Bloomington, Indiana

A: There is no single culinary oregano. The oregano that is sold in stores is a blend of dried leaves of several species of *Origanum* with other genera such as *Thymus*, *Salvia*, *Coleus*, *Satureja*, and *Monarda*. According to Dr. Arthur O. Tucker of Delaware State College, "Oregano refers to a flavor rather than a particular plant."

Tucker has identified 16 named species of *Origanum* and two interspecific garden hybrids that are currently cultivated in the United States. One of the most widely available, and an excellent garden oregano, is *Origanum vulgare* subsp. *hirtum*. It is also called *O. heracleoticum*,

winter marjoram, pot marjoram, and Greek oregano. This perennial is a native of Greece and Turkey and is reliably hardy to Zone 6 and probably farther north. The leaves have a strong, earthy aroma. It should be planted in full sun in a near neutral to slightly alkaline soil that drains well.

Unfortunately, quite a bit of confusion over nomenclature exists in the trade, and you may not get what you think you are getting when you purchase oregano from a garden center. The plant identified as oregano in many herb books—*Origanum vulgare* subsp. *vulgare*—has little flavor. According to Tucker, plants listed as Italian oregano may be *O. vulgare* subsp. *hirtum* (even though it is not native to Italy), or *O. x marjoricum* (which is also called sweet marjoram, as is *O. majorana*). Confused? Thomas DeBaggio of T. DeBaggio Herbs in Arlington, Virginia, says that customers should go by their sense of smell and purchase oregano that has aroma. "It's not like wine, it won't get better with age."

—Thomas M. Barrett

Wrong Remedy

Gardeners eager to reduce the use of pesticides may fall victim to some untested theories of pest and weed control. Using a solution of equal parts of vinegar and water to kill dandelions is one example, says Deborah Brown, horticulturist with the Minnesota Extension Service. "If that solution were strong enough to kill the dandelion leaves, it would also kill any grass blades it fell on. But then, the thick dandelion taproot would send up some new leaves anyway," Brown says.

Organic gardeners plagued with the pesky weeds may have to resort to old-fashioned methods. A long-handled dandelion digger should do the trick; try to get most of the root out each time you dig. Brown also suggests watering regularly and fertilizing lawn grasses at least two times a year to keep them growing vigorously. "There's no point in removing weeds unless grass will replace them; bare soil just invites invasion by more weeds."

Landscaping for the Allergy-Prone

Does pollen keep you from enjoying your garden? Allergies affect one out of every five persons and many of those allergies are plant related. It's true that pollens can travel many miles, but the olive tree in your yard exposes you to 10 times more pollen than the olive that's planted only a block away.

A brochure listing the plants least likely to cause allergies has been published by the American Lung Association of California. The plants

included were chosen using data counts of airborne pollens, clinical observations, and allergy skin testing. Some "sneezeless" plants include tulip trees, dogwoods, redbuds, azaleas, viburnums, cinquefoils, poppies, begonias, and daffodils.

To order your copy of "Sneezeless Landscaping," call your local affiliate of the American Lung Association or the American Lung Association of California at (415) 638-5864.

Protect Trees During Construction

Property owners are becoming increasingly aware of construction-related tree injury and death. Homeowners seeking ways to prevent tree injuries by construction workers or looking for restitution from careless builders will be interested in a new brochure issued by the American Society of Consulting Arborists. "Protecting Trees During Construction" answers questions builders and property owners most frequently ask about the

damage construction can cause, describes ways to prevent this damage, and offers advice on who should bear any added cost.

For a free copy of the brochure, write to Jack Siebenthaler, Executive Director, American Society of Consulting Arborists, 700 Canterbury Road, Clearwater, FL 34624 or call (813) 446-3356. Please request the brochure by name.



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GARDENING

by Hazel Weihe

Casualty Insurance

Severe winter winds...not enough rainfall...no snow. What's a plant to do?

There is one way to give your plants some help. Spray azaleas, rhododendrons, mountain laurel and other evergreens with an anti-transpirant named Wilt-Pruf.

Think of the plant as inhaling and exhaling. When a plant inhales, it takes water in through its roots. When it exhales, it gives off moisture through its leaves. There are tiny pores in the leaves that give off moisture. If the supply of water to the roots is too low, leaves become limp because they continue to emit moisture. In the process, leaves curl, become brown and desiccated. This is because they're giving off more moisture than the plant is absorbing. Brown leaves on a rhododendron in the spring may be a sign of desiccation, but folks call it "winter-kill."

Greatest transpiration happens in full sunshine. That is why I keep writing about watering your shrubs heavily before frost sets in, to get them through the winter. Surviving a dry, windy winter is very stressful for trees and shrubs. An anti-transpirant such as Wilt-Pruf can be your protection.

What an anti-transpirant does is hold a balance between water taken in and moisture given off. It can sometimes make the difference between saving a tree or shrub and losing it.

Another time an anti-transpirant is helpful is when transplanting a small tree or shrub. No matter how careful a person is, some part of the roots are lost. My plants have indicated by their behavior (they haven't died!) that Wilt-Pruf has been a definite help to them in surviving their trauma.

Wilt-Pruf is a clear organic liquid that in no way inhibits growth or harms a plant and it's available at nurseries, garden centers and hardware stores.

Hazel Weihe of Somers, New York, is an award-winning writer whose garden column is syndicated by The North County News.

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Regional Notes

Trilliums Protected

A spectacular patch of large-flowered trilliums (*Trillium grandiflorum*) has been guaranteed long-term protection by the Virginia Native Plant Society and the Virginia Department of Game and Inland Fisheries. The agreement protects 533 acres of the state-owned 4,007-acre G. Richard Thompson Wildlife Management Area. The game department manages the area for deer, wild turkey, ruffed grouse, and other game and nongame species.

The Thompson wildlife area is located along the crest of the Blue Ridge Mountains north of Linden, Virginia, an area famous for its spring wildflower displays. Intensive development and a recent gypsy moth outbreak that forced timber harvesting prompted members of the Virginia Native Plant Society to approach the game department about future management of the area.

According to the agreement, representatives of both organizations will form a task group to develop mutually acceptable management techniques for the Thompson area that

will ensure long-term protection of its natural communities. The game department has agreed to a two-year moratorium on timbering and the off-road use of heavy equipment in the portion of the wildlife area covered by the agreement.

The protection agreement includes a two-mile-square tract where millions of white and pink trilliums carpet the



Clear-cutting and machinery threatened valuable flora of the Thompson area.

ground each spring. Plant society member Gary Fleming estimates that there are over 14,000 trillium plants per acre here—over 18 million plants in all. Dr. Richard Lighty, a trillium expert and director of the Mount Cuba Center for the Study of Piedmont Flora, has described the Thompson area as “the most dense and extensive trillium stand I have ever walked in and also one which shows the most variation” in flower color.

As an added bonus, the area also features a smaller population of nodding trilliums (*T. cernuum*), which are rare in Virginia, and a seepage swamp community dominated by black ash trees (*Fraxinus nigra*).

For more information on the Virginia Native Plant Society write P.O. Box 844, Annandale, VA 22003.

Seeking New Trees for Old Mines

The compacted soil and poor drainage of surface-mined lands provide a poor environment for root growth. Roger K. Kjølgren, assistant professor of plant and soil science at the Southern Illinois University-Carbondale College of Agriculture (SIUC), is heading a team of researchers who have begun a long-term study to find out what types of trees are most suitable for planting on reclaimed surface-mined soils.

Working on a plot of reclaimed land near Pinckneyville, Illinois, the SIUC team this spring planted sweet gum, river birch, and pin oak trees. “These trees are native to bottomland habitats and generally grow reasonably well under compacted soil conditions,” Kjølgren said. Researchers may also try deep tilling prior to planting, which should provide a deeper rooting zone for tree development.

Illinois state guidelines require that land used for coal extraction be restored to its pre-mining condition. The trees will provide better surroundings for wildlife and improve the land's value. New homeowners may also benefit from the research since surface mine reclamation land is similar to land on which new homes are built. There the soil is often damaged by heavy equipment and foot traffic.

UC-Santa Cruz to the Rescue

As a part of his national tree planting campaign, President Bush often invites visiting foreign dignitaries to bring trees from their homelands for ceremonial plantings in Washington, D.C. However, when the premier of New South Wales, Australia, recently tried to import several frost-hardy species of eucalyptus trees for such a ceremony, he was stopped by tough U.S. Department of Agriculture quarantine regulations. The head of USDA's permit unit, Gary Brothers, then went searching for replacements in the United States—not an easy task for trees so exotic. To the relief of officials in both countries, he found the Arboretum at the University of California-Santa Cruz, which has been growing eucalyptus from seeds collected more than six years ago from the mountains of New South Wales. The arboretum was happy to donate three eucalyptus saplings.

Arboretum Manager Brett Hall, Director Ray Collett, and Australian horticulturist Rodger Elliot collected the seeds from a cold-resistant species

of eucalyptus tree in New South Wales in late 1983. The unnamed subspecies, commonly known as *Eucalyptus pauciflora* ‘Pendula’, is among a group of eucalyptus trees called snow gums.

In its native habitat, the stunted tree grows at high altitudes, near the tree line. Its slender, pendulous branches hang low to the ground, hence its nickname as the “weeping” eucalyptus tree. In the warmer environment at UCSC, the seeds have grown into upright trees with hard, chalky white bark, maroon branches, grayish green leaves, and white blossoms. “Of the trees native to Australia, these are among the most likely to survive the extremes of the climate in Washington, D.C.,” according to Hall.

New South Wales Premier Nick Greiner and Vice President Dan Quayle originally were scheduled to plant the trees during Greiner's visit in May. Schedule conflicts arose, and the Australian embassy decided to give the trees to the National Zoo in Washington, D.C., for planting in their new Australian pavilion.

60 Years of Service to Cleveland

The Garden Center of Greater Cleveland celebrated its 60th anniversary recently with a \$250-\$500 a plate dinner—quite a change for an institution that got its start in the sometimes water-logged confines of an abandoned boathouse.

It all started in the 1920s when Eleanor Squire donated her collection of gardening books to the Garden Club of Cleveland. To house the collection the club was given a boathouse at the edge of Wade Park Lagoon and on December 4, 1930, it opened its doors to the public as the nation's first civic garden center. The only problem was the recurring flooding.

From this modest beginning, the Garden Center of Greater Cleveland has grown into an important horticultural institution and a vital resource for Cleveland area gardeners. The garden center has moved to higher ground now (they were forced out of the boathouse by the flood of 1959), where they offer a variety of services to Clevelanders. For one, they work closely with the Cleveland public school system to teach children about plants and gardening, with grow boxes, on-site plantings, lectures, and more. A



James A. Ross/Cleveland Plant Dealer

A formal herb garden in back of the Garden Center of Greater Cleveland.

recent tree education project involved classroom discussions of conservation, deforestation, and recycling, and culminated with an Arbor Day celebration. The garden center also has

a thriving horticultural therapy program that serves hospitals, senior centers, retirement communities, and other institutions.

The groups that use its facilities are a veritable potpourri of local horticulture—plant societies, garden clubs, a bonsai club, an ikebana group, other flower arrangers, indoor gardeners, and many other types of plant people. Some come to hold meetings, some come for horticultural and gardening classes, and some come simply to enjoy the grounds, a green oasis in the heart of Cleveland. The garden center boasts a wide variety of gardens, including one of the largest herb gardens in the country (it is tended by the Western Reserve Herb Society). Visitors may also stroll through the Japanese garden, the wildflower garden, and the rose and perennial gardens. A favorite spot is the reading garden, a shady nook outside the library, where readers relax with their books. And by the way, the library, which is now called the Eleanor Squire Library, has grown into an impressive collection of over 14,000 titles.

Southern Texan Adapted for North

The popular Texas periwinkle (*Catharanthus roseus*) may be receiving some stiff competition from an American native in the bedding plant arena. Firebush (*Hamelia patens*), introduced by a limited number of north Texas nurseries last May, is an evergreen shrub or small tree native to tropical and subtropical America. Horticulturists at the Texas Agricultural Extension Service adapted the plant from a perennial in far south Texas areas to an annual that will grow 18 to 30 inches high in north Texas. The plant resists heat, drought, insects, and disease while blooming non-stop from June to November. Periwinkles, the current hot weather favorite, have in recent years been plagued by a fungal disease that causes them to wilt and die.

The scarlet tubular blossoms with their deeper red throats will make a dramatic addition to the Texas landscape. As an added bonus the foliage turns deep red in the fall. Firebush should be planted in full sun



Firebush

in well-drained soil and is equally at home in beds or containers. According to Steve George, horticulturist with the Texas Agricultural Extension Service, the plant is particularly striking when planted as background for low-growing annuals with white blossoms, such as carpet petunias.

Firebush is now available in the Dallas-Fort Worth and San Antonio areas. Extension service horticulturists are conducting tests to determine the plant's adaptability to other areas of the state.

Courtesy of Texas Agricultural Extension Service

For more information about the Garden Center of Greater Cleveland write 11030 East Boulevard, Cleveland, OH 44106 or call (216) 721-1600. The Garden Center is open Monday through Friday 9 a.m. to 5 p.m. and on Sunday from 1 to 5 p.m.

Getting Charged Up in Seattle

SEATTLE, Wash.—The American Horticultural Society's 45th Annual Meeting opened and closed with calls to members to participate with a passion in protecting the earth and in using horticulture to better others' lives.

Steven R. Lorton, Northwest editor for *Sunset* magazine, who served as master of ceremonies for the meeting lectures, began those talks by describing his encounter with a tiny, energetic gardener of around 90, who marked the occasion of his visit by ceremoniously planting an alpine. As he was wondering why anyone so old would bother to plant anything new, he glanced behind her and saw a sign carved in cedar: "Do what you can, with what you have, where you are."

If all of us heed this advice, he said, we can do plenty. His own neighborhood garden club, in seven one-day-a-year tours, has raised \$50,000 for such projects as a garden at Seattle's Children's Hospital, the University of Washington Medicinal Herb Garden, and the local public broadcasting station's horticulturally related programming.

He compared the revival of concern about the environment to preparing for war. "But the enemy is ourselves and the foolish gluttony that we—as a nation and as a planet—have slipped into."

In this war, he suggested three major campaigns for the horticultural community: reducing pollution and waste; acquiring and protecting undeveloped lands; and educating children. These things could be accomplished if every member of AHS spent just 15 minutes a day and circulated two pieces of communication each week, he urged. Some things we can do as individuals, other things will require action on a local or state level.

"What are we doing here?" he asked meeting attendees. "We're going to get charged up. We're going to get focused. We're going to get connected. We're going to get turned on. And then we're going to roar out of here and we're going to team up with whomever we can in this big, wonderful, obstreperous world of ours and we're going to do all that we can, with all that we have, wherever we are."

Much the same note was struck by J. Judson Brooks, longtime AHS Board Member who received the Society's Meritorious Service Award, in his acceptance speech at the awards banquet on the final night of the meeting.

Brooks, a banker, was able to devote a good deal more time to gardening—his passion is hybridizing rhododendrons—after he retired in 1965. But this



A day at the Rhododendron Species Foundation: Clockwise from top left: Barbara Lamb of Stanwood, Washington, and Elizabeth Lamb of San Francisco, admire a specimen in the Weyerhaeuser Pacific Rim Bonsai Exhibit; Louise Smith of Birmingham, Alabama, Genevieve du Pont of Wilmington, Delaware, and Jean Woodhull of Dayton, Ohio, in the foundation's alpine garden; John Whitworth of New York City considers a rhododendron in the plant sales area; Susan Bole Hattery, assistant director at the garden, visits with her grandmother, Nancy Bole of Cleveland, Ohio, and Jane Kammerer of Guilford, Connecticut; some mountain laurel catches the eye of Marie Wright of Norfolk, Virginia.



Photos by Steve Schneider

avocation surprised a son, who exclaimed: "Dad, I always remember you as a man of steel. What is all this about flowers?"

"Son," Brooks told him, "I believe that now I have just started to live."

Whereas at that time this passion seemed a bit eccentric, there has been a renaissance in love of the earth and the things that grow upon it, he noted. None of us must miss our opportunity to participate in this renaissance, Brooks said, and to make certain that that sense of caring never fades.

Seattle was definitely a place to get charged up, in Lorton's words, although non-Northwesterners had to continually remind themselves that many of the wonders they were seeing could not realistically be expected to grow in home gardens that are hotter, colder, or both. The variety and lushness of plants were almost exhausting.

At the Bloedel Reserve on Bainbridge Island, nearly every turn in the path revealed a scene radically different from the last. An undulating moss garden gave way to a long reflecting pool in a garden room by itself. Nurse logs—the gigantic stumps of long-dead conifers—fed the roots of living trees. Multihued candelabra primroses grew along a shady stream; then suddenly, we were in a sunny daisy-filled meadow. "I'm out of adjectives!" exclaimed one viewer.

Betty Miller's garden was described in great detail in the April *American Horticulturist* magazine, but words invariably fall short of any experience. Although members would see more rhododendron species at the Rhododendron Species Foundation, it was remarkable to see so many sizes and habits and foliage colors—relatively few were in bloom—intermingled with other types of plants. The scope of the Miller garden really hits home while kneeling under a gigantic redwood to eyeball an alpine with blooms no bigger than a pinhead.

Those who adore a formal garden were smitten with Eulalie Wagner's



Kathleen Fisher

Eulalie Wagner, owner of Lakewold Gardens, greets visitors in her gazebo.

Lakewold, whose uniquely shaped pool has been featured in numerous books and magazines. "I've seen it so many times; I can't believe I'm really here!" one member exclaimed as she stepped back for just one more photo of the pool. Outstanding features include a knot garden surrounded by standards of white 'Iceberg' roses—which reappear in the pool area—and a rhododendron walk leading to the house.

An experience of a different kind was the Center for Urban Horticulture, where research is being conducted on plants' reaction to city conditions, such as air pollution and limited room for roots to spread out. Among their findings is that some plants react to insects by releasing a chemical, much as a human immune system reacts to an attack, so that subsequently attacking insects don't destroy it. It may be possible, said Dr. Barbara Smith of the center's staff, to manipulate other plants genetically to make them more immune to insects.



Steve Schneider

Peggy Campbell, of Woodinville, Washington, and Mrs. Evan McCord and Martha Isaacson, both of Seattle, eye the many exquisite trough gardens created for display and sale at the meeting by members of the Northwest Horticultural Society.

Flower Arranger's Symposium

Co-sponsored by the
American Horticultural Society
and the
Garden Center of Greater Cleveland

Tuesday, October 9, 1990
9:30 a.m. to 3 p.m.

Garden Center of Greater Cleveland
11030 East Boulevard
Cleveland, Ohio

Topics and Speakers
Perennials and Annuals
Ideal for Cutting
Allen Armitage
Professor of Horticulture
University of Georgia

Grasses: The Under Utilized Element
John Greenlee
Nurseryman
Pomona, California

Variegated and Colored Foliage
Janet Oberliesen
Director of Development
Chadwick Arboretum,
Ohio State University

Inspiration and Technique:
A Demonstration
Pauline Runkle
Owner, Floral Artistry
Manchester-by-the-Sea,
Massachusetts

.....
Fee: \$88 per person; \$78 for members of the American Horticultural Society or the Garden Center of Greater Cleveland. Fee includes a boxed lunch.

Registration checks should be made payable to and sent to the Garden Center of Greater Cleveland, 11030 East Boulevard, Cleveland, OH 44106, Attn: Flower Arranging Symposium.

For more information call Marilyn Sommer at (216) 721-1600.

.....
Name _____

Address _____

City _____

State _____ Zip _____

Phone (day) _____

Phone (evening) _____

I have enclosed a check for:

- ☐ \$78 AHS or Garden Center member
☐ \$88 non-member

Registrations must be received by October 1, 1990.

An Interview With George C. Ball Jr.

At the conclusion of this year's Annual Meeting, George C. Ball Jr. succeeded Carolyn Marsh Lindsay as AHS President. He is president of the Flowerseed Group in West Chicago, Illinois, a division of Geo. J. Ball, Inc.



George Ball addresses members as he takes over the AHS presidency at the end of this year's Annual Meeting.

demand better quality, and then be willing to pay more when they get it. My advice is, "Keep yourself informed and be a tough customer."

Q: *How would you define the role or mission of AHS? Our stated mission is "Promoting excellence in horticulture," but exactly what does that encompass?*

A: The AHS is the only organization with the ability to address national, even continent-wide, issues. Most horticultural societies, garden or plant clubs focus on a particular region, genus, or group of plants. This is necessary in order to reach a thorough understanding of such special subjects.

In contrast, promoting all aspects of horticulture is our main concern. This means that we must communicate frequently and effectively about both specific and general developments in North American horticulture. These include both activities within horticulture as well as the role horticulture plays in society and on our continent. Horticulture should relate to all people, not just gardeners, and to the whole person, not just the "gardening" side. I want the AHS to claim for horticulture a greater place in our society. No other group can do that.

Q: *You said in your "Commentary" in our August magazine that your view of American horticulture and AHS is evolving. Can you elaborate?*

A: I'm speaking about adaptation, in the same sense as when one says that human society evolves. The AHS must remain flexible to respond to changes in both the social and horticultural environments. For example, conservation is a major challenge to most of humanity. Many of the changes in attitude and behavior necessary to stop rapid deterioration of the natural world will need to occur in North America. Our youth are especially in tune with these issues. They are the future of AHS. They will learn to appreciate the aesthetics of gardening only after we have helped them save endangered plants. The AHS has to be receptive to the idealism of these new members, and to any other segments of the membership that emerge in the future.

Q: *You have said that you will be shaping a strategic plan for the future of AHS. How will you go about this?*

A: We'll be using the pro bono services of McKinsey & Co, Inc., a well-known management consulting firm, to coach us. We must do the work ourselves. We will conduct surveys and analyze the successes of similar organizations in other fields. How do the athletic societies work? Music associations? Horse clubs? There is much to learn from the work of other groups. The process will take about a year. The plan will then serve as both a map and a scorecard. Members can help by letting us know what's on their minds and what they want from us.

Q: *One idea that has been proposed over the years, and by a number of members at this year's Annual Meeting, is the idea of regional AHS chapters. Do you see this as feasible?*

A: It's a great idea. We'll consider all such suggestions very seriously during our planning sessions. We should probably also organize college and university chapters. The trick will be in the organization and follow-through. We don't want to compete with existing societies and clubs or duplicate their work, but to support them through our activities.

Q: *Do you have some specific ideas that you intend to implement immediately?*

A: The only thing I have in mind is how to increase our membership. At the moment, we are improving the services and benefits we offer members. That's the starting point.

Q: *You are a third generation member of a family gardening business. Tell us a little more about those aspects of the business you handle.*

A: Day to day I manage the unit that breeds new varieties of flowers, produces the seed of both the new and existing varieties in the catalog, and distributes the product to seed companies worldwide. We develop mostly F₁ hybrids in the bedding plant, pot plant, and cut flower markets. Our major products include *Impatiens*, *Petunias*, *Antirrhinum*, *Anemone*, *Tagetes*, *Pelargonium*, and *Catharanthus* or *Vinca rosea*, as it's often called. We also produce a wide range of open-pollinated crops such as *Delphinium*, *Matthiola*, and *Lathyrus odoratus*. Our most popular products include F₁ *Impatiens* 'Super Elfin', F₁ *Petunia* 'Sugar Daddy', and F₁ *Anemone* 'Mona Lisa'.

Our two biggest challenges are to keep up with the rapid technological advancements in the horticulture industry, and to predict what people will buy in the future.

Q: *The majority of AHS members are amateur gardeners, rather than professionals like yourself. Are there aspects of the business that more amateurs should know that would make them better gardeners and more informed—or more sympathetic—consumers?*

A: The ornamental horticulture industry is very fragmented. Supply, quality, and service can be highly variable. And when it is consistent, it is often mediocre. Yet the market grows steadily. Indeed, most gardeners spend a lot of money on their supplies. If better served, they would spend even more. But they are too soft on the supermarkets, nurseries, garden centers, and seed companies. Consumers should

AHS Bulletin Board

Fall Festivities

Fall brings a flurry of activity to River Farm. Whether you enjoy lectures or festivals, you're sure to find something of interest.

♦ On September 8 we celebrate Dahlia Day. The River Farm dahlias will be in full bloom and members of the National Capital Dahlia Society will be present to answer all your dahlia questions. 11 a.m. to 4 p.m. Admission: free.

♦ Also on September 8, Gordon Chappell of Colonial Williamsburg will present a lecture on the "Williamsburg Gardens." 2 p.m. Admission: \$5. The AHS Lecture Series is co-sponsored by District II of the National Capital Area Federation of Garden Clubs, Inc. Please call (703) 768-5700 or (800) 777-7931 for reservations.

♦ Ornamental grasses will be the subject of a lecture by nurseryman Kurt Bluemel on October 6. Bluemel is owner of a perennial nursery in Baldwin, Maryland, that specializes in ornamental grasses. 2 p.m. Admission: \$5. Call for reservations.

♦ A spectacular flower show by members of the Ohara School of Japanese Flower Arranging will fill the main house at River Farm October 13 and 14. 11 a.m. to 4 p.m. each day. Admission: free.

♦ This year the annual AHS Fall Festival will focus on Japan. The October 14 event will feature Japanese gardens and plants along with Japanese food and entertainment. 11 a.m. to 4 p.m. Admission: free.

♦ October 27 will bring Andre Viette, well-known nurseryman and perennial



Mutsuo Tomita, director of the Ohara Center of New York, will be the featured guest at the Ikebana Exhibition of the Ohara School of Japanese Flower Arranging at River Farm October 13 and 14.

plant expert from Fishersville, Virginia, to River Farm for a lecture on perennials in the garden. 2 p.m. Admission \$5. Please call ahead for reservations.

For more information on events at River Farm write AHS, 7931 East Boulevard Drive, Alexandria, VA 22308 or call (703) 768-5700 or (800) 777-7931.

Nominees Sought

AHS invites members to nominate individuals who would be willing to serve on its Board of Directors. Board Members serve for three years. New Board Members will take office at the Annual Meeting in Birmingham, Alabama, April 16-21. A proxy ballot for those not attending the meeting will appear in the March *News Edition*. Send your candidate's name, address, and horticultural achievement or interest—Board Members include both professionals and amateur gardeners—to: Board Nominations, American Horticultural Society, 7931 East Boulevard Drive, Alexandria, VA 22308. Please include your own address and phone number so that we can contact you for more information if needed. Nominations must be received by October 1.

Design Classes

At the end of this month, International Design Symposium, Ltd. will begin a series of two-day courses on the art of flower arranging. The sessions, which will be held every month at River Farm, will include demonstrations and practical hands-on workshops.

The 1990 programs are:

♦ **September 25 & 26.** Everything Old—New Again will focus on tall arrangements and new ways to use flowers and baskets. Instructor: Kenn Stephens, International Design Symposium.

♦ **October 23 & 24.** Autumn Abundance features traditional and contemporary French flower bouquets. Instructor: Hannelore Billet-Reinhard, Societe National d'Horticulture de France.

♦ **November 13 & 14.** Feast of Flowers will present flowers for a festive board and seasonal plants. Instructor: Sally Nash, International Design Symposium.

♦ **December 11 & 12.** Prelude to Christmas features American and Continental designs. Instructor: Kenn Stephens.

Workshops run from 10 a.m. to 4 p.m. each day and include lunch. The cost for each workshop is \$75 per person, per day. To register send a check or money order to: AHS, Flower Arranging Workshop, 7931 East Boulevard Drive, Alexandria, VA 22308. For more information call (703) 768-5700 or (800) 777-7931.

Hotline Hours

In order to offer better service to AHS members, the hours of the Gardener's Information Service have been restricted to 11 a.m. to 3 p.m., Eastern Standard Time, Monday through Friday. Members may call our toll-free number [(800) 777-7931] during those hours, or write to us (AHS, Gardener's Information Service, 7931 East Boulevard Drive, Alexandria, VA 22308), for help with gardening problems and information on horticultural resources.

Mrs. John M. Maury, 1912-1990

AHS experienced a painful loss July 17 with the death from leukemia of Stuart (Mrs. John M.) Maury of Washington, D.C. Mrs. Maury was first elected to the AHS Board in 1973, and served as Secretary and Second Vice President. She was Co-chair of Friends of River Farm, a group that supports improvement of the Society headquarters and its grounds. "It was hallowed land to Stuart—she nurtured it, protected it, and dreamed about its future," said AHS President George Ball. "Stuart can never be replaced on our Board."

Gardener's Bookshelf

Taylor's Guide to Water-Saving Gardening

Houghton Mifflin Company, Boston, 1990. 447 pages. Color photographs and line drawings. Publisher's price: softcover, \$16.95. AHS member price: \$14.50.

Water-saving gardening is boring, you say? Do images of cacti, raked gravel, and dusty cisterns pop into your mind? Water-saving gardening, you say, is scorched earth gardening, the opposite of green and lush, and applicable only to arid regions? Leaf through the pages of this Taylor's Guide and you'll see otherwise.

Water-saving gardening, as this book makes clear, is not waterless gardening. Rather, it is gardening that seeks to use water wisely, and is as rich, colorful, and challenging as any horticultural pursuit. As it is also, for the most part, less expensive and less work than other forms of gardening, it should become, and eventually must become, a part of every landscape. *Taylor's Guide to Water-Saving Gardening* will help gardeners learn how.

As with all Taylor's Guides, this book is attractive, easy to use, and packed full of information. There are color plates of 320 water-thrifty plants (each plant is rated for drought tolerance on a five-point scale), an encyclopedia with their descriptions and growing requirements, essays on the principles of water-saving gardening, and appendices that include a rainfall map, plant sources, and a list of organizations with landscape water conservation programs. There is also a very useful case study on a suburban landscape that was redesigned for water conservation.

Whether you want to become more environmentally sensitive with your gardening, mount a new horticultural challenge, or simply save some money, this guide is highly recommended.

—Thomas M. Barrett



Designing Your Own Landscape

Gordon Hayward. Whetstone Publishing, Brattleboro, Vermont, 1989. 229 pages. Line drawings. Publisher's price: softcover, \$14.95. AHS member price: \$12.70.

Collections of essays often remind me of a poorly tended landscape; they tend to be dissonant, disheveled, and in need of a good weed. But these articles on plants, gardening, and landscape design are woven together by Gordon Hayward's philosophy of gardening and the result is much more than the sum of its parts.

Hayward's landscape is expansive: woodland paths, creeping vines, old-fashioned roses, wildflowers, and heirloom vegetables all have their place, as do perennials, bulbs, trees, and shrubs. He prefers organic techniques and leans towards natives and disease- and pest-tolerant plants. He even allows children in the garden (despite the fact that they bulldoze his lettuce with Tonka toys) and includes a chapter on how to enchant young ones with the magic of plants.

The one element that transforms this from an enjoyable to an engaging book is Hayward's interest in plant lore. The folklore of plants can be an integral part



of a landscape, and as enriching as any flower or foliage. Hayward often plants a particular vegetable for the personal histories associated with it and values the stories and common names behind all of his plants. Did you know, for example, that *Amelanchier canadensis* was given the name downy serviceberry by Colonial Americans because by the time the shrub had bloomed, the ground had thawed enough for them to hold burial services for those who had died in the winter?

—T. M. B.

A Flower Grows

Ken Robbins. Dial Books, New York, 1990. 26 pages. Hand-tinted color photographs. Publisher's price: hardcover, \$12.95. AHS member price: \$10.95.

Ken Robbins has created a unique book for children ages six and up. Hand-tinted photographs beautifully illustrate the life of an amaryllis from its beginnings as an ugly bulb through the unfolding of its dramatic lavender and pink blooms to the dying of its graceful leaves; the text describes the beauty that may come "from the most unexpected places." An author's note at the end of the book provides detailed and easy-to-follow instructions for planting and growing an amaryllis bulb.

—Mary Beth Wiesner

For Every House a Garden

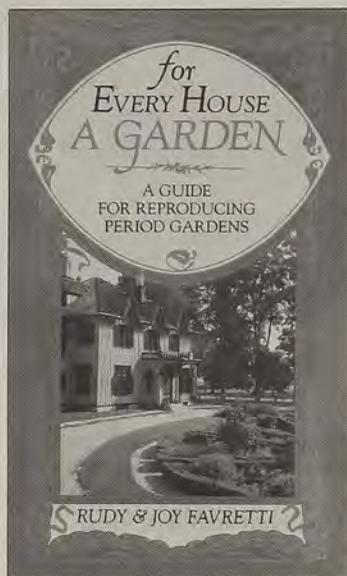
Rudy and Joy Favretti. University Press of New England, Hanover, New Hampshire, 1990. 137 pages. Black-and-white photographs and line drawings. Publisher's price: softcover, \$10.95. AHS member price: \$9.30.

Despite its subtitle, "A Guide for Reproducing Period Gardens," this book is not a guide. If you are interested in instructions on recreating historic gardens—what to do, how to do it, and where to get it—then this is not the book for you. Rather, *For Every House a Garden* is a worthy introduction to American landscape history from the 17th century to 1900.

Although the Favrettis include a few pages on gardens of craftsmen, laborers, and farmers, the bulk of the book focuses on the sumptuous landscapes of country gentlemen and city merchants. With many illustrations and photographs, the authors lead us through the lawns, the flower beds, and vegetable gardens of the

past, pausing along the way to point out paths, summerhouses, sundials, fountains, and statuary. They also provide a handy list of period plants (flowers, shrubs, trees, vines, vegetables, field crops, fruits, nuts, and herbs) for four periods (1600-1699, 1700-1776, 1776-1850, and 1850-1900).

There is not much species information here (especially for the earlier years), no geographical differentiation, and the book has a Northeastern bias. But for anyone toying with the notion of redoing their landscape in a historical style, or simply curious about our horticultural heritage, *For Every House a Garden* is a good place to start. —T. M. B.

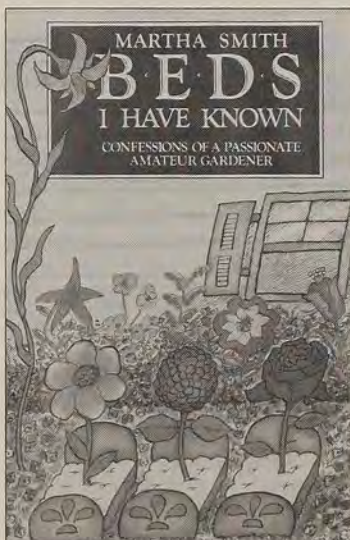


Beds I Have Known

Martha Smith. Atheneum, New York, 1990. 144 pages. Publisher's price: hardcover: \$17.95. AHS member price: \$15.25.

Subtitled "Confessions of a Passionate Amateur Gardener," *Beds I Have Known* is the mirthful "tale of one woman's descent into gardening madness." It begins innocently enough. "...One day you open a box of oat bran cereal and find it contains a bonus—a free package of seeds. In a desultory sort of way, you poke some holes in the ground beneath your kitchen window and toss in the seeds and promptly forget them. And then something awful happens: They come up. Normal life is over."

From that beginning Smith leads us down the garden path, laughing all the way. We share her compulsion for catalogs, her attempts to build the perfect tool shed, and her escapades at a flower show. ("It took but a single show to determine that I make an excellent spectator but a pathetic contestant.") We encounter the whimsical "Guide to Garden Saints," a quirky match-up list of "Personality Types and Their Favorite Plants and Pets," and "The Compleat Gardening Quiz," which clearly shows "what happens to the average mind when it is subjected to the stresses of life in the green lane." *Beds I Have Known* is for anyone who has ever asked the burning question, "Canna Lily Kill Ya?" —M. B. W.



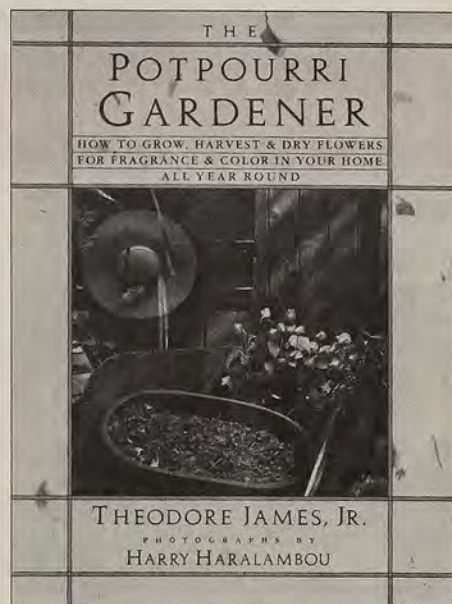
The Potpourri Gardener

Theodore James Jr. Photographs by Harry Haralambou. Macmillan Publishing Company, New York, 1990. 148 pages. Color photographs. Publisher's price: hardcover, \$22.95. AHS member price: \$19.50.

Potpourris can bring the fresh smell of the garden into any room of the house, but commercial potpourri (what author Theodore James Jr. calls "dead leaves... in a cellophane bag") often lacks "sparkling color and interesting ingredients" and can be expensive. James' how-to guide can easily start gardeners on the way to potpourri heaven.

The book opens with a chapter covering gardening basics, then moves ahead to chapters on specific plants. In addition to the cultural requirements of each, James includes information on its use in potpourri, type of scent, and harvest time. A "Making Potpourri" chapter includes directions on different drying methods, helpful hints, and easy-to-understand explanations of essential oils and fixatives.

James includes recipes for such tantalizing scents as "Scarlett's Revenge" (a magnolia-scented concoction featuring pink camellias and rhododendron flowers); "April in Paris" (a collection of artemisia, pussy willows, and pansies with a whiff of lily-of-the-valley); and "Ming Chee's Lotsa Lotus." Appendices list sources for plants and for potpourri materials. —M. B. W.



Book Order Form

Please send me the following books at the special AHS member prices.

- ☐ TAYLOR'S GUIDE \$14.50
UNC412
- ☐ DESIGNING YOUR OWN LANDSCAPE \$12.70
WHS001
- ☐ FOR EVERY HOUSE \$9.30
NEP001
- ☐ POTPOURRI GARDENER . \$19.50
MAC033
- ☐ BEDS I HAVE KNOWN . . . \$15.25
ATH001
- ☐ A FLOWER GROWS \$10.95
DIA001

I would like to order _____ books.

Please add \$2.50 per book for postage and handling. Virginia residents add 4½% sales tax. Please allow six weeks for delivery. Prices are subject to change without notice.

☐ Enclosed is my check for \$ _____

☐ Charge to:
☐ Visa ☐ MasterCard Exp. Date _____

Acct. # _____

Signature _____

Ship to _____

Street _____

City _____

State _____ Zip _____

Daytime phone number _____

MAIL TO: AHS Books, 7931 East Boulevard Drive, Alexandria, VA 22308.

Gardener's Dateline

Mid-Atlantic

♦ **Sept. 20-23. National Dahlia Show and 75th Anniversary of the American Dahlia Society.** Fairview, Virginia. Hosted by the National Capital Dahlia Society. Information: Susan Finch (301) 933-7800 or 933-1365.

♦ **Sept. 28-30. Oatlands Annual Garden Fair.** Oatlands Plantation, Route 15, six miles south of Leesburg, Virginia. Information: (703) 777-3174.

♦ **Oct. 9. Eighth Annual Perennials Symposium.** National Wildlife Federation, Vienna, Virginia. Information: Education Department, New York Botanical Garden, Bronx, NY 10458-5126, (212) 220-8720.

♦ **Oct. 13-14. The 37th Annual Chrysanthemum Show of the New Jersey State Chrysanthemum Society.** Frelinghuysen Arboretum, Morristown, New Jersey. Information: John A. Bednarz (201) 345-0343.

♦ **Oct. 20-21. Potomac Chrysanthemum Society's 35th Annual Chrysanthemum Show.** Wheaton, Maryland. Information: Robert K. Howell, 11214 Emack Rd., Beltsville, MD 20705, (301) 937-3720.

North Central

♦ **Sept. 13-15. Ohio Florists' Association Garden Center Tour of Michigan.** Detroit and southern Michigan. Information: Ohio Florists' Association, 700 Ackerman Rd., Suite 230, Columbus, OH 43202-1584, (614) 267-1117.

♦ **Sept. 29-Nov. 11. Fall Mum Show.** Foellinger-Freimann Botanical Conservatory, Fort Wayne, Indiana. Information: (219) 427-1267.

♦ **Oct. 4-6. Annual Systematics Symposium. Biological Relationships between Africa and South America.** St. Louis, Missouri. Information: Systematics Symposium, Missouri Botanical Garden, P.O. Box 299, St. Louis, MO 63166.

Northeast

♦ **Sept. 15. Harvest Festival.** City County Building, 800 French St., Wilmington, Delaware. Information: Kathy Mills (302) 658-1913.



San Francisco's Strybing Arboretum and Botanical Garden will hold a garden festival on Sunday, September 16 from 12 to 4 p.m. to celebrate its 50th anniversary. Festivities will include plant sales, gardening demonstrations, music, food, storytelling and games for children, an art exhibit, strolling entertainers, door prizes, and mini-tours of three of Strybing's collections: the Garden of Fragrance, the California Native Plant Garden, and the New World Cloud Forest. The event is free. Encompassing 70 acres in Golden Gate Park, Strybing features over 6,000 plant species from around the world including many endangered species. For more information call (415) 661-1316.

♦ **Sept. 22. Annual Ball—Fête des Fleurs.** Old Westbury Gardens, Old Westbury, New York. Information: Mrs. Douglas L. Paul (516) 333-0048.

♦ **Oct. 6-7. Eighth Annual Cranberry Harvest Tours.** Cranberry World Visitors Center, Plymouth, Massachusetts. Information: Julia Jensen (617) 437-7722.

♦ **Oct. 11. Eighth Annual Perennials Symposium.** New York Botanical Garden, Bronx, New York. Information: Education Department, New York Botanical Garden, Bronx, NY 10458-5126, (212) 220-8720.

♦ **Oct. 11-13. Northeast Regional Master Gardener Conference.** Newark, Delaware. Information: Sue Barton, Townsend Hall, University of Delaware, Newark, DE 19717-1303.

♦ **Oct. 13. Eighth Annual Perennials Symposium.** Arnold Arboretum, Cambridge, Massachusetts. Information: Education Department, New York Botanical Garden, Bronx, NY 10458-5126, (212) 220-8720.

♦ **Oct. 16. Dessert/Illustrated Lecture: Gardening with Nature.** Kennett Square, Pennsylvania. Information: Continuing Education, Longwood Gardens, Kennett Square, PA 19348-0501, (215) 388-6741, Ext. 516.

♦ **Oct. 22-24. The 1990 New England Greenhouse Conference.** Sheraton Sturbridge Inn, Route 20 opposite Old Sturbridge Village, Sturbridge, Massachusetts. Information: Richard J. Shaw, Dept. of Plant Sciences, 202 Greenhouses, University of Rhode Island, Kingston, RI 02881-0804, (401) 792-5996.

♦ **Oct. 22-25. Conference—"Biodiversity and Landscapes: Human Challenges for Conservation in the Changing World."** Penn State University, University Park, Pennsylvania. Information: Dr. Kim, 117 Land and Water, Center for BioDiversity Research, Penn State, University Park, PA 16802, (814) 863-0159.

♦ **Oct. 23. Perennials for the Landscape and Garden Center**

Industries Symposium. Swarthmore College, Swarthmore, Pennsylvania. Information: The Pennsylvania Horticultural Society, 325 Walnut St., Philadelphia, PA 19106, (215) 625-8299.

♦ **Oct. 24. Dessert/Illustrated Lecture: Cut Flowers from the Garden—Cutting is Not Murder!** Kennett Square, Pennsylvania. Information: Continuing Education, Longwood Gardens, Kennett Square, PA 19348-0501, (215) 388-6741, Ext. 516.

♦ **Nov. 12. Dessert/Illustrated Lecture: Birds, Plants, and Conservation.** Kennett Square, Pennsylvania. Information: Continuing Education, Longwood Gardens, Kennett Square, PA 19348-0501, (215) 388-6741, Ext. 516.

Northwest

♦ **Oct. 7, 14, 21, 28. Fall Foliage Festival.** The Rhododendron Species Foundation, Federal Way, Washington. Information: (206) 838-4646 (Seattle) or (206) 927-6960 (Tacoma).

South Central

♦ **Sept. 28-30. Sixth Annual Symposium and Plant Sale.** Armand Bayou Nature Center, 8600 Bay Area Blvd., Houston, Texas. Information: Gary Freeborg (713) 474-2551.

♦ **Sept. 29. Seminar: Growing Herbs Organically.** Fort Worth Botanic Garden. Sponsored by the North and Central Texas Unit of the Herb Society of America. Information: Fort Worth Botanic Garden, Box 7593, Dallas, TX 75209, (817) 469-9020.

Southeast

♦ **Sept. 29-30. Symposium "Refining the Garden: The Trowels and Pleasures of Gardening."** Atlanta, Georgia. Co-sponsored by the Atlanta Historical Society and the Georgia Perennial Plant Association. Information: Refining the Garden, Atlanta History Center, 3101 Andrews Dr., Atlanta, GA 30305, (404) 261-1837.

♦ **Oct. 7-11. The 10th Annual Conference of the Association of Zoological Horticulture.** Riverbanks Zoological Park, Columbia, South Carolina. Information: Jim Martin, Riverbanks Zoological Park, P.O. Box 1060, Columbia, SC 29209-1060, (803) 779-8717.

♦ **Oct. 10-13. The 19th Annual Meeting of the National Bark and Soil Producers Association.** Sarasota, Florida. Information: Robert C. LaGasse,

National Bark and Soil Producers Association, 13542 Union Village Circle, Clifton, VA 22024, (703) 830-5367.

♦ **Oct. 13-14. Annual Bromeliad Show and Sale.** Marie Selby Botanical Gardens, 811 South Palm Ave., Sarasota, Florida. Information: Spencer Ketchum (813) 366-5730.

♦ **Oct. 26-28. Gesneriad Research Foundation Seminar.** GRF Headquarters, Sarasota, Florida. Information: Hans Wiehler, 1873 Oak St., Sarasota, FL 34236.

♦ **Nov. 4-8. A New Tree Biology Seminar.** Appalachian State University, Boone, North Carolina. Dr. Alex L. Shigo, Seminar Leader. Information: Office of Conferences and Institutes, University Hall, Appalachian State University, Boone, NC 28608.

More Events

For an extensive listing of horticultural and gardening 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.

♦ **Nov. 15. Eighth Annual New Orleans Horticultural Symposium: Annual and Perennial Color in the Landscape.** Information: Dan Gill, Louisiana Cooperative Extension Service, P.O. Box 24006, New Orleans, LA 70184-4006, (504) 482-9081.

Southwest

♦ **Oct. 27-28. The 20th Annual Chrysanthemum Show.** Garden Center, 10120 Lomas NE, Albuquerque, New Mexico. Sponsored by the Albuquerque Chrysanthemum Society. Information: Lynda R. McBride (505) 296-6020.

♦ **Nov. 4-8. The 87th Annual Meeting of the American Society for Horticultural Science.** Tucson, Arizona. Information: ASHS-90, 113 South West St., Suite 400, Alexandria, VA 22314-2824, (703) 836-4606.

West Coast

♦ **Sept. 1. Seventh Annual Succulent Plant Symposium.**

The Huntington, San Marino, California. Information: Catherine Babcock, (818) 405-2147.

♦ **Sept. 7-30. Flower and Garden Showpark at the 1990 Los Angeles County Fair.** Pomona, California. Information: Kelly De Wit, Sid Robinson (714) 623-3111, Ext. 238.

♦ **Sept. 19. Annual Tree Management Seminar. Urban Trees: Their Costs and Contributions.** University of California, Riverside. Information: Cheryl Johnson (714) 787-4430.

♦ **Oct. 13-14. The 10th Annual South Bay Orchid Society Show.** South Coast Botanic Garden, Palos Verdes Peninsula, California. Information: (213) 772-5813.

♦ **Oct. 20. Annual Fund Raising Fall Plant Sale.** Santa Barbara Botanic Garden, Santa Barbara, California. Information: (805) 682-4726.

♦ **Oct. 20-21. Fall Festival of the Los Angeles Rose Society.** Descanso Gardens, La Canada Flintridge, California. Information: (818) 790-5571.

♦ **Oct. 20-21. Bonsai Show.** Sponsored by the Santa Anita Bonsai Society. Los Angeles State and County Arboretum, Arcadia, California. Information: (818) 446-8251.

♦ **Oct. 25-26. Fourth Annual Xeriscape Conference.** San Diego Convention Center, San Diego, California. Information: Jan Tubiolo (619) 443-1756.

♦ **Oct. 27-30. American Society of Landscape Architects Annual Meeting and Educational Exhibit.** San Diego Convention Center, San Diego, California. Information: (202) 686-ASLA.

International

♦ **Sept. 5-17. The 13th World Orchid Conference.** Auckland, New Zealand. Information: The Conference Secretariat, 13th World Orchid Conference, P.O. Box 12-442, Auckland 3, New Zealand or contact your local orchid society.

♦ **Oct. 19-20. The 12th Annual Canadian Greenhouse Conference.** University of Guelph, Guelph, Ontario. Information: Canadian Greenhouse Conference, c/o Donna Cobbledick, 324 Lake St., Grimsby, ON L3M 1Z4, (416) 945-9057.

Travel/Study Trips for the AHS Gardener

November 10-17, 1990

Gardens of the Colonial South

Board the *Nantucket Clipper* in Florida and travel north to old Southern gardens on Sea Island, private gardens in Savannah and Hilton Head, and the significant and historic gardens of Charleston. You'll view splendid marshlands while cruising the Intracoastal Waterway. Join AHS Past President Carolyn Marsh Lindsay and Bob Lindsay on board this yacht cruise.

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

January 23-February 5, 1991

Egypt and Nile Cruise

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OPPORTUNITY

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Lyme Disease in Perspective

If terror of Lyme Disease propelled you to hack down your ornamental grasses and wildflower meadow and douse yourself with bug repellent this summer, here are some statistics that may restore some calm to your outdoor activities.

True, the number of reported cases is increasing. Approximately 22,000 cases have been reported since 1980; over 4,500 of those cases were reported in 1988, and over 8,000 in 1989.

But of those cases, 45 percent have occurred in New York State—most of them

in just two counties, Westchester and Suffolk. New Jersey, the state with the next highest incidence, has had only nine percent of the reported cases.

Thus, if you live anywhere except the Mid-Atlantic, the chances of your coming into contact with an infected tick is fairly slim.

You can protect yourself by spraying bug repellent on exposed skin and clothing. However, the most effective repellents contain deet (N,N-diethyl-meta-toluamide), which is being investigated as a suspected carcinogen. The substance is definitely hazardous to cats, warned a Cornell University veterinary pharmacologist this summer. Some pet owners apparently have tried to keep potentially dangerous ticks off their animals by spraying them with repellents, but in cats, deet can lead to seizures and coma, Schwark said.

The best protection is probably avoidance. If you must walk in tall grasses or through woods, wear long sleeves and pants, and tuck the latter into tall boots. Light-colored clothing will allow you to see the ticks better.

The deer ticks that spread Lyme disease are much smaller than other ticks—about one-tenth of an inch long—and have a red spot on their abdomens. If a tick does land on you, grasp it close to its head with tweezers and pull it straight out with a gentle, steady pressure. Twisting, crushing, burning, or applying alcohol to it may cause it to release the spirochete bacteria that carries the disease. Place the tick in a closed container and have it identified by a health official or county agent. The symptoms are rarely missed in areas where Lyme is prevalent, and victims recover quickly when treated.

Seed Savers Win MacArthur Fellowships

Two pioneers of American heirloom gardening have won prestigious MacArthur Fellowships. Kent Whealy, co-director of the Seed Savers Exchange, and Gary Paul Nabhan, co-founder of Native Seeds/SEARCH and the assistant director for research and collections at the Desert Botanical Garden in Phoenix, won so-called "genius" grants of \$275,000 and \$245,000.

Both men—and their organizations—have been influential in the seed saving movement that seeks to preserve, exchange, and grow heirloom varieties of vegetables and fruits. Native Seeds/SEARCH has concentrated on preserving the traditional crops of Native Americans in the greater Southwest; the Seed Savers Exchange includes other heirloom varieties such as those discontinued from seed catalogs and garden vegetables of the Mennonites and Amish.

Lyme Data

These statistics on Lyme Disease are from the U.S. Center for Disease Control in Colorado. 1989 data are still being analyzed.

	1987	1988	1989
East North Central	385	311	603
East South Central	5	25	83
Mid-Atlantic	1,199	3,443	4,558
Mountain	0	5	64
Northeast	384	573	1,325
Pacific	209	213	298
South Atlantic	70	182	1,033
West North Central	101	85	233
West South Central	37	36	107
Total	2,390	4,673	8,304

East North Central: Illinois, Indiana, Michigan, Ohio, Wisconsin

East South Central: Alabama, Kentucky, Mississippi, Tennessee

Mid-Atlantic: New Jersey, New York, Pennsylvania

Mountain: Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming

Northeast: Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont

Pacific: Alaska, California, Hawaii, Oregon, Washington

South Atlantic: Delaware, District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, West Virginia

West North Central: Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota

West South Central: Arkansas, Louisiana, Oklahoma, Texas



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