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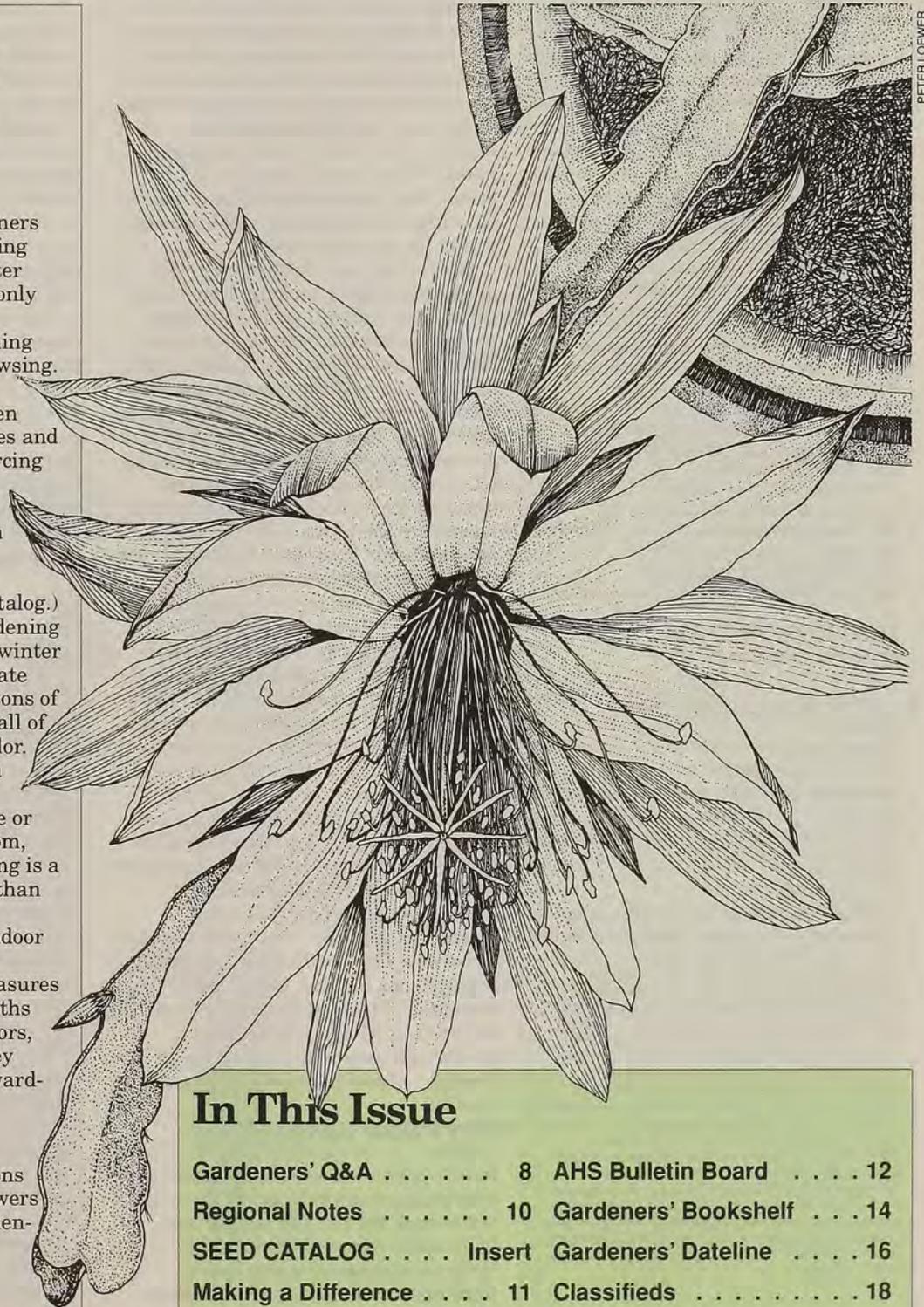
Inside Story

The belief that gardeners think about something else during the winter months is one held only by nongardeners.

Of course, there is the planning and dreaming and catalog browsing. When a mild day allows it, there is the reworking of garden "bones": the repairing of lattices and realigning of paths and reinforcing of raised beds. There is the sterilizing of seed flats and, in a few weeks, the planting in them of next season's dreams. (Some promising ones can be found in the enclosed Seed Catalog.)

But for some among us, gardening doesn't change appreciably in winter months. These are the inveterate indoor gardeners who, for reasons of space or taste, invite much or all of their gardens to share the parlor. This issue of the News Edition is for the rest: who, having watched a Boston fern crumble or an African violet refuse to bloom, concluded that indoor gardening is a sport more fraught with peril than bungee jumping.

Beginning on page 2, four indoor gardening experts share their thoughts on the perks and pleasures of indoor gardening, dispel myths and warn against common errors, and recommend the plants they find both easiest and most rewarding. We also offer some pest management strategies, a suggestion for composting indoors, books and organizations for additional advice, and answers to questions about indoor gardening in a special "Gardeners' Q&A" column from AHS Secretary Elvin McDonald.



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1992 Seed Catalog Enclosed!

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The Remodeled House Plant

During the 1970s, a certain look was *de rigueur* for interior decorating: white walls, a bentwood rocker, and Boston ferns headed the list. Those who kept the ferns alive bravely added a dracaena under a window and a split-leaf philodendron in a corner. But even for many of the successful, when the look went out, so did the plants.

Peter Loewer, whose many books include *Bringing the Outdoors In* and *The Indoor Window Garden*, believes that the desire to garden indoors or out is probably inborn, and for such people, indoor gardening has never been out of fashion. "For a few years, collecting plants was a yuppie thing to do," he says. "Then those people discovered they need care, just like children, and it was back to square one."

But Loewer and three other indoor gardening experts we interviewed agree that indoor gardening, far from being passé, has become more sophisticated, focusing less on "common" foliage plants and more on blooming plants such as orchids, or specialties such as hydroponics and bonsai. And they speculate that a new generation of gardeners, spurred by concern for the environment, is now bringing the outdoors in. "We've turned away from the legacy of the landscapers," says Elvin McDonald, who writes a syndicated column on indoor plants and is working on a new book on the subject. "House plants aren't just some furniture that we need to splash water on. They are the indoor response to our outdoor experience." McDonald has gone so far as to erect lattices and create a path with his house plants—a far cry from the windowsill syndrome.

Robert Farriss, president of the Indoor Gardening Society of America, Inc., says that the 100 members of its Cleveland chapter are bypassing spider plants for colorful *Achimenes* and *Sinningia*, shapely succulents, or scented geraniums. "They're interested in variety. I have 500 different plants, which keeps me on a pretty tight schedule!" Plants with the bonus of interesting foliage, like begonias, hoyas, and bromeliads are popular enough to have their own societies.

Why Indoor Gardens?

Indoor gardeners have long observed that plants seem to improve the quality of the enclosed air, say Loewer and McDonald; recent studies by the National Aeronautics and Space Administration merely confirm that plants reduce indoor air pollution.

Loewer and Tovah Martin, staff horticulturist at Logee's Greenhouses and author of *Once Upon a Windowsill*, a history of indoor gardening, note that having indoor plants is healthy for humans in other ways. With rare exceptions, indoor plants want the cooler temperatures—especially at night—and higher humidity that are also healthy for their owners. In the Victorian era, houses were cooler all day long, and at night, fires were banked and feather comforters hauled out. With the advent of furnaces, the repertoire of healthy indoor plants diminished rapidly, notes Martin. "If your skin is dry and the piano is out of tune, you know your plants need more humidity," she says. Fifty percent is probably a minimum, but some homes have humidity as low as 30 percent. An unglazed pot or a tray of gravel for plants will act as a minihumidifier for us.

And the bright light that most plants require probably improves mental health, notes Loewer. Research shows that a large percentage of the population suffers from at least a mild case of Seasonal Affective Disorder Syndrome: depression and diminished energy brought on by lack of enough full spectrum light in the winter.

Common Errors

With so many reasons to bring gardens indoors, why doesn't everyone have a home filled with plants year-round?

On the Cover

Artist-author Peter Loewer calls orchid cactus (*Epiphyllum × hybridus*) his favorite indoor plant. It's adaptable, tolerating temperatures down to 40 degrees; easy to propagate from cuttings; and when in bloom, "has people staggering to their knees," he says. Cultivars include 'Argus', whose apricot blooms have a mandarin rose center and yellow throat; 'Climax', with off-white petals having lavender center stripes and outer petals of amethyst ranging to red; 'Fireball', satiny orange pink, with a yellow-green throat and pink anthers and pistil; and 'Morocco', which combines light and medium purple, red, yellow, and cream. The drawings on pages 1-9 were first published in Loewer's book *The Indoor Window Garden*.

Indoor gardening is no harder than outdoor gardening, but it is different. "You *do* have to be a responsible enough person to take on opening the shades," observes Martin.

The biggest mistake that neophytes make, all our experts agree, is overwatering, and a second, related error is overpotting: putting a small plant in a too-large container. The result is that there isn't enough root action to create air spaces between soil particles. The soil sickens from a build-up of anaerobic bacteria, and the plant rots or drowns. A plant probably needs watering when a finger tapping on the pot produces a hollow ring; when no particles cling to a probe pushed into the soil; when the pot feels light when lifted. Most plants need watering when their surface feels dry, but there are many exceptions. Self-watering pots, in which a wick from a water source is inserted in the plant's soil, are

considered the best insurance against over- or underwatering.

In addition to overheating their homes, in the belief that all indoor plants are "hothouse beauties," Martin says too many indoor gardeners "don't prune well or at all." Primarily because of differences in lighting, plants that are naturally bushy outdoors become sparse and leggy inside. "Pruning is essential. It means the difference between a plant that's gorgeous and full and one that's scrawny and, well, rather unhappy."

Branching plants should be pruned above the second set of branches after blooming but before rapid growth begins. "You won't lose any blossoms, and should even have more," she says. Everbloomers can be pruned any time.

Lighting

The factor that keeps many from gardening indoors is probably lighting.

What if I only have north windows? What kind of lights should I buy?

While you can experiment with esoteric combinations, the basics of both natural and artificial light are pretty simple. However, there was some disagreement among our experts about the extent to which artificial lights are necessary.

Martin believes that a south window has enough light for almost any plant; only in the Southwest might such windows bring in too much light. Low-light plants like begonias, especially when young, and gesneriads might have better color under fluorescent lights, she said, but artificial light never seems to be enough for some sun-lovers, like geraniums. A bay window is "the next best thing to a greenhouse," she adds, because it brings in sun from different angles.

McDonald says some people are confused by catalogs that say plants need "half sunny" or "half shady" conditions. A west window is normally half sunny; those facing east, which get about twice as much sun, are half shady. However, a large tree or tall building can make "sunny" windows less so. Even windows dirty from cigarette smoke or a fireplace, or architectural details like eaves and cornices, can make a difference, says Loewer. He recommends using a camera with a light meter to get a more precise reading.

Set the camera at ASA 200, the shutter speed to 1/500 of a second, aim the camera toward a piece of white cardboard, and adjust the f-stop. If you've stopped at f/22, you have about 5,000 foot-candles of light—just barely enough for most cacti and flowering plants. If your setting is f/16, begonias and other jungle natives should be happy. A setting of f/4.5 means you have about 150 foot-candles. The absolute minimum for plant survival seems to be about 100 foot-candles. With lighting that low, plants should be moved outside in summer for as long as possible. (Summering outdoors is therapeutic for most house plants, as long as

Shrimp Plant

The shrimp plant (*Justica brandegeana*), says Peter Loewer, "is one of those few denizens of the plant world that has a common name of such exactitude that no amount of imagination is needed in order to see that the derivation is right on." The "shrimps" are overlapping, reddish brown bracts; two-lipped white flowers peek out from underneath them. Natives of Mexico, they need full sun and temperatures above 50 degrees. They are normally three-foot shrubs, so need some pruning to keep from becoming rangy.



Continued on page 4

Indoor Continued from page 3

they're acclimatized gradually, and checked for pests in the fall.)

But light meter readings will vary during the course of a day and as seasons change. With all these factors involved, it may seem almost easier to install lights.

Farriss and McDonald recommend a fluorescent fixture with one cool bulb for foliage, and one warm bulb for flowering. Two four-foot, 40-watt bulbs fit in a shop-type reflector and are a good length for most workbenches and kitchen counters. Plants needing the most light should be placed closer to the center. Farriss sets his on a timer for 12 to 14 hours. McDonald says eight hours a day is enough to maintain plants while the owner is away from home; but the rest of the time, he gives both plants and seed flats 16 hours of light. "That makes it easy to remember, because on a normal day I turn it on when I get up and turn it off when I go to bed." The lights are eight inches above seed flats, 15 to 18 inches above plants.

Soil

Our experts had differing preferences in growing media. One prefers soilless mixes with some additives for varying conditions; two prefer loam-based mixes; and one uses some of both.

The advantages of soilless mixes are that they can be purchased already mixed and they're light weight, which is important when you're lugging a six-foot *Schefflera* outdoors for the summer. They drain quickly, so you don't have to worry about overwatering, and there's less worry about pathogens.

The disadvantages include their lack of nutrients, which necessitates using more chemical fertilizers; their light weight, which makes tall plants more likely to become top heavy; and their inability to retain water and fertilizer like "real" soil does.

Farriss uses the soilless mix as a base and adds coarse builders' sand for succulents and peat moss for African violets. Sometimes when the mix doesn't seem heavy or rich enough he adds good quality potting soil, or compost that has been carefully sifted and sterilized. For the latter task, he uses a microwave set on high for 10 minutes. The compost should reach 180 degrees. "Cover it with a paper towel," he adds. "Plastic wrap will melt."

Those who eschew soilless mixes use commercial potting soil with the addition of coarse builders' sand or perlite for drainage, and humus, peat, or compost to add nutrients and hold moisture. Loewer finds that some

Indoor Plant Societies

For many indoor plants there are national societies of admirers who publish newsletters or magazines and sponsor plant and seed exchanges. Many encourage research, promote hybridization of new varieties, and work toward the standardization of nomenclature.

♦ **African Violet Society of America, Inc.**, P.O. Box 3609, Beaumont, TX 77704-3609. Dues \$15.

♦ **American Begonia Society**, 157 Monument Road, Rio Dell, CA 95562-1617. Dues \$15.

♦ **American Gloxinia and Gesneriad Society**, Jimmy Dates, c/o Horticultural Society of New York, 128 West 58th Street, New York, NY 10019. Dues \$18.

♦ **American Orchid Society**, 6000 South Olive Avenue, West Palm Beach, FL 33405. Dues \$30.

♦ **Bromeliad Society, Inc.**, 2488 East 49th, Tulsa, OK 74105. Dues \$20.

♦ **Cactus and Succulent Society of America**, c/o Dorothy Williams, 6240 Wildomar Way, Carmichael, CA 95068. Dues \$28.

♦ **Cryptanthus Society**, c/o Kathleen Stucker, 3629 Bordeaux Court, Arlington, TX 76016. Dues \$10.

♦ **Indoor Citrus and Rare Fruit Society**, 176 Coronado Avenue, Los Altos, CA 94022. Dues \$15.

♦ **International Aroid Society, Inc.**, Box 43-1853, Miami, FL 33143. Dues \$15.

♦ **Peperomia Society International**, 5240 West 20th Street, Vero Beach, FL 32960. Dues \$5.

♦ **Saintpaulia International**, 1650 Cherry Hill Road South, State College, PA 16803. Dues \$12.

plants like the addition of composted sheep or cow manure.

A Few Favorites

For Farriss and many members of his organization, gesneriads have long been favorites, but the genus of the moment has got to be *Streptocarpus*. Perhaps the plants, commonly called cape primroses, will soon become well enough known that we will stop hearing: "Is that a disease?"

They are frequently compared to African violets, and many predict they will eventually overtake them in popularity. In the July/August issue of

The Indoor Garden, the newsletter of the Indoor Gardening Society of America, George A. Elbert calls *Streptocarpus* "stylish and aristocratic," "gorgeous," and "a fantastic breed and botanical marvels."

They are less popular here than in England because, while African violets will tolerate the warmth of American homes, *Streptocarpus* generally will not. But recently, Mikkelsen's Nursery in Ashtabula, Ohio, has developed what it calls the Olympus series of *Streptocarpus*, which has smaller leaves and is more heat tolerant. One of the series, a white bloomer called 'Thalia', was a winner in last year's FloraStar trialing competition for container-propagated plants. Other cultivars that bloom constantly in temperatures under 80 degrees are blue-violet 'Constant Nymph' and 'Margaret', dark blue 'Netta Nymph', and 'Maassen's White'.

While Martin is fond of hibiscus for its variety of bright colors, fragrance is the biggest draw for her. "Heliotrope is one plant I wouldn't want to be without," she says. In her recent book, *The Essence of Paradise*, she describes its scent as a combination of baby powder, vanilla, and mulled cider. Not to be confused with the garden heliotrope, *Valeriana officinalis*, it is "more gratifying at first glance than most fragrant plants," with its dark green, deeply textured foliage. Her favorite hybrid is 'Iowa', which has "tight, voluptuous, royal purple umbels."

Jasmines are another favorite. Highlights are *Jasminum sambac* cultivars (the species is out of cultivation), with their scent of May wine touched with cloves; *J. nitidum*, a tidy bush-type plant with a fresh, soapy scent; and *J. tortuosum*, a vigorous viner with a fruity tang to its aroma.

Loewer's favorites include *Oxalis regnellii* (page 9); the orchid cactus (*Epiphyllum* × *hybridus* cultivars, illustrated on the cover and described on page 2); *Oncidium* orchid species, the long-blooming "dancing dolls" that remind him of fluttering moths; and *Cyclamen*, which he called "faithful, and great for writers because they survive when we can't afford any heat."

McDonald names pink grape ivy (*Cissus adenopoda*), a hairy-leaved climber grown for its colorful foliage; *Siderasis fuscata*, which has hairy dark green leaves with a white center and red underside and violet to rosy flowers shaped like those of the related spiderworts; and silver pothos (*Scindapsus pictus* 'Argyraeus'), a "highly trainable" vine whose heart-shaped leaves have a velvety, satin sheen. ♦

—Kathleen Fisher, Editor

An IPM Approach to Indoor Plant Pests

Darrell Trout, president of the Greater New York Chapter of the American Gloxinia and Gesneriad Society, Inc., notes in *Glox News*, the chapter's newsletter, that the use of toxic pesticides is even more dangerous indoors. He offers a number of alternatives, equivalent to an Integrated Pest Management strategy for the indoor gardener.

To prevent pests, he advises:

- ◆ Practice good sanitation. Keep growing areas clean of dead leaves and other debris. If you use matting, clean it frequently.

- ◆ Don't overcrowd your plants.

- ◆ Don't overfertilize. Very rapid growth is weak and invites trouble.

- ◆ New plants, whether they come from a commercial grower, friends, or plant sales, should be isolated for as

long as possible. Similarly, cut flowers from a florist or garden should not be put near your house plants.

To fight infestation once it occurs:

- ◆ Consider getting rid of badly infested plants. If it's a plant that grows from a tuber or rhizome, force it to go dormant and remove all the top growth.

- ◆ Wash the pests off with water—under a faucet, with the kitchen sink spray hose, or using a spray bottle to which you've added a bit of detergent.

- ◆ Try the USDA mix reported in our July News Edition: A tablespoon of detergent is mixed with a cup of cooking oil; two teaspoons of that concentrate are mixed with a cup of water and sprayed on the pests. "I would start with a more dilute

solution," writes Trout. "Always proceed slowly with any new product or organic formula, and read and follow the label directions."

He notes that others recommend such additives as fresh spearmint leaves, green onion tops, horseradish roots and leaves, cayenne pepper, onion, and garlic. "I am not totally convinced about the efficacy of those additives but they don't seem to represent a danger to your plants or yourself although they do make your garden or plant room smell vaguely like a vinaigrette."

- ◆ Alcohol has brought solace to many an indoor gardener. "Who hasn't used a Q-tip dipped in alcohol to destroy small quantities of mealybugs (and many innocent perlites)?" asks Trout, who admits he has "occasionally,

in desperation" sprayed plants with a half-alcohol, half-water solution to destroy a large population of mealybugs. Plants should be rinsed thoroughly with water immediately afterwards.

- ◆ Insecticidal soap works reasonably well and is safer than other manufactured insecticides. It can wash the names off plant labels if used frequently, Trout warns.

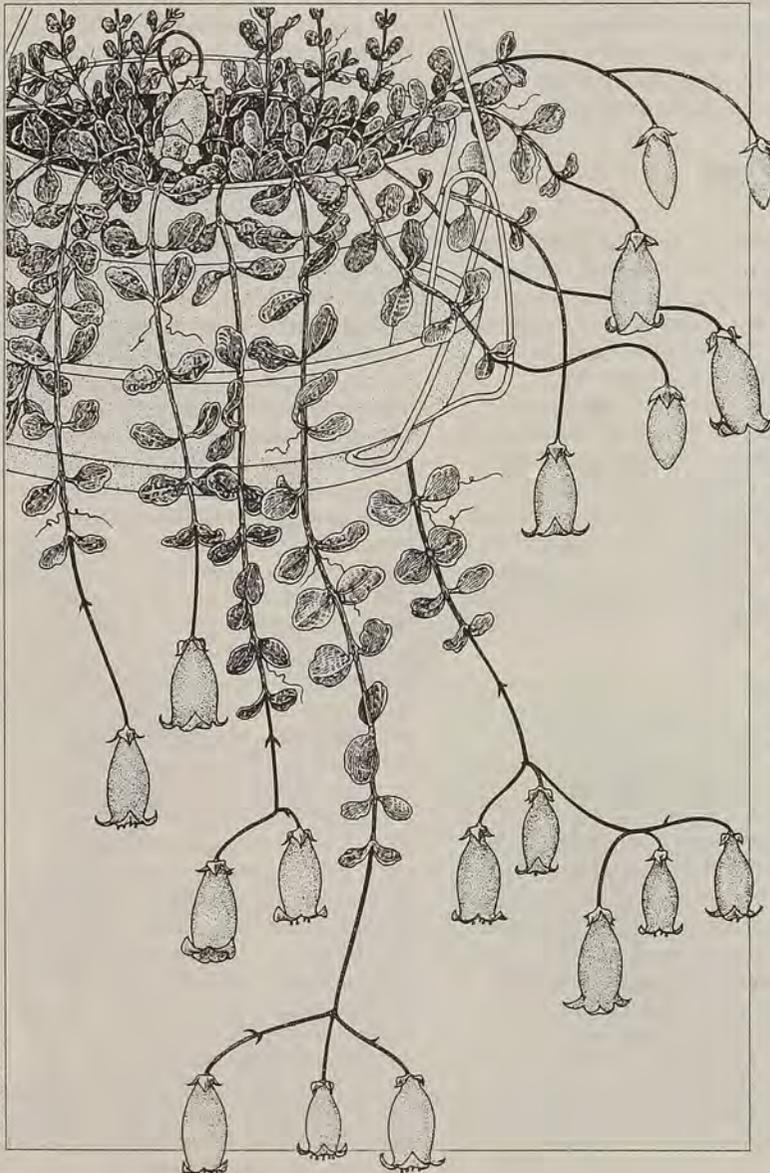
- ◆ Yellow sticky traps control whitefly, fungus gnats, and "other little winged critters," and help show the extent of your infestation.

- ◆ A new, highly refined dormant oil, Sun Spray, can, unlike other such oils, be used during the growing season and has been approved for greenhouse plants. It has been shown effective against 10 species of aphid, six species of scale, several species of spider mite, and mealybug. Users recommend two tablespoons per gallon of water as a spray, never as a dip.

- ◆ If all else fails and you need a strong chemical pesticide, learn which pest you are fighting and use a specific, not broad-spectrum pesticide, advises Trout. And of course, read the label and follow its directions.

Coral Bell Plant

Kalanchoe species are popular because they have both interesting foliage and long-lasting flowers. Peter Loewer finds *K. uniflora*, the kitchingia, the most attractive. It is also sometimes called the coral bell plant because of its coral red, puffed-up spring blossoms that remind Loewer of tiny hot-air balloons. This species is especially good in a hanging basket. It needs temperatures over 50 degrees and soil that's allowed to go dry between waterings.



Worms of Endearment

Horticulturists have viewed earthworms as barometers of soil health since Charles Darwin's landmark studies during the 1870s and 1880s. Today, the growing interest in composting has raised awareness of their role in improving soil structure and fertility, and in a process called vermicomposting.

Rather than simply hoping for worms to flourish and become active in the compost pile, vermicomposters add special hybrid worms to their worm bins and piles, hastening the breakdown of food scraps and plant materials. Vermicomposting is also a way for apartment dwellers and others to move composting indoors. Worm boxes—square or rectangular containers made from wood or plastic—can be tended inconspicuously in basements, laundry rooms, even under kitchen sinks.

All that's needed for indoor composting is a room temperature of 55 to 77 degrees; a worm box two feet square and eight inches deep for a household of one or two people (one three feet

deep will consume the food scraps of four to six people); worm bedding—five to 12 pounds of moistened, shredded newspaper, cardboard, manure, or dry peat; a handful of garden soil for the worms' gizzards, where coarse particles help the worms shred and grind the materials they ingest, and to provide compost microorganisms; and hybrid worms, either *Lumbricus rubellus* or *Eisenia foetida*, commonly called redworms, red wigglers, or manure worms. Do *not* use common garden worms (frequently *Lumbricus terrestris* or *Aporrectodea* species), which will not digest fresh food scraps and will soon perish indoors. Besides, you will need about 1,000 worms to begin—approximately one pound of worms per pound of food waste per week.

After establishing the worm box, the indoor composter simply adds kitchen scraps every few days, progressively burying fresh material throughout the bedding; checks on moisture periodically; and harvests worms and castings every couple of months while adding fresh bedding materials.

Among the most suitable worm foods are unprocessed scraps like coffee grounds, vegetable trimmings, fruit peels and rinds, spoiled vegetables and fruits, egg shells, and tea bags. As in outdoor composting, it is best to avoid fatty materials, grease, dairy products, and other prepared food materials that might produce odors or attract pests (or pets).

With a little care, these wiggling gourmets can become an integral part of indoor gardening, both in processing plant trimmings and dead leaves and blooms, and in providing nutrient-rich castings and compost to enhance the health and beauty of the indoor garden. —Joseph M. Keyser, Director of Programs

Mary Appelhof's Worms Eat My Garbage, the most complete book available on vermicomposting, can be purchased from the AHS Book Service for \$8.95. For a list of sources for worms and vermicomposting supplies, send a stamped, self-addressed envelope to Worms, AHS, 7931 East Boulevard Drive, Alexandria, VA 22308-1300.

Books for the Indoor Gardener

◆ *200 House Plants Anyone Can Grow* by Richard Gilbert (HP Books, 1988). An inviting and practical beginners' guide to the cultivation of best-loved house plants. Each plant is identified with a color photograph and sprinkling of words on the habit and appropriate culture. There are also useful decorating tips and chapters on general plant care. Publisher's price, softcover: \$12.95. AHS member price: \$11.00.

◆ *The Indoor Window Garden* by Peter Loewer (Contemporary Books, 1990). Unlike most indoor plant books, this one has black-and-white drawings

instead of photos, no cultivation keys, and is a joy to read—straight through like a novel, if you wish. Loewer is catholic (What other garden writer can quote from Greek poets, Gordon Jenkins's hit song of 1950 "Tzena, Tzena, Tzena," and J. K. Huysman's decadent classic *A Rebours* as effortlessly as from *Hortus Third?*) and a bit iconoclastic (Who else grows that "weed" horsetails indoors?), as well as informative. Included are plants for flower, fruit, or foliage; vines, grasses, and succulents. Publisher's price, softcover: \$9.95. AHS member price: \$8.50.

◆ *Indoor Plants* by George B. Briggs and Clyde L. Calvin (John Wiley & Sons, 1987). This unusually fine college textbook has little on individual species, but a whole semester's worth on the science of indoor gardening. Chapters like "Understanding the Growing Medium," "Soil Fertility and Plant Nutrition," "The Climate Indoors," and "Plant Disorders" are presented in a readable manner. Publisher's price, hardcover: \$62.95. AHS member price: \$53.50.

◆ *Success with House Plants* (Readers' Digest, 1979). A guide to some 600 taxa of house plants. Arranged by genera, each entry describes the genus, lists recommended species and cultivars, and explains their light, temperature, water, feeding, potting, and propagation requirements. This will be an especially attractive volume for indoor gardeners who want to experiment within a genus and grow, for example, the recommended ten *Philodendron* species and one hybrid. Publisher's price, hardcover: \$24.95. AHS member price: \$21.00.

You can order the above books from AHS Books, 7931 East Boulevard Drive, Alexandria, VA 22308-1300. Add \$2.50 postage for one book, \$1.50 for each additional book. Virginia residents add 4½% sales tax.

Indoor Experts

The following nonprofit organizations specialize in various aspects of indoor gardening:

◆ **Hobby Greenhouse Association**, 8 Glen Terrace, Bedford, MA 01730-2048. Annual dues of \$12 entitle members to the quarterly *Hobby Greenhouse*. HGA also has a write-in information service.

◆ **Hydroponic Society of America**, P.O. Box 6067, Concord, CA 94524, publishes the bimonthly *Soilless Grower* and an annual source directory. Annual dues are \$30.

◆ **Indoor Gardening Society of America, Inc.**, c/o Mrs. R. D. Morrison, 5305 S.W. Hamilton Street, Portland, OR 97221, publishes a bimonthly, *The Indoor Garden*, and a series of cultural guides, and has a seed exchange. Dues are \$15.

◆ **The Terrarium Association**, P.O. Box 276, Newfane, VT 05345, publishes several terrarium-related pamphlets. Not a membership organization, it provides a terrarium answer service by mail or phone ((802) 365-4721).

On African Violet 100th, Species Endangered

By Shirley Bellows

This year is the 100th anniversary of the discovery of African violets by Baron Walter von Saint Paul-Illaire. In the 1800s, he was governor of Tanganyika (now Tanzania), which was, at the time, controlled by Germany. Walter sent some specimens back to his father, Ulrich, who passed them on to Herman Wendland, of the Royal Botanical Gardens of Hanover. Wendland classified them in the family Gesneriaceae and named them *Saintpaulia* in honor of his friend. The first species identified was *S. ionantha*—"with violetlike flowers." Hence the common name of African violet. They are not related to violets that are in the family *Violaceae*.

Saintpaulia contains an abundance of genetic variety that has given rise to many mutations and hybrids of many different shapes and colors. This year, the first yellow African violet will be introduced at the National Convention of the African Violet Society of America.

But the original species have a delicate and simple beauty that is attracting an increasing number of growers. Unlike hybrids, the species will come true from seed. Yet they are almost unobtainable. After several years of searching, I have collected only nine out of a possible 30. I know of only one company in the United States that sells them.

Unfortunately, the species are endangered in their natural habitat due to the extensive logging in Tanzania and Kenya. This exposes the plants to

the strong African sunlight. Even if they could adapt to these new conditions, they would be smothered by light-loving plants. In 1986, *Saintpaulia* species were placed on an international list of the 10 most endangered plants in the world. Two species, *S. pusilla* and *S. inconspicua*, were thought to be extinct, both in the wild and in cultivation. However, *S. pusilla* may have been rediscovered and two new variants of *S. diplotricha* and *S. grandifolia* have just been found.

The *Saintpaulia* species have been found nowhere else in the world and hobby growers and botanists should dedicate themselves to their preservation. *Saintpaulia* species are just as easy to grow as their showy hybrids and, in some cases, even easier. Most

hybrids do best under fluorescent lighting, but the species are sometimes happier just on a windowsill. Here are descriptions of three of the species that I grow:

S. diplotricha: One of the first two species discovered in 1892, its foliage is a glossy dark green and the blooms are an unusual shade of blue gray. It blooms easily and maintains its symmetrical shape.

S. brevopilosa: Emerald green leaves form a perfect background for the purple blossoms. The petioles twist and turn, clockwise and counterclockwise. The leaves are a silky velvet, too soft to describe.

S. difficilis: Contrary to its name, this plant is easy to grow. It was named "difficult" because botanists had trouble naming it. It has bright chartreuse leaves and medium purple blooms. The contrast is stunning.

Yesterday-today-and tomorrow

Yesterday-today-and tomorrow, one of the common names for *Brunfelsia pilosa* and several other species in this genus, was inspired by the way the blooms first appear as deep purple and then fade over several days to pale blue and finally to white. The flowers appear most commonly from January through April, and are sweetly scented and funnel shaped. They need to be kept moist and like high humidity and frequent misting.



Shirley Bellows is founder and president of the London (Ontario) African Violet Society. This article is excerpted from the magazine of the Heritage Seed Program, RR 3, Uxbridge, Ontario, L9P 1R3.

African violet species are available by mail from Cape Cod Violetry, 28 Minot Street, Falmouth, MA 02540. Catalog \$2.

Gardeners' Q&A

Editor's Note: Our guest columnist this month is Elvin McDonald, Secretary of the American Horticultural Society and author of a syndicated column on house plants. Here is some of the advice that McDonald's column has dispensed in recent months.

Q: Do you have any information on aloe plants, inside or out?

Rosa, California

A: According to *Hortus Third*, there are 200 to 250 species of aloe native to arid parts of the Old World, chiefly Africa. They are typically succulent, perennial herbs, shrubs, or trees, usually stemless, but sometimes with simple or branched stems.

Best known is *Aloe barbadensis*, the aloe vera of commerce, which came originally from the Mediterranean region. It will thrive in almost any growing conditions but can't survive freezing temperatures or standing in water.

Aloes in general need well-drained soil that is moistened well and then not watered again until the surface is quite dry. Moderate to warm temperatures favor active growth, but flowering usually occurs following a season or two of dryness and cool but frost-free temperatures.

Q: I have a hibiscus that is nice and green and looks very healthy but never blooms. It did have beautiful flowers when I first received it. Could you tell me what is wrong?

Winnie, Illinois

A: Chinese hibiscus blooms on new wood. It needs at least a half day of direct sun and temperatures ranging from between around 60 degrees at night to 80 degrees by day. Keep the soil nicely moist. Avoid letting it become dry enough to cause even slight wilting of the leaves. Fertilize regularly, alternating between 3-10-10 and 15-30-15.

Q: A friend gave me a bromeliad plant and said all I needed to do was water it from time to time down the neck of the flower. Now that part is fading and I see four baby shoots growing all around. How do I repot and separate the new growths? Can you give me additional advice about growing bromeliads?

Sophie, Connecticut

A: Any bromeliad whose leaves form a vase can be watered by keeping these cups filled with fresh water. They need watering around the roots at least once a week during warm weather. Mine also get their leaves sprinkled with water once or twice a day.

Unless you have a warm fluorescent-light garden, wait until late winter or early spring to unpot, divide (by cutting or pulling apart, as the situation dictates), and repot your bromeliad. Then put it in your brightest window garden, where temperatures are generally from 60 to 80 degrees.

Bromeliads do well in humidity 40 percent or higher, and with fresh moving air. But some of the smaller ones such as species of *Tillandsia* and *Cryptanthus*, or earth stars, will do well in a terrarium where there is constant high humidity and the air is "close."

Bromeliads need a half day or more of direct sun from the time the offset emerges from the parent until it comes into bloom. Then the plant can be moved to an interior space to be enjoyed up close. Since the bracts are often showier than the true flower they support and much longer lasting, many can be enjoyed in relatively low light for several weeks or even months.

If they have enough warmth and light, fertilizing is beneficial. I use 30-10-10, 20-20-20, or 15-30-15 diluted to one-fourth or one-fifth recommended strength with every other watering.

Q: Why do older, outer leaves of my African violets collapse soon after they touch the rim of the pot?

Tom, Colorado

A: When mineral salts from the water and fertilizers collect on the rim, they burn the leaf stalk of the African violet the instant it touches. Soon this leads to complete collapse. That is why one often sees African violets growing in pots with a neat cuff of aluminum foil turned over the pot rim. Dipping the rim in hot wax before potting is another solution to the problem.

Q: How can I keep my cyclamens flowering over a long period? When I buy the plants in bloom, the older leaves soon turn yellow and sometimes the whole thing flops over and never perks up again despite frequent watering and fertilizing.

Georgette, Illinois

A: There is no commercial pot plant that is more abused than the cyclamen. The ones regularly offered at my neighborhood supermarket appear to have been prepped for immediate burial in a compost pile.

Buy cyclamen only from a known source. If the plant has been stressed by chilling, overheating, drying, or overwatering, it will never fully recover.

To keep a healthy cyclamen going, keep its soil nicely moist. Avoid extremes of wet and dry. If the plant becomes dry enough to cause slight wilting of the leaves, the older ones will wither prematurely and flower buds in the making will be killed.

Cyclamen needs bright light, but protection from too much hot sun. If the plant receives ample circulation of fresh air, it can tolerate more direct sun.

Cyclamen does best in a moderate range of temperatures, approximately 60 to 72 degrees. It also helps if there is adequate humidity, which can be boosted around the plant by setting the pot on a pebble tray with enough water to keep the pebbles wet but never so much that the pot stands in water.

These conditions being met, cyclamen will also benefit from half-strength applications of fertilizer labeled as a blossom booster for house plants such as African violets.

Q: White bugs have infested my house plants' soil. Even though I used household insecticides on a weekly basis, the bugs always return. What are they and how can I get rid of them?

Linda, Illinois

A: Your bugs sound like springtails. You can try a pesticidal soil drench or a diluted, liquid pesticide, like Ortho's Isotox, but my advice is to learn to ignore them. Their presence isn't threatening to your plants or to you. Better air circulation will deter them to some extent as will being sure always that your plant roots and soil never become soggy.

Q: I have a florist gloxinia in a partly sunny, fairly warm window. I let it go dormant this fall then found a new shoot emerging from the tuber. Do I repot the tuber now, or give the plant a more extended rest?

Diane, Ohio

A: Since you have a bright, warm window garden, there is no reason not to repot the tuber and start it into active growth. It would also do no harm to let this summer bloomer rest for two or three months in early winter.

The florist gloxinia is both variable and adaptable, in part because it does have a tuber designed to carry it through periods not favorable for active growth. Avoid soggy wetness and temperatures below 50 degrees. When watering gloxinias, use water at room temperature or warmer; cold water splashed on the hairy leaves can cause spotting and disfiguring blemishes on the foliage. As each flower wilts, remove it so light and air can reach developing buds, and cut off spent stalks as close to the base as possible.

Q: Several months ago I bought a small potted anthurium that has pinkish lavender flowers. Why do

the new leaves come out distorted? I noticed some small green insects.
Tracey, Connecticut

A: The insects are aphids. Spray with insecticidal soap or if there aren't many, remove them with your fingers. Anthuriums of the type you describe need constant warmth, high humidity, and bright light, but not much direct sun.

Q: Several years ago I received a large potted agapanthus covered with blooms. It has continued to grow well, but there have been no more flowers. Why?

Robert, Missouri

A: During fall and winter agapanthus needs to be kept cool but above freezing and dry enough to wither some of the older leaves. In spring and summer, keep the soil moist, provide a half day or more of direct sun, and fertilize regularly. Agapanthus blooms

best if potbound. It also responds well to applications of liquid manure tea.

Q: During a recent visit to a local conservatory, I noticed a gorgeous orchid cactus in bloom. Can this be grown as a house plant?
William, Pennsylvania

A: Orchid cacti can be grown in any indoor garden where geraniums thrive and bloom, which is to say sunny and warm in spring and summer, sunny and cool in fall and winter.

Epiphyllum species are related more to the rain forest than the desert, so bear this in mind when making up the potting soil. Besides the usual clean garden loam or packaged all-purpose potting soil, add clean, sharp sand and generous amounts of well-rotted compost, leafmold, or other organic humus.

When they are watered in prime growing weather, orchid cacti benefit from frequent, thorough drenching, drying overnight, and then another drench. In a fall-winter resting mode, they can go several days between drenchings.

Two sources are Ira Slade, Greenlife Gardens, 101 County Line Road, Griffin, GA 30223; and Glasshouse Works, Church Street, P.O. Box 97, Stewart, OH 45778-0097.

Q: I'm confused. One expert says weeping ficus needs full sun while another says it needs indirect light.
Larry, California

A: In my book, weeping fig (*Ficus benjamina*) needs as much direct sun as you can give it. When buying a weeping fig to grow indoors, where most lighting will be indirect, select one that has been preconditioned by receiving less and less light over a period of weeks or months. A ficus accustomed to full sun and then brought into a home will lose an alarming number of leaves in a matter of days.

Patricia Hamilton, a professional plant caretaker, has written a highly specific book, *The ABCs of Indoor Ficus Trees*, available for \$8 postpaid from Park Place Publications, P.O. Box 899-02, Pacific Grove, CA 93950.



Oxalis

Oxalis braziliensis blooms for two months in spring with petals that are burgundy red on top and paler underneath. Then the plant becomes dormant and resumes growth in fall. Another especially beautiful member of this genus is *O. regnellii*, which has squarish shamrock-shaped leaves and beautiful white flowers that Peter Loewer says never seem to stop blooming. The oxalic acid contained in the leaves can be poisonous in large amounts but the leaves of the European *O. acetosella* are used to flavor soups and salads.

Regional Notes

Sea Lavender Laws

The *Rhode Island Wild Plant Society Newsletter* reports that sea lavender (*Limonium carolinianum*) has been added to the list of plants protected by Rhode Island's "Christmas Greens" law. The law also prohibits collecting of club mosses (*Lycopodium* spp.), flowering dogwood, trailing arbutus, great laurel (*Rhododendron maximum*), mountain laurel, winterberry (*Ilex verticillata*), American holly (*I. opaca*), and inkberry, along with pines, hemlocks, cedars, spruces, and firs.

As sea lavender has become more popular in holiday decorations and dried flower arrangements, collectors have devastated populations in Atlantic seaboard salt marshes. This prompted Leona A. Kelly, a Rhode Island Wild Plant Society member and state representative, to introduce the bill. As with the other "Christmas Greens" plants, sea lavender can now be collected only by the property owner or with written permission of the property owner. Violators are subject to arrest and fines up to \$50.

Sea lavender is also protected in Massachusetts, Connecticut, Maryland, and Virginia. The Rhode Island Wild Plant Society recommends that frustrated flower arrangers substitute German statice (*Limonium latifolium*), which is widely available from nurseries.

N.Y. Flora Group

The New York Flora Association has been formed to promote the study of native and naturalized plant life in the state.

Sponsored by the New York State Museum Institute, the group will send members a quarterly newsletter with information on a variety of botanical issues, including rare plant conservation, new weeds, and announcements of field trips. Members will also receive a preliminary draft of an atlas that maps the 3,500 plant species known to grow in New York as well as a copy of recent legislation involving rare plants. Dues are \$10 per year, plus a one-time fee of \$5 to help pay for the atlas. To join, send a \$15 check payable to N.Y.S. Museum Institute to: New York Flora Association, 3132 CEC, Albany, NY 12230.



MURIEL WEINERMAN/NEW YORK BOTANICAL GARDEN

Luce Herb Garden features formal boxwood knots.

New Herb Garden at NYBG

The New York Botanical Garden recently dedicated its Nancy Bryan Luce Herb Garden. The 2,500-square-foot garden contains beds of European and American herbs and shrubs surrounding two knots of boxwood.

It was designed by English designer and writer Penelope Hobhouse to be highly ornamental as well as educational. Herbs are labeled, but are grouped primarily for aesthetic effect. The central section of the garden is in a formal knot pattern created with tightly clipped boxwood (*Buxus microphylla* 'Winter Gem'), Japanese holly (*Ilex*

crenata 'Compacta'), and common rue. Perimeter beds contain taller-growing shrubs and perennial herbs arranged for flower and leaf color harmonies and to emphasize texture and fragrance. The garden features some 90 taxa representing 25 families.

The design, construction, and maintenance of the garden were made possible by a \$300,000 grant from the Henry Luce Foundation. It is the first new garden to be created at the New York Botanical Garden since the installation of the Peggy Rockefeller Rose Garden in 1988.

Palming Off Smuggled Palms

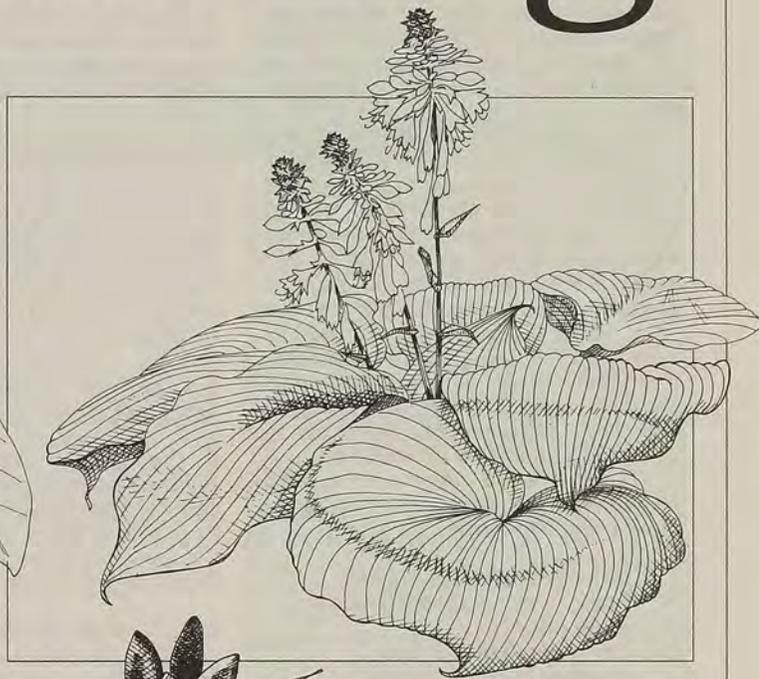
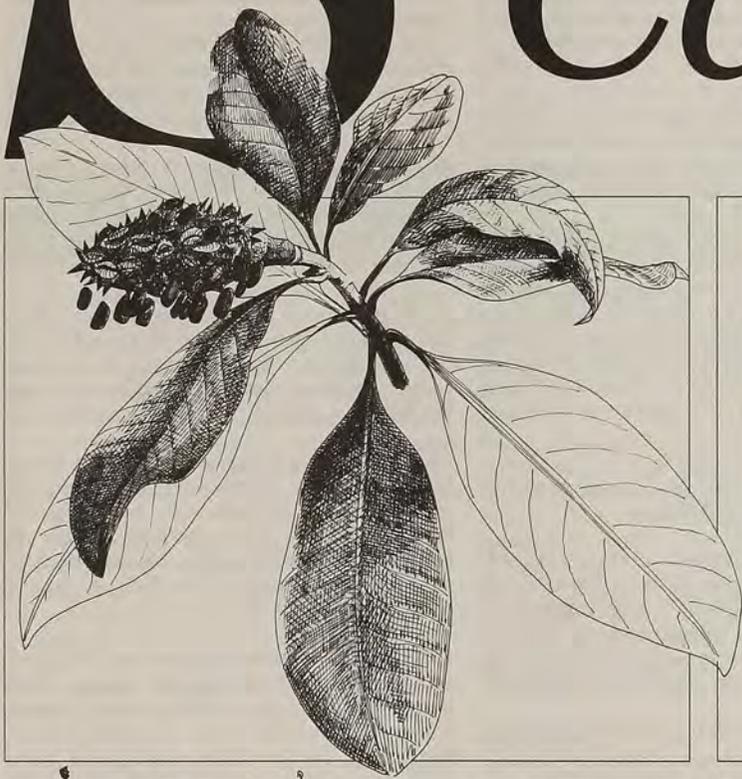
Smuggled palms infiltrating California are bringing with them pests such as fire ants and burrowing nematodes. While only container-grown, certified pest-free palms can be legally imported in California, *Sunset* magazine reports that infested Florida palms dug from the ground are finding their way into the nursery trade and home landscapes.

Queen palms and pygmy date palms (*Phoenix roebelenii*) are the two most commonly smuggled palms. To avoid purchasing illegal palms, *Sunset* recommends that consumers buy

plants from a reputable nursery that will reveal its sources, and exercise caution when purchasing larger specimens, especially those over 10 feet tall. But Jack Wick, regulatory consultant for the California Association of Nurserymen, notes that large specimens may very well be lawful, healthy palms grown by California nurserymen. According to Wick, chain stores are a major purchaser of smuggled palms. The California Association of Nurserymen is working to inform consumers about importation laws.

1992  AHS

Seed Catalog



ILLUSTRATIONS BY ALASTAIR E. BOLTON

Clockwise from top left: *Magnolia grandiflora*, *Hosta ventricosa*, *Capsicum annum* var. *annuum*, *Dolichos lablab*.

For instructions on how to order seeds from the 1992 Seed Catalog, see page 11SC.

The following table provides germination information and requirements. For some seeds, more than one germination technique may be used. For example, A,B indicates that the seed may be sown indoors or outdoors. Some seeds require more than one treatment before germination can occur. Db,Eb indicates that a three-month warm stratification treatment must precede a two-month cold stratification treatment.

Seeds that require cold stratification should be sealed in a plastic bag with a small amount of moist (but not wet) sphagnum moss or peat moss. Tie the bag closed and place in a refrigerator at 38 to 40 degrees for the time indicated, which may be from one to four months.

Seeds requiring a period of warmth before the cold stratification treatment are treated exactly as for cold stratification except that they are stored at a temperature of 70 to 80 degrees for some period of time. Simply bringing seeds indoors for the specified time is often sufficient.

Scarification is the process of softening or breaking an especially hard or thick seed coat. The seed coat may be rubbed with sandpaper or a small file or soaked in hot water. Soak the seed in five times its volume of hot water (180 to 212 degrees) for 24 hours. The hot water is poured over the seed and allowed to cool.

L, which indicates that the seed is easy to germinate, does not necessarily mean that it is also easy to grow once it has germinated. If you are unfamiliar with a particular species, you may want to consult a horticultural reference book.

General seed germination and transplanting instructions will be included with your order.

- A May be sown indoors in flats.
- B May be sown outdoors where they are to grow.
- C Sow indoors in peat pots to minimize transplant shock.
- Da Warm stratification of 2 months.
- Db Warm stratification of 3 months.
- Dc Warm stratification of 4 months.
- Dd Warm stratification of 5 months.
- De Warm stratification of 6 months.
- Ea Cold stratification of 1 month.
- Eb Cold stratification of 2 months.
- Ec Cold stratification of 3 months.
- Ed Cold stratification of 4 months.
- F Scarification.
- G Hot-water soak.
- H Light recommended for germination.
- I Dark recommended for germination.
- J Cool temperature required for germination (55 to 60 degrees).
- K Warm temperature required for germination (80 degrees).
- L Easy to germinate.
- M Difficult to germinate.
- N No reliable germination information.
- O Sow in fall.

Unless otherwise stated, it should be assumed that all plants grown from the seed in this catalog do best in full sun and in well-drained soil.

Annuals

1. *Amaranthus caudatus*. Love-lies-bleeding. Height: 5 feet. Vivid red long-lasting tassel-like flowers. Young leaves and seeds are edible. Sow on or near surface. B,K.

2. *Cardiospermum halicacabum*. Love-in-a-puff. Height: 10 feet. Woody-stemmed perennial grown as an annual in Zone 5-9. Vigorous, self-clinging vine. Dense, feathery, light green foliage smothered with large, ornamental inflated fruit and petite snow white flowers. Seed pods look like green balloons, not quite as large as golf balls. In warmer climates self-seeds freely. A,B,L.

3. *Cleome hasslerana*. Spider flower. Height: 4-5 feet. Good for the back of an informal border. Has 2-3-inch rose, purple, pink, or white flowers. Drought tolerant. Reseeds readily. A,B,H,L.

4. *C. 'Helen Campbell'*. Height: 4 feet. Compound leaves with spines at base. This cultivar has numerous white flowers with 1-inch-long petals and 2-3-inch-long stamens. Tolerates partial shade and prefers a dry soil. A good cut flower. In hot weather the petals will curl during the day and open fully in the evening. A,B,H,L.

5. *C. spinosa*. Similar to *C. hasslerana* but flowers are off-white. A,B,H,L.

6. *Coreopsis tinctoria*. Plains tickseed. Height: 3-4 feet. Native to North America and easy to propagate. Prolific and long-lasting flowers with yellow petals and red centers. Cut regularly for continued blooming into the fall. Thrives in poor and sandy soils. A,B,L,O.

7. *Cosmos spp.* Height: 2 feet. Bright yellow and orange flowers bloom all summer and into late fall. Blooms best in sandy soil; rich soil and short-season climates reduce flowering. Remove dead heads to promote flowering. In the North A, elsewhere, B,J,L.

8. *Dolichos lablab*. Hyacinth bean. Height: 6-10 feet. Tender perennial vine grown as an annual. Flowers pinkish purple, about 1 inch long. Fruit is a plump purple pod, 2 inches long with black or white seeds. Edible but the bean should be thoroughly cooked with 2-4 water changes. A,B,L.

9. *Dyssodia tenuiloba*. Dahlberg daisy. Height: 8 inches. Feathery, scented foliage and a rounded habit. Resembles a small marigold with many small golden flowers. Blooms all summer. Grows in sand and gravelly soil. Ideal for rock gardens. Heat tolerant. A,B,C,H,L.

10. *Eschscholzia californica*. California poppy. Height: 2 feet. Flowers range from deep orange to pale yellow, 2 inches across. Bloom-

ing is encouraged by poor sandy soil. Will reseed. B,L.

11. *Gaillardia pulchella*. Blanket flower. Height: 2 feet. The 2-inch daisylike flower heads are red with yellow tips or entirely red or yellow. Plant in dryish soil. Extremely resistant to drought and heat. A good cut flower. A,B.

12. *Hibiscus trionum 'Sunny Day'*. Rose mallow. Height: 2-4 feet. Leaves to 3 inches long and wide. Pale yellow flowers with purple-black centers, 1½ inches across. Readily self-seeds. Grow as an annual North and as a perennial South and in greenhouses.

13. *Papaver spp.* Poppy. Height: 1-2 feet. Mixed colors, singles and doubles. Remove dead flowers to promote blooming. Tolerates poor or dryish soil. Does not transplant well. In climates with mild winters sow in fall. B.

14. *P. glaucum*. Tulip poppy. Height: 2 feet. Red flowers 4 inches across with black at the base. A milky sap-producing plant with solitary flowers on long stalks. Where winters are mild sow outside. Tolerates poor soil. A,B.

15. *Pennisetum setaceum*. Fountain grass. Height: 2-3 feet. Grows in graceful arching mounds with fine-textured narrow leaves. Flowers profusely in long nodding pink purple panicles June until October. Reseeds readily. Zone 3-6 as an annual, Zone 7-9 as a hardy perennial. A,B,K,L,O.

16. *Reseda odorata*. Mignonette. Height: 2 feet. An old-fashioned garden annual. The extremely fragrant yellow-white flowers, which grow in loose spikes, are used for perfumery oil. Prefers alkaline soil, cool summers. In very hot summers the roots require mulch to keep them cool. Sow thinly and thin the seedlings. B,J.

17. *Rhynchelytrum repens*. Natal grass. Height: 3 feet. Grass has ¼-inch-wide leaf



Dolichos lablab

ALASTAIR E. BOLTON

blades. Flower is a 6-inch-long, rosy pink panicle fading to pink and silver. Thrives in a sandy soil. Zone 3-8 as an annual, Zone 9 as a short-lived perennial. B,K,L.

18. *Senecio cineraria*. Dusty-miller. Height: 2-3 feet. The yellow or cream flower heads are several inches across in compound terminal clusters but the plant is grown primarily for its white, woolly leaves. The plants can be sheared to prevent legginess. A,B,J.

19. *Silene armeria*. Sweet William catchfly. Height: 18 inches. Rose pink flowers in terminal clusters. Thrives in a damp woodland soil. Does not transplant well. B.

20. *Sorghum bicolor*. Broomcorn. Height: 6-10 feet. Rapidly growing, coarse-textured annual used for making brooms. Sometimes puts out prop roots. Full sun or partial shade; particularly suited to the Great Plains. B,L.

21. *Tagetes tenuifolia* 'Gnome'. Height: 6-12 inches. Fine feathery leaves. Forms a compact bush covered with numerous solitary bright yellow-orange flowers. Likes moist soil.

This dwarf strain makes an excellent border edging. A,L.

22. *Verbena × hybrida*. Height: 12 inches. Leaves are gray green. Flowers are clusters of pink, purple, red, or blue, 2-3 inches in diameter with white centers. Seed is sensitive to high moisture so water the flat before planting rather than after. Can be grown as a short-lived perennial in frost-free regions. A,I,J.

23. *Verbesina encelioides*. Butter daisy. Height: 3 feet. Perennial grown as an annual. Has a loosely branching habit. Rough-toothed leaves are 4 inches long and whiter on top than underneath. Flowers are daisylike and a deep, bright yellow with toothed ray florets. Will attract many bees, butterflies, and other insects. Drought tolerant. B,L.

24. *Viola × wittrockiana*. Pansy. Height: 6-12 inches. Mixed colors. A hardy perennial to Zone 4. Plant outside in the fall or inside in early spring. Heat tolerant and an excellent bedding plant. Plant in moist soil in sun or partial shade. Refrigerate in a moist medium

Poppies (#13) are a great plant for the most seed-intimidated gardener. Their successful germination and growth is practically guaranteed when they are sown in late fall or early spring outdoors where they are to grow. Why not try sowing them in unexpected places for a surprise of color? Charles and Doris Balant of Newcastle, Maine, contributed this year's tulip poppies (#14). Mrs. Balant describes how she uses them each year: "The flowers make a great display in my vegetable garden where I let them grow up in my asparagus bed. When the asparagus are bearing, the poppies are still small. By midsummer I pull them up so that asparagus still get plenty of sun to complete their year's growth."

for 2 weeks prior to planting indoors. A,I,J,O.

25. *Zinnia* 'Thumbelina'. Zinnia. Height: 6 inches. Blooms are only 1-2 inches wide. An excellent edging plant. It thrives in hot dry weather. Good ventilation is essential. A,B,K.

Perennials

26. *Actinidia chinensis*. Kiwi. A deciduous twining vine with attractive foliage but grown mainly for its fruit. New purple leaves gradually turn green. Orange or yellow flowers 1-2 inches across are produced on year-old woody stems. Both male and female plants must be planted to set brown egg-shaped fruit. Full sun to part shade, average soil. An excellent fence cover or trellis plant. Zone 7-9. B,Ec.

27. *Alcea rosea*. Hollyhock. Height: 10 feet. Spikes of white, pink, or purple flowers about 2-4 inches across. Requires staking. Plant in rich soil in full sun. Best for the back of a border or against a wall or fence. Zone 2-3. A,B,J,L.

28. *A. rosea* 'Nigra'. Same as above but flowers are dark maroon, almost black in color.

29. *A. rosea* 'Pinafore'. Hollyhock. Height: 3-4 feet. Ruffled, semidouble and single flowers are white, rose pink, light yellow, cerise, and scarlet. Blooms midsummer to early fall. Bushier habit than above. If seeds are started inside during late winter, they should flower during the summer. Zone 4. A,B,J,L.

30. *Allium giganteum*. Height: 18 inches. This bulbous plant is grown mainly for its decorative midsummer, deep lilac flower head. When flowers die, cut the heads off but leave stalks to feed bulb for next year. Seeds can be sown in spring or fall. Zone 3. B,L.

31. *Anemone multifida*. Windflower. Height: 2 feet. Very small white to yellowish flowers appear in June. Deeply cut hairy foliage. Looks best massed in naturalized designs. Sun to part shade with moist but well-drained soil. Zone 2. A,B

32. *A. narcissiflora* and *A. nemorosa*. Height: 1-1½ feet. Compact plant has long

stalks, rounded leaves. Umbel-like clusters of flowers are white to pale yellow, turning apricot. A nice rock garden plant. Likes sun to partial sun with well-drained soil. Zone 3-9. A,B.

33. *A. pulsatilla*. Pasqueflower. Height: 9 inches to 1¼ feet after flowering in early spring. Lovely lavender blue to reddish purple 2½-inch-wide flower with stems and leaves covered by soft hairs. Attractive fernlike foliage. Very decorative in rock gardens or naturalized areas. Likes a rich, well-drained sandy loam. Water well during dry periods. Full sun to part shade. Sow seeds in autumn or early spring where they are to be grown, or in a 70-75 degree room. Zone 5-8. A,B,O.

34. *A. sylvestris*. Height: 1-1½ feet. Fragrant, nodding, white 1½-inch flowers with 5 sepals. May bloom periodically through summer and again in fall. Has running roots and rapidly colonizes open woodlands in humusy soils. Plant in partial shade. Zone 3-9. B.

35. *Aquilegia canadensis*. Wild columbine. Height: 3-3½ feet. Five-petaled flower with long spurs of vivid scarlet and yellow. Blooms late spring, early summer. Airy, blue-green foliage and a very graceful and elegant habit. Grows best in semi-shade and moist, rich, and well-drained soil. Sow directly outdoors up to 2 months before frost, or in early spring. If sown indoors, place in peat moss and refrigerate for 3 weeks and then germinate at 70-75 degrees. Zone 3. A,B,H.

36. *A. × hybrida*. Columbine. Height: 2-3 feet. An old-fashioned favorite. Fernlike leaves. In mild climates, can be grown in full sun; elsewhere most prefer partial shade. Zone 5. B,L.

37. *A. 'McKana Hybrids'*. Columbine. Height: 2½ feet. A lovely spurred flower in a

mix of red, pink, white, yellow, and crimson. Blooms early summer. Especially nice in naturalized settings. Needs full sun to part shade with good drainage. Zone 4. A,B,Ea.

38. *A. vulgaris*. European crowfoot. Height: 1-2½ feet. Flowers are a mix of dark blue, violet, pink, and white, with blue-green foliage. Spurs on flowers are ½-1 inch long. Can be quite variable from seed. Full sun to part shade in a rich, sandy loam. Zone 4. A,B,L.

39. *Asclepias tuberosa*. Butterfly weed. Height: 3 feet. Orange, occasionally red and yellow umbel-like flowers. Blooms late spring to midsummer. Attractive 2-6-inch-long straplike leaves. Excellent for borders or meadow areas. Thrives in drier, infertile soils. Usually pest free. Zone 4. A,B,I,L.

40. *Baptisia australis*. Blue false indigo. Height: 3-6 feet. Butterflylike inch-long blue flowers appear on long terminal racemes. Flowers late spring into summer. After flowering, ornamental, puffy, dark 2-4-inch seed pods develop. Good for perennial beds and borders or naturalized areas. Will grow in most soil types. May need staking. Zone 4. A,B,L.

41. *Belamcanda chinensis*. Blackberry lily. Height: 2-3 feet. Sword-shaped, rich green leaves similar to those of iris. Summer blooms on wiry, forked stems are 2 inches across, showy orange splashed with yellow and crimson. Fruit capsules split to expose shiny black seeds, which can be used for dried arrangements. Thrives in sun or shade with moist, well-drained soil. Zone 5. A,B,L.

42. *Campanula carpatica*. Tussock bellflower. Height: 8-18 inches. Dense clump habit. Lilac blue flowers are 1-2 inches across.

Long light green, petioled leaves. Full sun to part shade. Zone 4. A,B.

Another common name for the blackberry lily (#41) is leopard flower since the flowers are spotted orange. This is a beautiful yet underused perennial that is easy to grow, and makes a great plant for the perennial border or floral arrangements. After flowering, the plant has attractive, sword-shaped, 10-inch leaves with clusters of black seeds that look like blackberries borne on erect stems. Hardy to Zone 5.

43. *Cassia marilandica*. Wild senna. Height: 3-4 feet. Showy, bright yellow 1-inch-wide flowers. Seeds sown in spring or summer will flower the following spring. Makes a nice planting in front of a fence or along the edge of a wood. Annual pruning enhances shape. Drought tolerant. Zone 6. A,B.

44. *Castilleja chromosa* and *C. linariaefolia*. Paintbrush. Height: 16 inches. A mix of *Castilleja* species that are partly parasitic on roots of other plants. Flowers are mostly greenish, with scarlet and yellow bracts on spikelike racemes. Excellent companion to lupine. Zone 4. B.

45. *Centaurea macrocephala*. Yellow cornflower. Height: 2-3 feet. Bright yellow thistle-like flower heads 3-4 inches in diameter with rust-colored bracts. Midsummer flowers are long lasting when cut. Good for naturalizing. Sun to part shade in any soil. Can tolerate some drought. Zone 6. A,B,I,L.

46. *Cimicifuga racemosa*. Black cohosh. Height: 3-8 feet. White midsummer flowers nod slightly from 1-3-foot racemes borne above foliage. Leaves are deeply serrated and attached to long petioles giving plant an airy, graceful appearance. Very hardy once established. Works best in a natural woodland setting or other lightly shaded areas. Thrives in moist, fertile soils. Will self-sow. Zone 3. A,B,O.

47. *Clematis crispa*. Blue jasmine. Height: climbs to 10 feet. Long-stalked blue to purple 1-2-inch-wide solitary flowers. Attractive for naturalized areas and growing over shrubs. Prefers part shade with a moist, well-drained soil. Zone 5. B,O.

48. *C. tangutica*. Golden clematis. Height: climbs to 10 feet. Flowers early with small golden bells, followed by silvery seed pods. Plant in sun to partial shade in rich, limey soil. Zone 3-9. B,J.

49. *Coreopsis grandiflora* 'Early Sunrise'. Height: 2 feet. Golden yellow, semidouble flowers. Showy blooms from early summer to fall. Plant in light, sandy soil. Zone 3. B,L.

50. *C. lanceolata* 'Baby Gold'. Height: 16 inches. Clump-forming habit. Long stems, abundant golden flowers 1½-2½ inches across with brown centers. Blooms early to late summer. Easy-care and great for borders, naturalized areas, and cut flowers. Zone 4-9. A,B,L.

51. *Dianthus barbatus*. Sweet William. Height: 2 feet. Abundant flat red-, pink-, white-, and violet-fringed flowers. Excellent for rock gardens. Usually treated as a short-lived perennial or biennial. Seed sown in early summer should flower the following year. Prefers rich, moist soil. Zone 4. A,B,L.

52. *D. deltoides*. Maiden pink. Height: 4-15 inches. Low growing with grasslike leaves. Flowers are red or pink with crimson eyes. Plant in light, sandy soil. Zone 2-3. B,L.

53. *Diets vegeta*. African iris. Height: 2 feet. Leaves spread out in a fan shape. Flowers are 2½ inches across, white with yellow or brown spots. Likes humus-rich soil; allow to dry between waterings. Germination takes 20-40 days. Zone 5-9. B.

54. *Digitalis grandiflora* and *D. lutea*. Foxglove mix. Height: 3 feet. Small yellow flowers are loved by hummingbirds. Very prolific. Likes part shade and a rich soil. Zone 5-9. A,B.

55. *D. lutea*. Height: 2-3 feet. Racemes abundantly bear light yellow to white ¾-1-inch flowers a bit smaller than those of *D. grandiflora*.

56. *D. × mertonensis*. Height: 3 feet. Erect biennial with reddish pink, many flowered racemes in May and June. Good plant for low-maintenance gardens since it readily self-sows. Seeds sown outdoors in early fall or started in a greenhouse during winter should flower the following summer. Zone 4-8. B,H,K,M.

57. *D. purpurea*. Common foxglove. Height: 2-4 feet. Extremely showy tubular flowers are purplish pink with brown-spotted throats. Blooms early June to mid-July. Self-sows. Seeds sown outdoors in early fall or started in a greenhouse during winter should flower the following summer. Likes part shade and a rich soil. Zone 4. A,B,K,L.

58. *D. purpurea* 'Alba'. Same as above except flowers are white.



Anemone multifida

59. *D. purpurea* 'Foxy'. Same as above except grows a little taller. Zone 4-8. A,B,H,K,L.

60. *Echinacea purpurea*. Purple cone-flower. Height: 2-5 feet. A sturdy, coarse, hairy plant with leafy, branching stems. Its solitary, daisylike flowers may reach 6 inches across. Their showy, drooping petals vary from purplish pink to almost white. Easy low-maintenance plant. Zone 3. B,L.

61. *Echinops* spp. Globe thistle. Height: 3-6 feet. Erect stands of sturdy stems, branched with thistlelike leaves, and large, spherical, compound flower heads. Easy, undemanding sun lover. Excellent for cutting and drying. Zone 3. B,L.

62. *Erigeron* hybrids. Fleabane. Height: 2 feet. 1-1½-inch flower heads have violet-blue rays with yellow disk flowers that bloom on and off from midsummer to fall. Leathery basal leaves 3½ inches long. Likes sandy soil. Zone 4. A,B,J,O.

63. *Eupatorium aromaticum*. Height: 4 feet. Rounded clusters of white flowers bloom in late summer to fall. Oval leaves, 4½ inches long. Part-shade with sandy, dry soils. Zone 4. A,B.

64. *E. maculatum*. Joe-Pye weed. Height: 4-6 feet. Toothed, lance-shaped leaves are 2½-8 inches long in whorls of 3-6. Rose pink to purplish flower heads. Effective for naturalizing or for the back of wide borders. Eventually forms a massive clump of purple, hollow stems. Full to partial sun with a moist soil. Zone 3. B.

65. *Festuca ovina* var. *glauca*. Dwarf blue fescue. Height: 6-12 inches. A tufted grass with slender blue leaf blades. Finely textured panicles of greenish beige flowers appear June-July. Remove after flowering to strengthen the plant. Zone 4-9. A.

66. *Gaura lindheimeri*. Height: 4 feet. Leaves are lance shaped, 1-3 inches long. Long-blooming flowers are in open panicles; white petals turn pink. Prairie species with an airy, open, bushy habit. Drought tolerant. Zone 7. A,B.

67. *Hemerocallis* hybrids. Daylily. Height: 1½-3½ feet. A mix of yellow, orange, pink, red, maroon, salmon, and several bicolor flowers begin appearing about midsummer. Germination will take from 3-7 weeks. Full sun to part shade with rich soil. Zone 4. A,B,C,L,O.

68. *Hesperis matronalis*. Sweet rocket. Height: 1-3 feet. Showy white, purple, to light blue fragrant flowers produced in loose terminal racemes. Blooms in May and June. Self-seeds prolifically. If seeds are started indoors in late winter or early spring, plants will bloom the first year. Does best with a little shade and slightly damp, but well-drained soil. Zone 2-3. A,B,H,K,L.

69. *Hibiscus coccineus*. Rose mallow. Height: 6-8 feet. Deep red, funnel-shaped flowers are 5-6 inches wide. Narrow upright habit. Blooms from mid- to late summer. Native to wetlands, will tolerate drier soils and light shade. Zone 6-9. B.

70. *H. militaris*. Halberd-leaved rose mallow. Height: 3-7 feet. Tall, erect multi-stemmed plant. White to pale pink flowers that are 3-4 inches wide with red centers. Plant in very wet to normal soils. Needs ample and continuous moisture to thrive. Zone 4-9. A,K,L.

71. *H. moscheutos* subsp. *palustris*. Sea hollyhock. Height: 3-8 feet. White, pink, and rose flowers. Leaves are rounded and 3-lobed. Hairy fruits. Zone 4-9. A,K,L.

72. *H. syriacus*. Rose-of-Sharon. Height: 6-10 feet. Stiffly erect shrub with showy single lavender purple flowers 1½-3 inches across. Flowers late summer into fall. One of the best *Hibiscus* species for Northern gardens. Full sun to part shade. Zone 5. A,B,L.

73. *Hosta* spp. Plantain lily. Species unknown to donor. Plants are all green. Full to part shade with moist, well-drained soils. Zone 3. A,B,L.

74. *H. lancifolia*. Narrow-leaved plantain lily. Height: 2 feet. Narrow, 5-inch-long, dark glossy leaves. Dark violet summer flowers about 2 inches long. Full to part shade with moist, well-drained soils. Zone 4. A,B,L.

75. *H. ventricosa*. Blue plantain lily. Height: 3 feet. Dark green leaves are up to 9 inches long and 5 inches wide. Bell-shaped late summer flowers are violet-blue on 3-foot stems. Plant in shade. Zone 3. A,B,L.

76. *Iris* spp. Siberian iris mix. Height: 2-3 feet. Purple, blue, and white blooms in early summer. Grasslike leaves are densely clumped. Low care, very hardy, and especially good for Southern gardens. Full sun to part shade. Likes moist, slightly acidic, rich soils. Does well near streams or pools. Zone 4. B,M,O.

77. *I. pseudacorus*. Yellow flag. Height: 5 feet. Yellow-flowered iris with blue-green foliage. Grow in moist areas, bogs, and streams. Blooms in late spring. Zone 6. B,O.

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Seed packets are marked by catalog number only, so it will be your only means of identifying the seeds you have selected.

78. *I. spuria*. Butterfly iris. Height: 2 feet. Leaves are linear to 1 foot long, stiff, and powdery. Flowers are blue-purple or lilac. Full sun to partial shade with moist soil. Zone 4-9. B,L.

79. *Liatris scariosa*. Blazing-star. Height: 4-6 feet. Native American wildflower, excellent for border and meadow. Unbranched leafy stems end in a dense, long-lasting spike of small purple flower heads. Likes moderately fertile, sandy soil. Zone 3. A,B.

80. *L. scariosa*. White liatris. Same as above except has white flowers and needs very good winter drainage.

81. *L. spicata*. Blazing-star. Height: 2-5 feet.

Spikes to 2½ feet long on smooth stems; flower heads of 5-14 rosy purple florets. Drought resistant. Winter mulching is recommended in cold climates. Prefers moderately fertile, sandy soils, good winter drainage. Zone 3. B.

82. *Lilium* 'Connecticut King'. Asiatic lily hybrid. Height: 2 feet. Bright yellow erect midsummer flowers with light yellow centers and no spots. Vigorous grower. Likes a light, sandy soil with full sun to partial shade. Benefits from some winter protection. Sow seeds outdoors in rows in fall and dig up the small bulblets to replant the following spring. Plants started from seed will take several years to flower. Zone 4-8. B,L,O.

By selecting only white flowering plants, plants with light-colored foliage, plants that bloom in the evening, and plants with flowers that have a strong evening fragrance, you can plant a "moon" garden this year. Here are some suggestions for your midnight musings: mignonette (#16), *Cleome* 'Helen Campbell' (#4), dusty-miller (#18), *Anemone sylvestris* (#34), *Digitalis purpurea* 'Alba' (#58), *Eupatorium aromaticum* (#63), money plant (#86), and *Malva moschata* 'Alba' (#90).

83. *L. formosanum*. Height: 5-7 feet. Very abundant dark green leaves to 8 inches long. Trumpet-shaped flowers are 5-8 inches long, white inside and maroon outside. Blooms mid-to late summer for about 3 weeks. Likes a light sandy, moist but well-drained soil, partial shade, and protection from wind. Zone 8 (possibly Zone 7 with winter protection). A,B,L,O.

84. *L. pennsylvanicum*. Candlestick lily. Height: 3 feet. One or more flowers on each stem, 4 inches across, red to scarlet, yellow spotted with purple black at base. Sow outdoors in early spring or indoors, maintaining a temperature of 70 degrees in the medium. Zone 5-9. A,B,L,O.

85. *Lobelia cardinalis*. Cardinal flower. Height: 3-4 feet. Bright scarlet, occasionally pink or white tubular 1½-inch flowers bloom early to late summer. Prefers light shade or full sun where summers are cool, and moist to wet soils. Zone 3. A,B,L,O.

86. *Lunaria annua*. Money plant. Height: 3 feet. Biennial that will reseed. Flowers are purple or white. Fruit is silvery, papery, and coin shaped, useful for dried arrangements. Full sun or light shade. Zone 6-9. B,L.

87. *Lychnis coronaria*. Rose campion. Height: 2-3 feet. Bright magenta pink flowers on long stems contrast beautifully with woolly white-green oval leaves. Blooms late spring into early summer. Self seeds. Zone 5. A,B,L.

88. *L. coronaria* 'Atrosanguinea'. Same as above except flowers are dark red.

89. *Malva moschata*. Musk mallow. Height: 2-3 feet. Bushy with satiny, bright rose pink, 2-inch flowers, June through September.

Prefers lime-free soil. Zone 3. A,B,L.

90. *M. moschata* 'Alba'. Same as above but with white flowers. Comes true from seed.

91. *Oenothera erythrosepala*. Evening primrose. Height: 6 feet. Yellow blossoms open each evening. Sow seed in spring; plant will not bloom until the following year. Full sun or light shade. Zone 5. B,L.

92. *Papaver orientale*. Oriental poppy. Height: 4 feet. Showy red 4-6-inch-wide flowers with contrasting black centers are borne on long stems. Leaves to 12 inches long. Dies back after flowering. Plants will bloom the second year. Lightly cover seeds to germinate. Zone 4. B,J.

93. *Penstemon confertus*. Beard-tongue. Height: 2 feet. Small tubular midsummer flowers are pale yellow to white with brownish bearded staminode (sterile stamen), and arranged in clusters. Low fertility needs. Zone 4. B,L,O.

94. *P. digitalis*. Height: 5 feet. One of the larger penstemons. White to pinkish flowers are about 1 inch long with bearded staminodes. As plant matures, stems turn reddish. Blooms in spring to early summer. Vigorous grower. Zone 4. B,L,O.

95. *P. fruticosus*. Height: 16 inches. Forms dense clumps with 1½-inch-long lavender blue flowers with yellow bearded staminodes. Does not like too hot or too dry a location, but does need excellent drainage. Zone 6. B,L,O.

96. *P. glaber*. Height: 2 feet. Blue to violet 1½-inch-long spring flowers. Upper leaves are bluish green. Cannot thrive in intense heat or high humidity. Needs excellent drainage. Zone 3. B,L,O.

97. *P. strictus*. Height: 2½ feet. One-inch blue flowers, 6-inch pointed oblong leaves. Does not like too hot or too dry a location. Tolerates poor soil, but needs excellent drainage. Zone 4. B,L,O.

98. *Phacelia sericea*. Scorpion weed. Height: 1½ feet. Lavender to purple-blue flowers are crowded on vertical panicles. Leaves oblong to 4 inches long. Heat and drought tolerant, needs gravelly lime-free soil. Zone 6. B.

99. *Potentilla villosa*. Cinquefoil. Height: 12 inches. Leaves have silky surface, hairy underside; 1½ inches long. Yellow flowers 1 inch in diameter. Plant in moist, fertile soil. Zone 2-8. B,L.

100. *Rudbeckia hirta* 'Gloriosa Daisy'. Black-eyed Susan. Height: 2-3 feet. Gold, yellow, bronze, orange, brown, and mahogany single flowers are 3-6 inches wide, and have center bands of brown, yellow, or black. Full sun to part shade. Prefers a rich, moist soil, but will grow in poor soil. Heat and drought tolerant. Zone 4. A,B,L.

101. *R. triloba*. Thin-leaved coneflower. Height: 4½ feet. Distinguished from black-eyed Susan by smaller, more numerous flowers with shorter rays. Somewhat invasive. Zone 3-9. B,L.

102. *Saponaria officinalis*. Bouncing Bet. Height: 1½-3 feet. Pink or white 1-inch-wide flowers bloom on sparsely branched stems. Full sun to slight shade. Zone 4. A,B,L,O.

103. *Sidalcea malviflora*. Checkerbloom. Height: 2-4 feet. Erect plant with watermelon pink flowers in racemes. Foliage, flowers, and habit resemble hollyhocks. Blooms all summer, especially if continually deadheaded. Plant in sun or part shade in moist, well-drained soil. Thrives in moist and cooler climates. Zone 5. A,B,L.

104. *Solidago odora*. Sweet goldenrod. Height: 5 feet. Leaves are 4 inches long and produce an anise odor when brushed. Yellow flower heads in large panicles. Plant in average, well-drained soil. Easily grown from seed, blooming the second year. Zone 3. A,B.

105. *Stokesia laevis*. Stokes' aster mix. Height: blue cultivars are 18 inches and pink are 12 inches. Flowers are 3-4 inches across and bloom over a long season. Plant in average soil in full sun to light shade. Zone 5. A,H.

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106. *Vaccaria pyramidata* 'Pink Beauty'. Height: 2 feet. Erect and mounded habit with pink to dark purple flowers. Blooms throughout summer. Good in rock gardens. Cut back after flowering to keep a neat habit and for continued flowering. Zone 4. A,B,I.

107. *Verbascum blattaria*. Moth mullein. Height: 3-6 feet. Tall, erect stems form a rosette; densely grouped 1-inch-wide yellow

summer flowers have violet stamens. Stately plant for the back of the border. Does not do well in wet or cold soils. Germinate seeds indoors at 65-75 degrees. Zone 4. A,L.

108. *V. bombyciferum*. Mullein. Height: 3 feet. Multibranching stems bear woolly, gray green leaves to 6 inches or longer. Narrow spires of crowded, yellow 1-inch flowers from midsummer to early fall. Biennial, sending up flower spikes the second year. Plant in slightly alkaline soil. Zone 5. A,B,K,L.

109. *Wisteria sinensis*. Chinese wisteria. Height: climbs to 30 feet or more. Woody stemmed vine. Somewhat fragrant, bluish violet flowers bloom in pendulous racemes in May. After flowering, velvety seed pods develop. Grow on a sturdy structure. Plant in moist, deep, well-drained soil. Zone 5-8. A,F,G,J.

Wildflower Mixtures

The following wildflower mixtures have been donated by the Applewood Seed Company in Golden, Colorado, a wholesale seed company that specializes in native and wildflower meadow plants. All the mixes contain 16-25 species of approximately 40 percent perennials, 20 percent biennials, and 40 percent annuals. Each packet contains enough seed for approximately 100 square feet. If this much space is not available, seed can be more densely sown, but may need to be thinned as plants develop. **Please add 50 cents postage to your total payment if ordering wildflower mixtures.**

Planting Instructions

Sow seeds on a patch of prepared bare ground from which all weeds and grasses have been removed. Sow in early spring when your area normally has rainfall ample to keep planting area moist. Seeds can be sown in early summer as long as sufficient moisture is available for at least 4-6 weeks after sowing.

Broadcast seeds evenly by hand over the area and rake to lightly cover with ¼ inch of soil. Thoroughly soak the planting area. Maintain consistent moisture for 4-6 weeks or until plants are established, at which point watering can be reduced. Pull weeds as soon as they can be identified. Do not fertilize unless soil is extremely poor since fertilizer will only encourage weeds and excessive foliage at the expense of flowering.

110. Knee-high Wildflower Mix. A mixture of annuals, biennials, and perennials 6-24 inches in height. This mix is designed to suit the needs of suburban or urban areas where lower plantings are preferred. This is an excellent mix to plant in front of a house, fence, or wall. These flowers include flowering flax, globe candytuft, prairie flax (*Linum perenne* subsp. *lewisii*), rocket larkspur, wallflower, annual baby's-breath, dwarf cornflower, California poppy, lance-leaved coreopsis (*Coreopsis lanceolata*), gaillardia, and corn poppy.

111. Low-growing Wildflower Mix. A mixture of annuals, biennials, and perennials 6-

16 inches in height. A mix suited for walkway areas, driveways, or wherever low growth is desired. This mix includes globe candytuft, dwarf coneflower, wallflower, California poppy, cape marigold (*Dimorphotheca sinuata*), annual baby's-breath, sweet alyssum, California bluebell, dwarf lance-leaved coreopsis (*Coreopsis lanceolata*), calliopsis (*C. tinctoria* 'Nana'), spurred snapdragon (*Linaria maroccana*), dwarf yellow evening primrose (*Oenothera missouriensis*), Iceland poppy, dwarf garden catchfly (*Silene armeria*), garden forget-me-not, and viola (*Viola cornuta*).

112. Midwest Perennial Wildflower Mix. Illinois, Indiana, Iowa, eastern Kansas, Kentucky, Michigan, Minnesota, Missouri, eastern Nebraska, Ohio, Wisconsin, southern Manitoba, and Ontario. Height: 6-40 inches. Habit: mounding, spreading, and upright. Various shades of pink, red, yellow, white, blue, orange, and purple.

113. Midwest Wildflower Mix. Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, Ohio, Wisconsin, southern Manitoba, and Ontario. Mix of 24 species including baby's-breath, black-eyed Susan, globe candytuft, prairie coneflower (*Ratibida columnifera*), purple coneflower, lance-leaved coreopsis (*Coreopsis lanceolata*), cornflower, oxeye daisy, dwarf yellow evening

primrose (*Oenothera missouriensis*), flowering flax, annual gaillardia (*Gaillardia pulchella*), wild lupine (*Lupinus perennis*), corn poppy, and others.

114. Mountain Wildflower Mix. For elevations above 7,000 feet in Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming, and southern Alberta, plus all areas of Alaska, eastern British Columbia, northern Manitoba, Northwest Territories, northern Saskatchewan, and the Yukon. Twenty-one species including baby's-breath, black-eyed Susan, garden catchfly (*Silene armeria*), columbine (*Aquilegia* spp.), cornflower, oxeye daisy, prairie flax (*Linum perenne* subsp. *lewisii*), garden forget-me-not, perennial gaillardia (*Gaillardia aristata*), harebell, rocket larkspur, penstemon (*Penstemon strictus*), California poppy, wallflower, yarrow (*Achillea* spp.), and others.

115. Northeast Mix. Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, Virginia, Washington, D.C., West Virginia, Maritime Provinces, Newfoundland, and Quebec. Twenty-two species including New England aster, baby's-breath, black-eyed Susan, purple coneflower, lance-leaved coreopsis (*Coreopsis lanceolata*), flowering flax, foxglove, gayfeather

Take Advantage of Your Member Benefits

AHS members can take advantage of our unique Gardeners' Information Service. Write or call toll-free (800) 777-7931 Monday through Friday anytime between 11 a.m. and 3 p.m. EST for information on plant care, solutions to plant problems, help with plant selection, sources for hard-to-find plants and garden supplies, names and addresses of specialized horticultural organizations and national gardening events, and horticultural career, education, and internship information. If we cannot give a definitive answer to a question, we have the nation's largest computer database of horticultural organizations and programs that we can use to help direct members on where to find further information.

(*Liatispicata*), gilia (*Ipomopsis rubra*), rock-et larkspur, corn poppy, spurred snapdragon (*Linaria maroccana*), and others.

116. Northwest Perennial Wildflower Mix. For elevations below 7,000 feet in northern California, western Oregon, western Washington, and the coast of British Columbia. Height: 6-40 inches. Mounding, spreading, and upright plants blooming in various shades of pink, red, yellow, white, blue, orange, and purple.

117. Southeast Mix. Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, eastern Oklahoma, South Carolina, Tennessee, and eastern Texas. Twenty-one species including sweet alyssum, baby blue-eyes, baby's-breath, bird's-eyes, black-eyed Susan, purple coneflower, four-o'clock, annual gaillardia (*Gaillardia pulchella*), gayfeather (*Liatispicata*), gilia (*Ipomopsis rubra*), rocket larkspur, wild lupine (*Lupinus perennis*), tree mallow (*Lavatera trimestris*), and others.

118. Southwest Mix. Arizona, southern California, southern Nevada, and New Mexico. Twenty-one species including Tahoka daisy (*Machaeranthera tanacetifolia*), farewell-to-spring (*Clarkia unguiculata*), prairie coneflower (*Ratibida columnifera*), calliopsis (*Coreopsis tinctoria*), cornflower, prairie flax (*Linum perenne* subsp. *lewisii*), flowering flax, penstemon (*Penstemon strictus*), California poppy, corn poppy, tidy-tips, yarrow (*Achillea* spp.), and others.

119. Southwest Perennial Mix. Arizona, southern California, southern Nevada, and New Mexico. Height: 6-40 inches. Mounding, spreading, and upright plants with flowers of pink, red, yellow, white, blue, orange, and purple.

120. U.S. Perennial Wildflower Mix. This mix will grow in all areas of USDA Zone 3-9 if directions on page 6SC are followed. Height: 6-40 inches. Mounding, spreading, and upright with flowers of pink, red, yellow, white, blue, orange, and purple.

121. Western Wildflower Mix. Colorado, Idaho, western Kansas, Montana, western Nebraska, northern Nevada, North Dakota, eastern Oregon, South Dakota, Utah, eastern Washington, and Wyoming. Twenty-four species including Tahoka daisy (*Machaeranthera tanacetifolia*), prairie coneflower (*Ratibida columnifera*), calliopsis (*Coreopsis tinctoria*), tricolor daisy (*Chrysanthemum carinatum*), dwarf yellow evening primrose (*Oenothera missouriensis*), prairie flax (*Linum perenne* subsp. *lewisii*), annual gaillardia (*Gaillardia pulchella*), perennial gaillardia (*G. aristata*), wild lupine (*Lupinus perennis*), penstemon (*Penstemon strictus*), California poppy, yarrow (*Achillea* spp.), and others.

The AHS Gardeners' Information Service has available more detailed information on soil preparation, creating and maintaining a wildflower garden or meadow, and wildflower and native plant resources, available by sending \$1 to: GIS, Wildflower Guidelines, 7931 East Boulevard Drive, Alexandria, VA 22308.

Trees and Shrubs

122. Acer ginnala. Amur maple. Height: 20 feet. Multi-stemmed, rounded habit. Serrated 3-inch leaves are often purple when young, lustrous green on top and a light green underneath when mature. Fall foliage is scarlet and yellow. Pannicles of yellow-white fragrant spring flowers unfurl with the leaves and are followed by 1-inch-long winged fruit that persists into late fall. Zone 5. Da,Ed, or F followed by Ed.

123. A. macrophyllum. Oregon maple. Height: 100 feet. Smooth stout trunk, lobed leaves 10-12 inches across. Fragrant yellow hanging flowers are followed by wing-borne fruit. Bright orange fall foliage. Zone 7. B,O.

124. A. rufinerve. Redvein maple. Height: 30-40 feet. Three-lobed, double-toothed, 2-6-inch, dark green leaves. Pale green upright spikes of flowers in May. Beautiful crimson fall color. Plant in full sun to part shade with cool, moist, well-drained soil that is slightly acidic. Zone 6. A,Ec or O.

125. Albizia julibrissin. Silk tree. Height: 40 feet. Deciduous with spreading crown. Lacy, graceful leaves 9-12 inches long. Pink brush-like flowers. Best in full sun, but will grow in part shade with average soil. Drought tolerant. Zone 6-9. B,F,O.

126. Alnus glutinosa. Black alder. Height: 40-60 feet. Single or multi-stemmed with egg-shaped or oblong irregular crown. Dark glossy leaves, 4-inch male flower spikes, and female cones. Ideal for infertile soils by rivers or along highways. Full sun to part shade, moist soils. Zone 3-7. A,B,Ec, or O.

127. Aronia melanocarpa. Black chokeberry. Height: 3-10 feet. Wide, smooth, serrated leaves. Flowers are white or slightly reddish. Fruits are black, 1/2 inch in diameter. Fall foliage is wine red or purplish black. Has a tendency to sucker and will form a large

colony. Very adaptable. Full sun or part shade, wet or dry soils. Zone 3-8. B,O.

128. Berberis koreana. Korean barberry. Height: 6 feet. Deciduous shrub. Two-inch-wide, toothed leaves are dull light green, mottled with red when young, red in fall. Flower is 2-inch yellow-orange raceme followed by an egg-shaped bright red fruit. Zone 6. B,Eb,L.

129. Cedrus libani. Cedar-of-Lebanon. Height: 75-120 feet. Great spreading horizontal branches with lower branches sweeping the ground. Pyramidal when young, flat topped at maturity. Rich green needlelike 1-inch leaves with barrel-shaped 4-inch cones. Must be planted in the open in sandy loam. Does not tolerate pollution. Zone 5-7. B, Ea,L.

130. Cercidium floridum. Palo verde. Height: 30 feet. Deciduous Southwestern desert shrub. Remarkable green branches photosynthesize. Divided leaves are rounded, blue-green, and short lived. Yellow flowers

hang in clusters from leaf axils; pods are 3-inch cylinders. Zone 6. B, F.

131. Cercis chinensis. Chinese redbud. Height: 10-15 feet. Multi-stemmed, deciduous, with heart-shaped leaves. Blooms on bare stems and branches in early spring before leaves appear. Showy purple pink flowers, 4-inch pealike seed pods. Plant in full sun to part shade in well-drained, deep soil. Zone 6. A,B,G, Ec.

132. Chionanthus virginicus. Fringe tree. Height: 12-20 feet. Gray bark, medium to dark green leaves often lustrous above and paler underneath, turning yellow or gold in fall. Lacy, white, fragrant flowers are borne in 6-8-inch panicles, both male and female on one tree. Flowers in May-June. In August or September, produces dark blue, grapelike, fleshy fruit with a stony seed. High pollution tolerance. Needs moist, deep, rich, acidic soil. Zone 3-9. A,B,Db, Ec,M, or O.

133. Cornus florida. Eastern dogwood. Height: 30 feet. Broad-branched, dense shrub. New wood is green becoming darker and brown in winter. Fall foliage is scarlet red to violet. Large white flowers bloom in May followed by scarlet red fruits in the fall. Prefers part shade with a rich, moist, and acidic soil. Not pollution tolerant. Zone 5-6. A,B,Ed, or O.

134. C. sanguinea. Blood-twigg dogwood. Height: 6-15 feet. Unkempt, spreading, round-topped, multi-stemmed tree with 3-inch broad, dark green, hairy leaves. Inconspicuous 2-inch off-white flowers appear in late May. Good massing shrub, not a specimen. Plant in sun to part shade in any soil. Zone 4-7. A,B,Db, Ec.

135. Cotinus coggygria. Smoke tree. Height: 15 feet. Broad, dense, and shrubby. Leaves are 2-inch ovals. Smoke effect produced by silky hairs on flower stalk. Flowers are purple pink



Fagus sylvatica

ALASTAIR E. BOLTON

8-inch plumes followed by tiny berrylike fruits. Yellow-orange leaves in fall. Prefers poor soil. Zone 6. Acid soak for 30-60 minutes and Ec or O.

136. *Diospyros kaki*. Japanese persimmon. Height: 20-30 feet. Low-branched, wide-spreading habit with lustrous leathery leaves turning red, yellow, and orange in the fall. Male and female white flowers appear May to June. The fruit, a juicy seeded berry, can reach 3-4 inches in diameter and will ripen after the leaves have fallen in October. Prior to ripening the fruit is astringent and unpleasant to eat. Requires moist soil. Zone 7. B,L.

137. *Eucommia ulmoides*. Hardy rubber tree. Height: 60 feet. Resembles an elm. Deciduous leaves are serrated, pointed ovals, 3 inches long; upper side crinkled, underside hairy. Winged single seed nut. Produces a rubbery latex sap. Zone 6. A,B,Ec,L.

138. *Fagus sylvatica* 'Atropunicea'. Purple beech. Height: 100 feet. Intense purple foliage. Round to oval crown branched to the ground. Smooth gray bark. Moist, well-drained acidic soil, not too wet or compacted. Zone 4-7. B,Ec,O.

139. *Holodiscus discolor*. Creambush. Height: 10 feet. Deciduous shrub with symmetrical upward arching growth and 4-inch, toothed, oval leaves. Blooms in June-July with 10-inch panicles of creamy white flowers that last several weeks. Zone 6. B,Ed,K.

140. *Juglans ailantifolia* var. *cordiformis*. Heart nut. Height: 60 feet. Stout branched with rounded crown. Has 15-inch toothed leaflets and large flat, heart-shaped nut. Eating quality superior to other Asian walnuts. Zone 4. A,Ed or B,O.

141. *Juniperus deppeana*. Height: 35 feet. A silver blue garden conifer for warmer climates. Half-inch cones are very powdery, and on older trees the reddish brown bark is divided into small square plates. Zone 7. A,Db,Ed.

142. *Magnolia grandiflora*. Southern magnolia. Height: 100 feet. A densely pyramidal, low-branched, stately evergreen with 8-inch glossy leaves and large 6-12-inch creamy white flowers in May-June. Flowers followed by rusty brown conical seed heads up to 4 inches long. Zone 6-9. A,Ed.

143. *Myrica pensylvanica* Bayberry. Height: 12 feet. Upright round dense habit.

Deciduous to semi-evergreen. Dark green, oblong, hairy, 4-inch leaves are aromatic when bruised. Male catkins and flowers appear before leaves in March to April. Female plants have gray waxy fruits. High salt tolerance. Remove wax coat and stratify in peat. Zone 2-6. A,B,Ec.

144. *Oxydendrum arboreum*. Sourwood. Height: 25-30 feet. Pyramidal, round-topped tree with drooping branches. Leaves are lustrous dark green, 8 inches long. Lacy white flowers in late June. Holds seed capsules through the winter. Excellent specimen tree. Zone 5-9. A,B,L.

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145. *Picea pungens* 'Glauca'. Blue spruce. Height: 90-135 feet. Broad dense pyramidal growth with horizontal branches becoming open with age. Needles blue-green. Cylindrical 2-4-inch cones. Plant in full sun in moist to dry soils. Zone 2-7. A,B,Eb.

146. *Pinus strobus*. White pine. Height: 120 feet. Mature tree crown is composed of several horizontal and ascending branches. Bluish green needles are 5 inches long. Cones are dark gray brown and 6 inches long. Intolerant of air pollution and salt. Zone 3. B,Ec, or O.

147. *Pterostyrax hispidus*. Fragrant epaullette tree. Height: 20-30 feet. Round-headed form opens up at maturity. Leaves are 8-inch ovals. June blossoms are 10-inch panicles with creamy white flowers. Zone 4-8. A,B,Ec.

148. *Pyrus calleryana* 'Bradford'. Bradford pear. Height: 15-30 feet. Erect, narrow habit with upswept branches. Lustrous 3-inch toothed leaves are bright yellow and russet in fall. Small white flowers in 3-inch clusters. Excellent ornamental and street tree. Zone 6. A,B,Ec.

149. *Quercus alba*. White oak. Height: 50-80 feet. Pyramidal shape changes to more rounded habit with spreading branches. Fall leaf color varies from brown to deep red with leaves persisting on trees well into late fall. Prefers deep, moist, well-drained, slightly acidic soils. Zone 3-9. A,B,L,O.

150. *Rhodotypos scandens*. Jetbead. Height: 3-6 feet. Deciduous shrub with greenish brown twigs. Oval, serrated, 4-inch leaves. Mounded with loose ascending branches. Single white 2-inch flowers in

spring to early summer. Black seeds form in groups of 3-4. Tolerates heavy shade, almost any soil type and condition. Zone 4-8. B,Da,Ea,M.

151. *Robinia pseudoacacia*. Black locust. Height: 30-50 feet. Upright habit, narrow oblong crown, becomes ragged with age. Dull dark green leaves, 1-inch white flowers in 8-inch clusters in late May, followed by a flat brown 3-inch pod. Tolerant of salt, drought, poor soil. Seeds, shoots form thickets. Zone 3-8. A,B,F or G.

152. *Rosa spinosissima*. Scotch rose. Height: 3 feet. Deciduous shrub with elliptical leaves, numerous creamy white, occasionally pink or yellow flowers. Stems densely covered in straight needlelike bristles. In September develops purplish black, round, 1/2-inch hips. Has a moundlike symmetrical habit, often forming thickets. Valued for its profuse flowering and low habit. Zone 4. A,B,Dd,Ec.

153. *R. virginiana*. Virginia rose. Height: 6 feet. Serrated foliage is glossy green in summer turning purple, orange-red, then crimson and yellow in the fall. Red prickly stems often form a dense mass and are attractive in winter. Pink, solitary flowers, occasionally 2 or 3 together, are 2 inches across and appear in June. The bright red fruit ripens late summer and persists through the winter. Makes an effective barrier or low hedge. Likes a sandy soil and is particularly suited to coastal areas. Zone 3. A,B,Dd,Ec.

154. *Staphylea trifolia*. American bladder-nut. Height: 10-15 feet. Upright, heavily branched spreading growth. Flowers with greenish white 2-inch nodding panicles in late April, producing a 1-inch flat seed capsule. Low maintenance in full sun to part shade and moist, well-drained soils. Zone 3-8. A,B,Db,Ec.

155. *Viburnum sieboldii*. Height: 10 feet. Open habit, deciduous with 6-inch toothed leaves, shiny on the upper side and paler underneath. Creamy white May flowers in 4-inch long panicles of flat-topped clusters. Fruits are rose red ripening to blue-black. Likes acidic soil. Zone 5. A,B,Da,Ec.

156. *Vitex agnus-castus*. Chaste tree. Height: 10-20 feet. Deciduous leaves are dark green with gray hairs on underside. Fragrant pale lilac flowers in 7-inch spikes clustered at the end of stems make a spectacular show in late summer. Attracts butterflies. Mediterranean native likes heat. Zone 7. A,B,L.

Herbs

The Native Seed Foundation of Moyie Springs, Idaho, donated creambush (#139) with these comments: "It is chiefly unnoticed as a shrub until its lovely blooms, like ocean-sprays, fill the understory of an open forest." Those members in Zone 6 and south should consider growing this airy and graceful shrub with long-lasting creamy white blooms that blend in well with most herbaceous ornamentals in a border. It is easy to grow from seed.

157. *Agastache foeniculum*. Anise hyssop. Height: 3 feet. A member of the mint family, this rounded, upright perennial has spikes of small purple flowers that bloom late summer into fall. Anise-scented leaves are used in teas and potpourri. Attracts bees. Will take some shade, likes rich soil. A good plant for native gardens or naturalized areas. Zone 4. A,B,L.

158. *A. foeniculum* 'Fragrant Delight'. Giant hyssop. Height: 2-3 feet. Perennial.

Flower color ranges from blue, yellow, red, pink, to white. Foliage has a peppermint, spearmint, and licorice smell and taste. Full sun to part shade, likes rich soil. Zone 4. A,B,L.

159. *Allium schoenoprasum*. Chives. Height: 1-2 feet. Perennial. Rounded pink to mauve flower heads bloom midsummer. Foliage is used for salads, cooking, and makes a nice edging for herb gardens, borders, or walkways. Zone 4. A,B,L.

160. *A. tuberosum*. Garlic chives. Height: 20 inches. Perennial. This species has flat leaves and a delicate garlic flavor. White flowers are striking in late summer and early fall. Zone 3. A,L.

161. *Borago officinalis*. Borage. Height: 1-2 feet. Delicate pinkish blue flowers are star shaped with black stamens protruding from petals. Flowers and young, tender foliage taste like cucumbers and are used for a "cooling" effect in wine drinks and salads. Will grow in any average soil. A,B,C,L.

162. *Coriandrum sativum*. Coriander. Height: 1-3 feet. Small umbel-shaped white, rose, or lavender flowers bloom in summer. Grown for its seeds, which are used for seasoning. Finely divided foliage (cilantro) used in Mexican cuisine. A,B.

163. *Isatis tinctoria*. Woad. Height: 4 feet. Biennial. Flowers are yellow panicles. Leaves yield a beautiful blue dye. Sprays of seed pods are useful in dried arrangements. A,B.

164. *Levisticum officinale*. Lovage. Height: 4-6 feet. Perennial. Looks like a tall, much-branched celery with slender stems. Grows best in rich, moist soil. Will take some shade. Chop leaves and stem tips to flavor meats, salads, and soups. Zone 3. B.

165. *Mentha* × *piperita* var. *citrata*. Lemon mint. Height: 1-2 feet. Perennial. Erect, fast growing with lavender flowers appearing on short, thick spikes. Has citrus scent and flavor. Likes rich, moist soil. Zone 5. A,L.

A container planted with several different types of herbs makes a lovely addition to a windowsill, terrace, or patio garden. Plant spearmint (#166), Italian parsley (#171), and sweet basil (#168) together, or Italian parsley and oregano (#170) for a kitchen windowsill garden. Common thyme (#174) planted in a terracotta pot is a delightful culinary evergreen herb to enjoy all year.

166. *M. spicata*. Spearmint. Height: 1-3 feet. Perennial. Narrow, bright green leaves with spikes of tiny pink whorled flowers. This is the traditional mint used to flavor mint juleps, ice tea, and mint sauce. Zone 4. A,B,L,O.

167. *Myrrhis odorata*. Sweet Cicely. Height: 3 feet. Perennial. Anise-scented, fernlike foliage. White umbel flowers are borne above the foliage in May. Use aromatic leaves to season fish, salads. Does not transplant well once established. Plant in shade with a good humusy soil. Zone 3. A,B,O.

168. *Ocimum basilicum*. Sweet basil. Height: 1-2 feet. Bright green aromatic foliage with tiny whorled white flowers. Pinch back new leaves to produce more growth and a bushier habit. Prefers a warm location with moist, well-drained soil. A,B,L.

169. *O. basilicum* 'Citriodorum'. Lemon-scented basil. Height: 12-18 inches. Bushy habit. White tubular flowers. Excellent for vinegars. Likes rich soil. A,B,K,L.

170. *Origanum vulgare*. Oregano. Height: 8-12 inches. Hardy perennial with a compact, trailing habit adorned each year with pink or white flowers. Makes a lovely pot plant grown on a sunny kitchen window. Prefers dry soil. Zone 5. A,B,O.

171. *Petroselinum crispum* var. *neapolitanum*. Italian parsley. Height: 6-12 inches. Biennial. Dark green flat-leaved variety has taste superior to curly parsley. Pick the outer leaves continually leaving fresh sprigs in the center to provide new growth. Full sun or part shade. A,B,G.

172. *Ruta graveolens*. Common rue. Height: 2-3 feet. Perennial. Aromatic, blue-green, club-shaped foliage with a shrublike habit. Yellow flowers bloom in midsummer. A good plant for low edgings. Contact with foliage, especially on hot and dry summer days, may cause dermatitis. Traditionally used as a medicinal plant. Zone 4. A,B,L.

173. *Tanacetum parthenium* 'Ultra Double White'. Feverfew. Height: 2-3 feet. Perennial. Pungent ferny foliage, neat, well-branched habit. Numerous full, double, daisylike flowers. Best in light, sandy soil. Self-seeds very freely. Tea made from leaves is reputed to relieve headaches. Zone 4. A,B,L.

174. *Thymus vulgaris*. Common thyme. Height: 6-12 inches. Evergreen perennial herb with opposite leaves and woody base. Small pink to white flowers form whorls. This is the thyme most widely used in cooking. Zone 4. A,B,J,L.

Vegetables

175. *Amaranthus hybridus* var. *erythro-stachys*. Amaranth. Warm-season, drought-tolerant crop of the Aztec and Inca cultures of South America. Will reach 6 feet, producing deep burgundy flower heads. Both seeds and young leaves are edible. Leaves are best cooked or steamed and taste similar to spinach. Ripe seeds should be further dried indoors or in sun. They can then be toasted, popped, sprouted, or ground into a flour. Matures in 90-100 days. B,K.

176. *Brassica oleracea*. Russian red kale. One of the rarer varieties. Grows to 3 feet. Frilly, wavy cerise-veined leaves. Plant late spring to summer. Excellent for overwintering in the Pacific Northwest. 50 days to maturity. A,L,O.

177. *Capsicum annuum* var. *annuum*. Ornamental pepper. Bears slender, upright, 1-2-inch conical yellow, orange, red, and purple fruits from midsummer to frost. Plants reach 9-12 inches with bright foliage and bushy habit. Plant in full sun to part shade in moist, well-drained soil. A,H,K.

178. *Chenopodium capitatum*. Strawberry blite. Young leaves and new shoots are used raw in salads or can be cooked like spinach. Bright red berries can be eaten raw or boiled and seasoned. Berries are also used as a red dye. Makes an attractive edible plant for a container. A,B,L.

179. *C. quinoa*. Multi-head quinoa. Grows to 5-6 feet. Flowers are panicles of red, orange, yellow, purple, or mauve. Small, egg-shaped, dull blue-green leaves can be used as a salad green and the seeds cooked or used as flour. Matures in 100 days. Detailed usage/growing information sheet will be enclosed with order. B,K.

180. *Citrullus lanatus*. Moon and stars watermelon. Excellent producer with fruits of 25-40 pounds. Fruits have a field of yellow stars with a thick, slightly ridged rind and saffron yellow flesh with a rich sweet flavor. Leaves are dark green with yellow "stars." Matures in 100 days. A,K.

181. *Lepidium sativum*. Garden cress. Tangy sword-shaped leaves are used fresh in salads or sandwiches when small and tender. Fast-growing vegetable; make small succession plantings every 3 weeks from spring until hot weather and then again in the fall. Thrives in ordinary soil. Matures in 45-60 days. B,J.

182. *Lycopersicon lycopersicum*. Peron tomato. Large-fruited red variety with an indeterminate growth habit. A very dependable and excellent producer. Matures in 68 days. A,K,L.

183. *Phaseolus vulgaris*. Hutterite soup bush bean. Compact bush grows 16-24 inches.



Capsicum annuum var. *annuum*.

Distinctive, plump, light green seeds can be made into a creamy white gourmet soup. 55 days to maturity. B,L.

184. *P. vulgaris*. Oregon giant snap pole bean. Vines 7-10 feet in length with pink flowers and thick mottled purple, green-splashed, stringless 7-inch pods. 65 days to maturity. B,L.

185. *Tetragonia tetragonioides*. New Zealand spinach. Makes a good summer sub-

stitute for true spinach. Leaves are triangular, dark green. In the North, short runners form and plants spread to 2-3 feet. In very hot climates, plants do well with light afternoon shade. Also makes a good container plant. Matures in 60-90 days. A,B,G,L.

186. *Zea mays*. Hopi blue corn. Height 5 feet. Ancient flint corn is a staple of the Hopi Indians of northern Arizona. Bushy plant with 7-inch ears and smooth blue kernels. The ripe kernels are ground into flour. Matures in 90-

100 days. B,G,L.

187. *Z. mays*. Red dent field corn. Excellent resistance to blight and drought. Stalks average 9 feet with 9-12-inch ears. Kernels are white, tender until they mature, then turn red and tough. Matures in 105 days. B,L.

188. *Z. mays*. Striped popcorn. This rare and beautiful corn grows to 4 feet and produces 4-6-inch ears with striped kernels. Thrives in a sandy or clay soil. Matures in 100 days. B.

Mr. Howard Hitchcock, of Caldwell, Texas, one of the contributors of red dent field corn (#187), described his experience growing the useful and beautiful corn. He wrote, "... before finally mature the grains of this red corn are solid white. As the mature grains harden they turn solid red. While unripe and soft this is a good eating corn cooked by boiling."

Home and Greenhouse, Southern Zones

The freely branching shrub, *fremontia* (#195), is always breathtaking when in bloom with its large, spectacularly showy, orange-yellow flowers. It is one of the most beautiful plants to espalier. Dark green pubescent leaves set off the bright flowers that appear in succession over a long season. It is not difficult to grow if it is in full sun and fairly dry soil.

189. *Annona cherimola*. Cherimoya. Height: 20 feet. Evergreen tree. Leaves are oval or lance shaped, velvety beneath. Strongly aromatic, usually solitary flowers with nodding fragrant outer petals. Four-inch fruits are covered with U-shaped scales. Greenish when ripe, with custardlike flavor. Hand pollinate for fruit. Zone 9. A.

190. *Bauhinia variegata*. Orchid tree. Height: 20-40 feet. Scented ornamental with heart-shaped 6-inch leaves. Flowers are spathe-like, 1 inch long with 2-inch red to magenta or white petals. Minimal maintenance. Plant in ordinary soil. Zone 8b. A.

191. *Cassia artemisioides*. Wormwood senna. Height: 4 feet. Evergreen shrub with narrow, downy leaflets spiraled around stem. Abundant flowers are sulfur yellow in spring, becoming 3-inch, flat pods. Bark emits unpleasant odor when crushed. Zone 8b. A,B,L.

192. *Cercis occidentalis*. Western redbud. Height: 15 feet. Deciduous shrub similar to eastern and Chinese redbud except for its rich waxy leaves. Needs deep, fertile soil. Zone 8. A,G,Ec, or O.

193. *Delonix regia*. Royal poinciana. Height: 20-50 feet. A wild and rangy, brilliant parasol of flowers in May-June. Flowers are 5 inches

in diameter in bunches of intense scarlet or crimson; one petal is marked with white or yellow. Very fast growing. Zone 10b. A,B,L.

194. *Eriobotrya japonica*. Loquat. Height: 25 feet. Six-to-10-inch leaves are wrinkled with hairy undersides. Small white fragrant winter flowers followed by edible pear-shaped fruit that ripens in April. This very handsome shrub does well in tubs or the greenhouse and is also useful for fresh fruit and jelly. Tolerant of dry conditions, part shade. Zone 8. A,B.

195. *Fremontodendron mexicanum*. Fremontia. Height: 18 feet. Shrub with thick, rounded, 1-3-inch dark green leaves. Orange-yellow 3-inch flowers open simultaneously and last several weeks, followed by glossy black seeds. Tolerates dry soil. Zone 9. A,B,C.

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196. *Jacaranda mimosifolia*. Green ebony. Height: 25-40 feet. Deciduous fernlike 8-inch leaves, blue to purple 12-inch blooms, flat egg-shaped pods. Prefers sandy soil. Zone 8b. A,B,J,L.

197. *Leucodendron xanthoconus*. Sunshine bush. Height: 4-5 feet. Pointed leaves are lemon yellow. Male flowers are yellow and fluffy. Likes conditions similar to that of roses and will need protection from frost. Zone 9. A.

198. *Lithops* spp. Living-stone. Height: under 1 inch. Essentially a stemless succulent, forming stonelike clumps buried in sand with tips of leaves exposed. Various markings with transparent "windows." Solitary flowers appear in central split, after 3-4 years. Likes gritty porous soil and a hot dry environment. After the first year, keep moist in the summer but do not water from early autumn to early spring. Give maximum illumination in winter. Zone 8. A,K,L.

199. *L. pseudotruncatella*. Height: 1 inch. Flat-topped conical-shaped succulent with a stonelike appearance. Gray sides tinted with purple. Convex brownish-gray at the top with branching rust-colored grooves. Yellow flower 1-2 inches across. Likes gritty sandy soil with no humus. Sow indoors in pots 1/8 inch under grit. Zone 8. A,K,L.

200. *Mammillaria heyderi* var. *heyderi*. Coral cactus. Height: 1 inch. Hemispherical, nearly pyramidal shape with many creamy

white spines. Flowers are pink and/or white. Needs a sandy gritty loam. Temperatures below 70 degrees are likely to seriously hamper germination. Zone 8. A,K.

201. *M. wrightii*. Pincushion. Height: 1 inch. Cylindrical to 3 inches thick. Has white, dark-tipped radial spines up to 2 inches long, darker stouter central spines, one of which is hooked. One-inch purple flowers are followed by egg-shaped fruit in summer. Needs gritty loam. Zone 8. A,K.

202. *Pinus elliottii*. Slash pine. Height: 80-115 feet. Broad to conical pyramidal habit. Lower branches are shed on mature specimens. Dark, shiny green 11-inch-long needles with 2-3 needles per bundle. Likes a deep, dry soil. Zone 8b. A,B,L.

203. *P. radiata*. Monterey pine. Height: 75 feet. Handsome, irregular, open headed with dense bright green foliage of 3-inch needles. Produces 4-inch cones that sometimes remain on the tree for many years. Likes deep, dry soils. Zone 9. B,Ea,K.

204. *Pistacia terebinthus*. Cyprus-turpentine. Height: 15 feet. A Mediterranean shrub with long lance-shaped leaves. Dark purple wrinkled fruit is the original source of turpentine. Thrives in heat and poor, dry soils. Zone 9. A,B,Eb,O.

205. *Potentilla recta* 'Warrenii'. Cinquefoil. Height: 1 1/2-2 feet. Freely branched stems, coarsely toothed oblong leaves with 2-4 inch leaflets. Produces numerous buttercup yellow 1-2 inch wide flowers. Full sun to part shade. Zone 8. A.



Bauhinia variegata

River Farm Seeds

American Horticultural Society horticultural interns Alastair E. Bolton and Juliet Liniado collected seeds from cosmos (#7), hollyhocks (#27), money plant (#86), and blue false indigo (#40) from the gardens at River Farm. We also want to thank them for the drawings in this year's catalog, and Aubrey Glass, Aubrey Glass Jr., and Jane Glass for their help with the 1992 Seed Program.

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Thanks to those who donated seed to the 1992 program.

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Continued on page 12SC

How to Order

Although we have a considerable amount of many of the seeds listed, in some cases the seed is in short supply. To increase the chances that you will get what you want, fill out the order form on this page and mail it immediately. Whenever possible, we'll send your first choices, but please also list alternate selections that we can send in case we run out.

After sending in your order, it is important that you keep this catalog; you will need it to identify the seeds you receive. All the seed packets are marked with only the master list numbers that appear in this catalog. You will not be able to identify your seeds if you do not save this catalog.

The cut-off date for orders is May 1. The longer you delay in placing your order, the less likely it is that you will receive your first choices.

As you complete the order form, we hope you will consider making a donation to help defray the cost of the Seed Program. We suggest a minimum of \$2 if you are ordering 10 packets of seed, and \$3 if you are ordering 15 packets of

seed. All contributions to the American Horticultural Society are tax-deductible.

Seed Program 1993

One of the greatest rewards of gardening is the feeling you get when you've raised a plant in such abundance that you have enough seed, cuttings, or divisions to share with your friends. Start thinking now about sharing your 1992 bounty with AHS's nationwide community of gardeners. Although much of the seed in our catalog is donated by seed companies and botanical gardens, we also depend heavily on donations from members. Particularly if you have any unusual or rare plants in your garden, we hope you will collect the seed and send it to us for the 1993 seed offerings so that it can be shared with other American Horticultural Society members. For information on the 1993 Seed Program, write to:

Seed 1993
 American Horticultural Society
 7931 East Boulevard Drive
 Alexandria, VA 22308

Seed Catalog Order Form

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Continued from page 11SC

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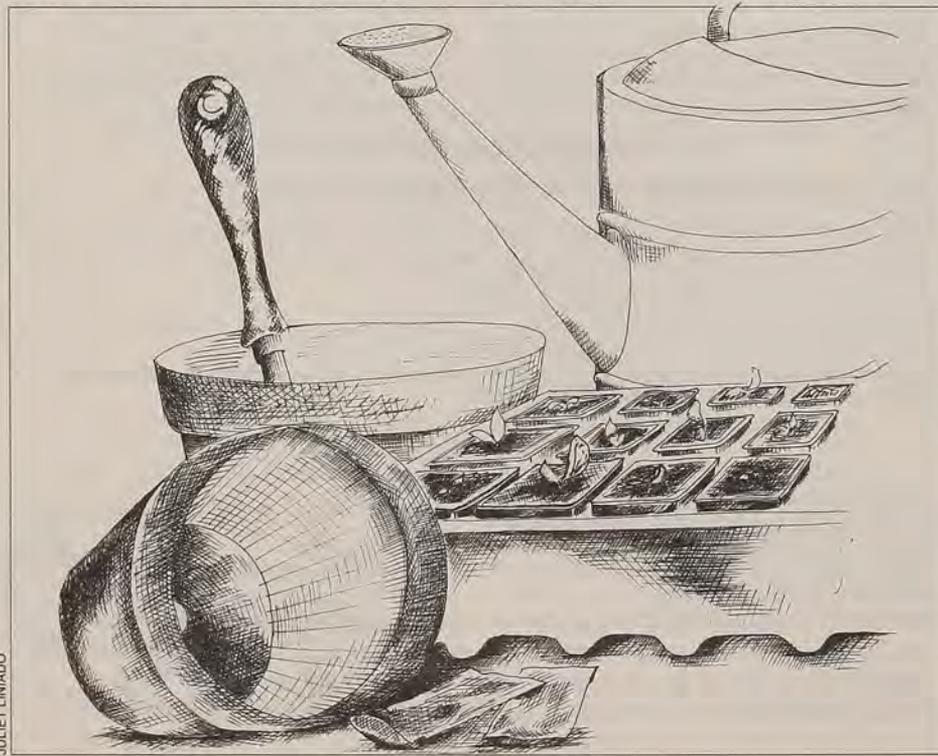
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JULIET LINIARO

Making a Difference

Enid A. Haupt: Gifts That Grow

Last summer, the staff of New York's Rusk Institute of Rehabilitation Medicine opened a new outdoor therapy and rehabilitation garden, an extension of the Enid A. Haupt Glass Garden built in 1959. Both gardens were a gift from Enid Annenberg Haupt, a philanthropist, horticulturist, art collector, and the retired publisher and editor-in-chief of *Seventeen* magazine, who has made horticulture her special cause. "The happiest I've ever been has been in a greenhouse or a garden," she told *Town & Country* magazine in 1990. She has given millions of dollars to public parks and gardens in this country and others, including a gift to the gardens at Monet's home in Giverny.

The Rusk Institute's glass garden was the first facility of its kind to be made part of a hospital for physical rehabilitation. It offers a pleasant respite from the stark hospital setting and surrounding urban environment. Within its glass walls, patients work with plants as part of their treatment to improve physical endurance, motor skills, and coordination.

The new, 4,000-square-foot outdoor garden was planned by Rusk's horticultural therapy staff. Doorways and paths are wheelchair accessible and plant beds are raised. There is built-in seating and lighting, an arbor, and a barbecue that the recreational therapy staff uses for patient cookouts.

Haupt's original donation to the Rusk Institute introduced the idea of hospital gardens to be used for horticultural therapy. Her other contributions to horticulture have made a comparable impact.

Perhaps closest to the hearts of American Horticultural Society



Enid A. Haupt and former First Lady Pat Nixon compare plant notes during the grand opening of River Farm in 1974.

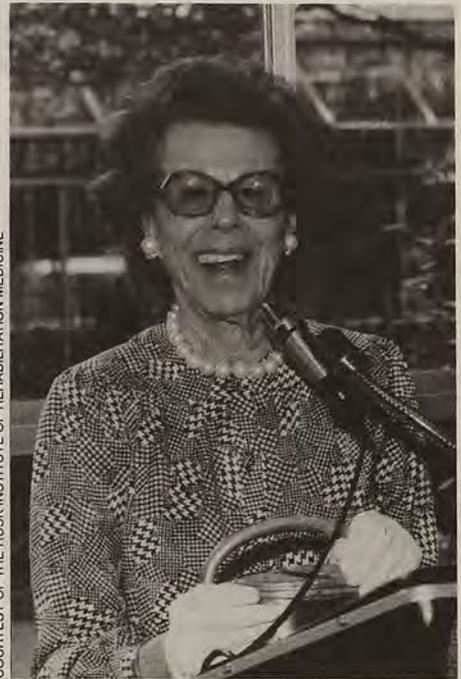
members and staff was her donation of River Farm to the Society in 1973, while she was Secretary of the AHS Board of Directors. Her \$1 million gift has preserved River Farm, one of George Washington's five original working farms, as a permanent, open public space in the burgeoning Washington metro area; provided a base for AHS operations; and produced a site for numerous gardens and collections from various plant societies and horticultural organizations.

During the week, visitors stroll through the specialty gardens at River Farm and wander down to the Potomac River. It's a popular place for lunchtime picnics in the summer. Children seem compelled to climb over the ha-ha wall and gather bouquets of flowers from the meadow garden. Artists use the gardens for inspiration and the house for exhibitions. Tours, lectures, and other special events draw visitors from around the country.

Elsewhere, Haupt has supported creation and maintenance of both indoor and outdoor gardens. In the late 1970s the New York Botanical Garden's neglected conservatory received her attention. Construction of the glass house had begun in 1899 with an airy iron framework covered with 17,000 individual panes of glass. When it opened in June 1900, the conservatory encompassed almost an acre of enclosed growing space and was crammed with 9,000 plants.

But eventually, rusting and rotting both indoors and out, normal glass breakage, and leaky roofs led to almost constant maintenance and repair of the structure. Antiquated heating and ventilation systems threatened the survival of the plants. Originally Haupt offered \$850,000 to redo the palm court and its dome. Later, she increased her contribution to \$5 million and then added another \$5 million as an endowment for maintenance. The restored structure was reopened as the Enid A. Haupt Conservatory in March 1978.

The Enid A. Haupt Garden at the Smithsonian Institution opened in May 1987. Haupt donated \$3 million for the four-acre Victorian garden adjacent to the Smithsonian castle. It is essentially a rooftop garden, planted on top of two underground museums, the roofs of which are covered with two to eight



Enid A. Haupt.

feet of topsoil. The center of the garden is a Victorian parterre with multi-colored swags and ribbon beds adapted from the sunken garden at the 1876 Centennial Exposition in Philadelphia.

In 1989 Haupt gave \$1.5 million to the Cloisters, the Metropolitan Museum of Art's center for medieval arts in New York City. The donation was used to maintain the Cloisters' three small gardens, which are composed almost entirely of plants from the Middle Ages.

Horticulture isn't Haupt's only cause. Last summer she donated \$25 million to the Memorial Sloan-Kettering Cancer Center for their new outpatient facility, now called the Enid A. Haupt Pavilion.



The Rusk Institute's outdoor therapy garden.

AHS Bulletin Board

River Farm to Host Alexandria Decorators Showhouse

From May 2 through 31 visitors will get a new look at the AHS headquarters when River Farm will become the Alexandria Decorators Showhouse. Prominent interior and garden designers will use the historic River Farm house and the adjoining gardens and grounds as the settings for their most impressive decorating ideas and some of their improvements will be permanent. Society offices in the main building will be moved to a temporary space during the event.

River Farm, with its picturesque location overlooking the Potomac River, was selected in May 1991 by the Campagna Center as the site for its major 1992 fund raiser. Formerly the YWCA of Alexandria, Virginia, the

center was renamed in 1990 to honor its long-time director, Elizabeth-Anne Campagna. The center offers programs to improve the quality of life for women and families in the greater Alexandria community, particularly those in transition or crisis.

Representatives of the center and AHS determined that a joint fund-raising venture would enhance the showhouse and benefit both groups' educational programs. AHS and the Campagna Center will share in the proceeds from gate ticket sales and from an on-site boutique created for the event. In conjunction with the event, AHS will develop a program of lectures and symposia on the influence of horticulture in home design.

Because of the amount of traffic the event is expected to generate, AHS had to receive special permission from the Fairfax County Board of Supervisors to hold this fund-raiser. The Society received approval from the Wellington Civic Association, the domain in which River Farm lies, and met other requirements for the zoning variance.

Frank Babb Randolph is the 1992 showhouse professional advisor. A nationally recognized interior designer, he received one of *House Beautiful* magazine's distinguished "Ten Best Showhouse" awards for the room he designed in the 1990 Alexandria Decorator Showhouse. Randolph will select the design advisory board, choose designers for the showhouse, and coordinate the aesthetic details with AHS representatives.

AHS Board Members Sally Boasberg and Helen Fulcher Walutes and Executive Director Frank Robinson will coordinate the event for the Society.

Randolph has designated how each room will be decorated. For example, two empty rooms that used to house main-frame computers will become a "honeymoon cottage." Robinson's office will become the master bedroom suite; the office of Elizabeth Smith, Robinson's executive assistant, will become a lady's study. Even the smallest spaces will be transformed—a tiny coat closet off the kitchen will become a china closet.

In November interior designers submitted proposals to decorate the rooms and landscape designers submitted plans for the gardens.

Once the interior designers begin working, most of the AHS staff will move to offices elsewhere in the Alexandria area. The publications staff will remain at River Farm; everyone else will pack up their computers, desks, and files for moving day on March 1. They'll return around June 15 after the decorators have removed their handiwork and the offices become offices again.

Members and friends of the Society are encouraged to attend the showhouse, open May 2 through 31 from 10 a.m. to 3 p.m. daily. American Horticultural Society President's Council members will be honored at a dinner to be held at River Farm during the event.

Blount Challenge Continues

Mary Katherine Blount sees the gardens and grounds of River Farm as a place to highlight the best in American horticulture and the importance of horticulture to the country. Her vision, one shared by the AHS Board of Directors, has prompted Blount, an AHS Board Member from Montgomery, Alabama, to issue a challenge to her fellow Board Members and to members and friends of the Society. She has pledged \$25,000 to the Society, if AHS in turn raises an equal amount.

Blount's donation will be used to hire a horticulturist who will develop, beautify, and oversee River Farm's 27 acres. The matching funds will be used to purchase gardening tools and equipment as well as for salary.

To date the Society has raised \$2,250 toward the challenge grant. Combined with the opportunity of the 1992 Alexandria Decorators Showhouse (see article this page), the Blount Challenge offers an exciting opportunity for AHS to expand and restore the gardens at River Farm.

We cordially invite you to participate in the Blount Challenge.

Yes, I will help expand and restore the gardens at River Farm.

My check, made payable to the M. K. Blount Challenge, and in the amount of \$_____ is enclosed.

Please print your name as you wish it to be listed in the AHS Contributor's Report.

Name: _____

Street Address/P.O. Box: _____

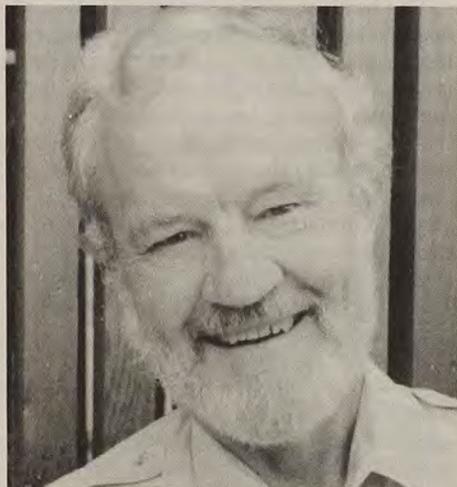
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MAIL TO: M. K. Blount Challenge, American Horticultural Society, 7931 East Boulevard Drive, Alexandria, VA 22308-1300.

Spend time with some great gardeners.



English writer **Rosemary Verey** notes the influence of great gardeners on British and American gardens for her keynote address.



"Victory Garden" co-host **Jim Wilson** leads the first day's program with introduction to several masters of the specialty garden.



Garden expert **Rosalind Creasy** looks at the future on the second day with her presentation about children in the garden.

Colonial Williamsburg and the American Horticultural Society present the 46th

Williamsburg Garden Symposium



April 5-8, 1992

Every great garden is created by a great gardener.

Great gardeners are the subject and the leaders of this year's symposium in Williamsburg, Va. A faculty of garden experts, presentations by visiting gardeners, demonstrations and master classes fill the program.

Garden Symposium registration includes six days of access to Colonial Williamsburg's exhibition buildings, craft shops, museums, and gardens; two receptions and a dinner; and a full schedule of tours, talks, demonstrations, clinics, and conversations.

Learn from garden masters. Harvest ideas to take your garden to greatness.

For full registration information, please mail the coupon to Garden Symposium, P.O. Box 1776, Williamsburg, VA, 23187-1776, or call (804) 220-7255.

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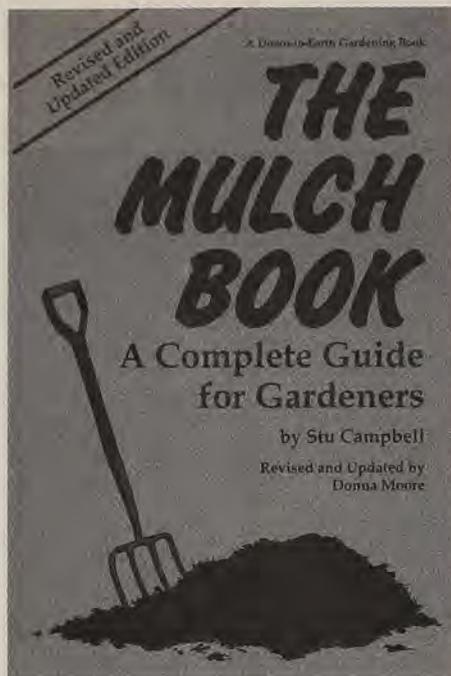
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Gardeners' Bookshelf



The Mulch Book

Stu Campbell. Storey Publishing, Pownal, Vermont, 1991. 120 pages. Black-and-white illustrations. Publisher's price, softcover: \$8.95. AHS member price: \$7.60.

There are probably as many different opinions about how best to mulch a garden as there are mulching materials. Stu Campbell's recently revised edition of *The Mulch Book* is about as handy a way as is imaginable for dealing with these numerous approaches.

Campbell addresses the most common "whys" of mulching: soil stabilization and improvement; labor-saving weed control; and the increasingly important environmental issues of water conservation, reduction or elimination of pesticides and herbicides, and the recycling of organic materials that might otherwise be landfilled or incinerated.

Perhaps the highlight of this new edition is the roster of materials suitable for mulching, which often range from the sublime (spent hops) to the seemingly ridiculous (used aluminum foil and pink fiberglass insulation). Of note is Campbell's treatment of the new geotextile fabrics, and his well-grounded warnings about traditional materials, especially his accurate criticism of peat moss, which too many gardeners view as the first

choice in mulch. Campbell is also sensitive to the cost considerations in selecting a material for home use, as well as ease of application and "staying power."

The balance of the book looks at specific application recommendations for several dozen of the most commonly grown vegetables and a variety of fruits and ornamentals, being careful to include seasonal notes. Many gardeners will appreciate the easy-to-use "Quick Reference Chart" as a handy overall guide to mulches and key mulch characteristics—appearance, insulation value, cost, weed-control ability, permeability, moisture retention, and decomposition rate—and additional comments.

—Joseph M. Keyser

Joseph M. Keyser is AHS's director of programs and of the National Backyard Compost Demonstration Park.

Backyard Composting

Harmonious Technologies, Pasadena, California, 1991. 96 pages. Black-and-white photographs and illustrations. Publisher's price, softcover: \$6.95. AHS member price: \$5.90.

As home composting develops more and more momentum, we are destined to see a proliferation of handbooks, guides, and encyclopedias on composting. Joining the best-selling *Rodale Guide to Composting*, a comprehensive study of home, agricultural, and municipal composting; and Stu Campbell's *Let It Rot*, a simpler guide from Garden Way Publishing, is *Backyard Composting*, a quickly read,

heavily illustrated compendium of some of the most current compost wisdom.

The book reflects the latest notions on proven methods from the leaders in the home-composting movement: strategies like "stockpiling" and valuable alternatives to the conventional and too frequently cited "layering" process, such as initially mixing all of the nitrogen and carbon materials together as a compost stew.

For gardeners setting out to select a composting system or bin, *Backyard Composting* offers a host of choices, although some of the products cited have already been redesigned or replaced by other units. Beyond the array of commercial devices, tools, and activators, the authors have included useful information for gardeners interested in constructing their own systems, both with premium materials and with recycled lumber and wire-mesh scraps from around the house and community.

Perhaps the strongest element of this new book is the implied notion that there is no "one method" or system for home composting, but a large range of products and approaches, from high tech to low budget, from labor and time intensive to the casual involvement that has traditionally appealed to gardeners.

Backyard Composting rounds out its coverage of home composting by looking at some of the newer or more popular trends in organic recycling, and makes an admirable plea for "grasscycling" or "don't bag it" lawn care, in addition to some words on vermicomposting (worm composting).
—J. M. K.

A World of Ferns

Josephine M. Camus, A. Clive Jermy, and Barry A. Thomas. Natural History Museum Publications, London, England, 1991. 112 pages. Color photographs. Publisher's price, softcover: \$22.95. AHS member price: \$19.50.

In commemoration of the centenary of the founding of the British Pteridological Society, three society member/fern experts have produced this celebration of the world of ferns and their close relatives horsetails and club mosses. This is essentially a beginners' book, with chapters introducing fern botany, the fern fossil

record, modern uses of ferns, and the diversity of fern habitats—tropical forests, wetlands, temperate lands, arid zones, mountain summits and polar regions, as well as home and public gardens.

The highlight of the book is the splendid photography. Remarkably, the nearly 200 color photographs were all taken by Pteridological Society members and friends and donated to the authors. If your idea of a fern is limited to visions of the Boston fern, than you'll be pleasantly shocked by the colors, textures, shapes, and habitats contained herein.

—Thomas M. Barrett, Assistant Editor

Lilies of the Hearth

Jennifer Bennett. Camden House Publishing, Camden East, Ontario, Canada, 1991. 191 pages. Black-and-white illustrations. Publisher's price, softcover: \$14.95. AHS member price: \$12.70.

A few years ago Jennifer Bennett began a speech to a group of university women by saying, "Flowers are considered suitable decorations for women's clothing but less so for men's." That talk, in which Bennett used her floral-patterned skirt as one example of the ancient, and many-faceted, relationship between women and plants, evolved into *Lilies of the Hearth*, subtitled "The Historical Relationship Between Women & Plants."

Bennett's history begins with a look at "Mother Nature" and the goddesses connected with plants. These earth goddesses include Ishtar, a prominent figure in Middle Eastern lore; Gaia, the grain mother and Greek goddess of vegetation and domestic animals; and Ala and Asase Yaa, two earth spirits of Africa. Most readers can relate the story of Demeter and Persephone but others may be less familiar. According to the Apinaye Indians, who lived southeast of the Amazon River, corn originated when "a widower fell in love

with a star, which came to him in several guises, including that of a woman. She introduced him to corn growing on a hardwood tree and taught him and his tribe how to plant it."

Bennett also introduces us to Victorian botanists, ancient and modern "witches," pioneers, wealthy "flower collectors," women commemorated in botanical names, floral textile artists, environmentalists, botanical illustrators, and floral entrepreneurs.

One of those pioneer women, Catharine Parr Traill, immigrated to Canada in 1832 at the age of 30. In 1855 she wrote *The Female Emigrant's Guide*, telling women what to expect

and how to survive and garden on North American land. Traill learned enough Latin to begin studying native plants and relied on "old settlers' wives and choppers and Indians" for the rest of her information. Bennett says Traill "noted that some plants had no name at all that she could discover, and so I consider myself free to become their floral grandmother and give them names of my own choosing."

Lilies of the Hearth is filled with black-and-white illustrations and photos, one of which shows Vita Sackville-West as a child. In that curious photo, her dress and hair are festooned with a profusion of flower chains and wreaths.

—Mary Beth Wiesner, Assistant Editor

Book Order Form

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

- The Mulch Book** \$ 7.60
- Backyard Composting** \$ 5.90
- A World of Ferns** \$19.50
- Lilies of the Hearth** \$12.70

I would like to order ____ books.

Postage and handling: \$2.50, first book; \$1.50, each additional book. Virginia residents add 4½% sales tax. Please allow six weeks for delivery. Prices are subject to change without notice.

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Gardeners' Dateline

Mid-Atlantic

♦ **Jan. 7-8. Virginia Flower and Garden Symposium.** Radisson Hotel, Virginia Beach, Virginia. Sponsored by Virginia Professional Horticulture Conference. Information: Bonnie Appleton, (804) 363-3906, Fax (804) 363-3950.

♦ **Feb. 7-9. Association of Professional Landscape Designers Annual Winter Meeting.** "Leaving No Stone Unturned VI." Conference. Rockville, Maryland. Information: Bill Hewitt, (615) 790-0824.

♦ **Feb. 13-15. Fourth National Conference on Organic/Sustainable Agriculture Policies.** Hyatt Regency Hotel, Bethesda, Maryland. Cosponsored by the Center for Science in the Public Interest and the Institute for Alternative Agriculture. Information: Agriculture Conference, c/o CSPI, 1875 Connecticut Avenue N.W., Suite 300, Washington, DC 20009.

North Central

♦ **Jan. 4-7. Grower Expo '92.** Pheasant Run Resort and Convention Center, St. Charles, Illinois. Sponsored by *GrowerTalks* magazine. Information: Julie A. Stewart, P.O. Box 532, Geneva, IL 60134-0532, (708) 208-9080, Fax (708) 208-9350.

♦ **Jan. 11-Mar. 8. Azalea Show.** "Romance is in the Air." Foellinger-Freimann Botanical Conservatory, Fort Wayne, Indiana. Information: Foellinger-Freimann Botanical Conservatory, 1100 South Calhoun Street, Fort Wayne, IN 46802, (219) 427-1267.

Northeast

♦ **Jan. 20-22. Massachusetts Horticultural Congress.** Tara Hyannis Hotel and Resort, Hyannis, Massachusetts. Information: Debbie Hergenrother or Debbie Fanning, Massachusetts Horticultural Congress, 100 Boylston Street, Suite 1050, Boston, MA 02116, (617) 426-6400.

♦ **Jan. 24, 28, 29. Turf IPM; Feb. 11-13. Woody Ornamentals IPM; Feb. 25. Landscape Plant Materials.** Landscape Integrated Pest

Management Short Course. Eastern Massachusetts Agricultural Center, Waltham, Massachusetts. Sponsored by the University of Massachusetts Cooperative Extension. Information: Kathleen Carroll, University of Massachusetts Cooperative Extension System, French Hall, UMASS, Amherst, MA 01003, (413) 545-0895.

♦ **Jan. 30, Feb. 6, 13, 20, 27. Professional Landscape Management Program.** "Focus on Pruning." Lancaster, Pennsylvania. Sponsored by Penn State Cooperative Extension. Information: H. Bruce Hellerick, Penn State Cooperative Extension, 1383 Arcadia Road, Room 1, Lancaster, PA 17601, (717) 394-6851.

♦ **Feb. 7. Fifth Annual Midwinter Symposium.** "Today's Horticulture." Longwood Gardens, Delaware. Cosponsored by the Professional Gardener Alumni Association and Longwood Gardens. Information: (717) 361-8041.

♦ **Feb. 10-13. The 47th Annual Nursery Conference.** Hershey Lodge and Convention Center, Hershey, Pennsylvania. Sponsored by the Pennsylvania Nurserymen's Association, Pennsylvania Cooperative Extension Service, and Penn State's Department of Horticulture. Information: (717) 238-1673.

♦ **Mar. 7. Garden Planning Day.** Old Sturbridge Village, Sturbridge, Massachusetts. Information: Old Sturbridge Village, 1 Old Sturbridge Village Road, Sturbridge, MA 01566.

AHS Composting Classes Continue

The AHS Backyard Composting Lectures will begin again in February. Joe Keyser, American Horticultural Society director of programs, will host the lecture and demonstration on February 1 at 10 a.m. Admission is \$5 and reservations are required. For more information write or call AHS, 7931 East Boulevard Drive, Alexandria, VA 22308-1300, (703) 768-5700 (in Virginia) or (800) 777-7931.

South Central

♦ **Feb. 10-17. The 63rd International Golf Course Conference and Show.** Seminar. New Orleans Convention Center, New Orleans, Louisiana. Sponsored by the Golf Course Superintendents Association of America. Information: (913) 841-2240.

Southeast

♦ **Through Jan. 15. First Annual Poinsettia Festival.** "Color it Crimson." Cypress Gardens, Winter Haven, Florida. Information: (800) 237-4826 (national) or (800) 282-2123 (Florida).

♦ **Jan. 17-19. Southern Perennials and Gardening Symposium.** Callaway Gardens, Pine Mountain, Georgia. Information: Martha Miller, Symposium Coordinator, Callaway Gardens Education Department, Pine Mountain, Georgia 31822, (404) 662-5153.

♦ **Jan. 31-Feb. 2. Management Clinic.** Galt House East Hotel, Louisville, Kentucky. Cosponsored by the National Landscape Association, Garden Centers of America, and Wholesale Nursery Growers of America. Information: The Management Clinic, 1250 I Street N.W., Suite 500, Washington, DC 20005, (202) 789-2900.

♦ **Feb. 8. Fifth Annual Perennial Symposium.** Atlanta, Georgia. Cosponsored by the Atlanta Botanical Garden and the Georgia Perennial Plant Association. Information: (404) 876-5859.

♦ **Feb. 15. Seventh Annual Guilford Horticultural Society Symposium.** Guilford County Agricultural Center, Greensboro, North Carolina. Information: Tina Adams, (919) 275-5866 or Gay Smith, (919) 955-7450.

♦ **Feb. 15-16. Camellia Show.** Atlanta Botanical Garden, Atlanta, Georgia. Sponsored by the North Georgia Camellia Society. Information: (404) 876-5859.

♦ **Feb. 20-23. Ikebana Exhibit.** Selby Botanical Gardens, Sarasota, Florida. Presented by the Sarasota Chapter of Ikebana International. Information: Marie Selby Botanical Gardens, 811 South Palm Avenue, Sarasota, FL 34236, (813) 366-5731.

♦ **Feb. 23-27. Third Cloister Garden Series.** Cloister on Sea Island, Georgia. Speakers include Frederick McGourty, Mary Ann McGourty, and Fred C. Galle. Information: Mrs. Irene Butler, Special Programs Director, The Cloister, Sea Island, GA 31561, (800) 732-4752.

♦ **Feb. 28-Mar. 1. The 17th Annual African Violet Society of America Show.** "Violets in the Sunshine State." Eastlake Square Mall, Tampa, Florida. Information: Joanne Martinez, 809 Taray DeAvila, Tampa, FL 33613, (813) 963-7424.

♦ **Mar. 6-8. The 47th Miami International Orchid Show.** "A Cascade of Orchids/Una Cascada de Orquideas." Coconut Grove Convention Center, Miami, Florida. Information: South Florida Orchid Society, 6940 S.W. 111 Place, Miami, FL 33173, (305) 274-3741.

♦ **Mar. 10-11. Eighth Annual Davidson Horticultural Symposium.** "The Common Bond: Back to Roots." Davidson College, Davidson, North Carolina. Information: Davidson Horticultural Symposium, P.O. Box 1145, Davidson, NC 28036, (704) 892-5266 (Nan Hubbard) or (704) 892-8285 (Virginia Minter).

Southwest

♦ **Feb. 5-7. American Sod Producers Association Midwinter Conference and Exposition.** Bally's Casino and Resort, Las Vegas, Nevada. Information: American Sod Producers Association, 1855-A Hicks Road, Rolling Meadows, IL 60008, (708) 705-9898, Fax (708) 705-8347.

♦ **Feb. 18-21. The 23rd Annual Erosion Control Conference and Trade Exposition.** Reno, Nevada. Information: Ben Northcutt, Executive Director, International Erosion Control Association, P.O. Box 774904, Steamboat Springs, CO 80477, (303) 879-3010, Fax (303) 879-8563.

West Coast

♦ **Jan. 2. Garden Talk.** "Xerophytes for Neophytes—or, Cacti for Beginners." Huntington Botanical Gardens, San Marino, California. Talk by Joe Clements, desert garden curator. Information: (818) 405-2282.

♦ **Jan. 5. Rose Pruning.** South Coast Botanic Garden, Palos Verdes Peninsula, California. Demonstration by the South Coast Rose Society. Information: (213) 544-6815.

♦ **Jan. 14-June 1. Florence Yoch Landscape Design Exhibition.** "Personal Edens: The Gardens and Film Sets of Florence Yoch, 1890-1972." Huntington Botanical Gardens, San Marino, California. Information: (818) 405-2141.

♦ **Jan. 19. Azalea and Camellia Seminar.** Descanso Gardens, La Canada Flintridge, California. Sponsored by the Descanso Guild. Information: (818) 790-5414.

♦ **Jan. 25-26. Camellia Show.** South Coast Botanic Garden, Palos Verdes Peninsula, California. Display by the South Coast Camellia Society. Information: (213) 544-6815.

♦ **Jan. 26-27. The 13th Annual Bonsai Show.** "Winter Silhouettes." Los Angeles State and County Arboretum, Arcadia, California. Sponsored by the Baikoen Kenkyukai Society and the Aiseki Kai Club. Information: (818) 821-3222.

♦ **Feb. 6. Garden Talk.** "Cymbidiums." The Huntington, San Marino, California. Talk by James Folsom, director of the Huntington Botanical Gardens. Information: (818) 405-2282.

♦ **Feb. 20-27. Garden Tour of Hawaii.** Oahu and Kauai, Hawaii. Tour guide is Dave Stockdale, coordinator of the University of Washington's Center for Urban Horticulture and Scot Medbury, center alumnus and horticulturist with the Honolulu Botanical Gardens. Information: Center for Urban Horticulture, (206) 685-8033.

♦ **Mar. 5. Garden Talk.** "The Secret of Great Gardens." Huntington Botanical Gardens, San Marino, California. Discussion by landscape architect Graham Stanley. Information: (818) 405-2282.

♦ **Mar. 7-22. The 14th Annual Tulipmania Event.** Pier 39, San Francisco, California. Information: (415) 391-0850.

♦ **Mar. 7-May 31. Wildflower Walks.** Rancho Santa Ana Botanic Garden, Claremont, California. Information: (714) 625-8767.

International

♦ **Mar. 4-8. The 37th Flower Show of the Garden Club of Toronto.** "Gateway to Spring." Civic Garden Centre, Toronto, Canada. Information: Judy Dingle, (416) 482-2759.

1992 Flower Shows

♦ **Feb. 6-9. Northwest Flower and Garden Show.** Washington State Convention and Trade Center, Seattle, Washington. Information: Northwest Flower and Garden Show, Show Headquarters, 1515 N.W. 51st, Seattle, WA 98107, (206) 789-5333, Fax (206) 784-5545.

♦ **Feb. 21-23. Maymont Flower and Garden Show.** "A Midwinter's Dream." Richmond Centre, Richmond, Virginia. Information: (804) 358-7166.

♦ **Feb. 22-Mar. 1. New Jersey Flower and Garden Show.** Garden State Convention and Exhibit Center, Somerset, New Jersey. Information: (908) 560-9020 or (609) 799-4949.

♦ **Mar. 4-8. Atlanta Flower Show.** "Sweet Land of Liberty: Presidential Pathways." Atlanta Apparel Mart/INFORUM, Atlanta, Georgia. Information: Carole Carley, (404) 220-2115.

♦ **Mar. 4-8. Washington Flower and Garden Show.** Washington Convention Center, 900 Ninth Street N.W., Washington, D.C. Information: TJS Productions, 7668B Fullerton Road, Springfield, VA 22153, (703) 569-7141.

♦ **Mar. 8-15. Philadelphia Flower Show.** "Horizons for Discovery." Philadelphia Civic Center, Philadelphia, Pennsylvania. Information: Pennsylvania Horticultural Society, 325 Walnut Street, Philadelphia, PA 19106-2777.

♦ **Mar. 12-15. The 25th Annual Lawn, Flower, and Garden Show of Wichita, Kansas.** "The World is Your Garden." Century II, Wichita, Kansas. Information: (316) 721-8740.

♦ **Mar. 14-22. New England Spring Flower Show.** "Rediscover the Americas." Bayside Exposition Center, Boston, Massachusetts. Information: (617) 536-9280.

♦ **Mar. 14-22. New York Flower Show.** "Discovery '92." Pier 92, 55th Street, New York City. Information: New York Flower Show, 128 West 58th Street, New York, NY 10019, (212) 757-0915, Fax (212) 246-1207.

♦ **Apr. 8-12. Seventh San Francisco Landscape Garden Show.** "Park Place." Fort Mason Center, San Francisco, California. Information: Janet Taber-Coppola, (415) 750-5105.

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The American Horticultural Society is often asked to refer individuals for horticultural positions around the country. As a service to our members, both jobseekers and employers, we would be very glad to receive résumés and cover letters of individuals seeking job changes

and employers seeking candidates. All responsibility for checking references and determining the appropriateness of both position and candidate rests with the individuals. Inquiries and informational materials should be sent to: Horticultural Employment, American Horticultural Society, 7931 East Boulevard Dr., Alexandria, VA 22308.

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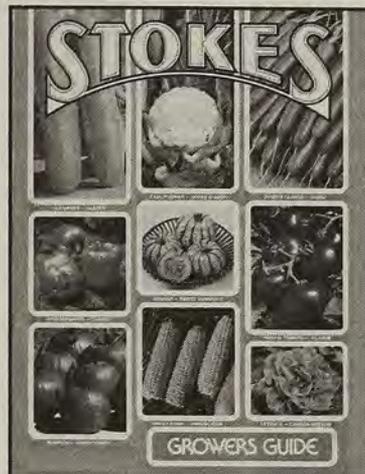
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Members' Forum

Healthy Herbs

Congratulations on your latest News Edition. As a service provider to the scientific community and a member of the Herb Society of America, I enjoy a healthy dose of skepticism with my everyday gardening and plant study activities. We always attempt to speak from our most ethical selves when we share our experiences with friends and neighbors; i.e., this is the soil recipe I have used successfully for pelargoniums, or this has worked for me when growing Mediterranean herbs in pots on my south-facing deck. And when I speak of my medicinal plant use, I feel certain of myself when I say, "I split an aloe leaf and wore it taped on those open blisters on my heels after that 18-mile hike in the Pennsylvania highlands. . . It's the only way I could get to sleep; even the air against the wounds produced excruciating pain up both legs. They were completely healed within a week."

Your November issue is a timely contribution to bridging the gap between past and future, between the herbalist and the medical researcher. For many reasons now we are desperate to find some common ground and it can be an intelligent and exciting process to reconnect many more of us to the ways of Planet Earth. I am thrilled and invigorated about being a member of the

American Horticultural Society. I laud your choice of author Steven Foster.

Pat Kenny
Silver Spring, Maryland

Lecture Tapes Wanted

The September issue describes the Society's fall lecture series at River Farm. Have you ever considered taping lectures like these and offering audiotapes for sale? Surely there are a lot of members like me, scattered around the country, who cannot attend the lectures in person but who would be grateful for the chance to buy a tape of some of them.

Molly Hackett
Victor, Montana

We have offered such tapes in the past, notably at Annual Meetings, but the demand for them did not seem to justify the trouble and expense of taping the lectures. If we did receive more letters like yours, we would certainly be willing to try again.

Contest Winner

Patricia Posey of Toledo, Ohio, a long-time AHS member who shared a photo of her garden in the letters column of the February 1991 *American Horticulturist* magazine, won first prize this summer in a local television

station's amateur flower garden contest. As a result her garden merited a visit by Bob Thomson, host of the PBS series, "Victory Garden." Thomson has recently retired from the show to promote the AmeriFlora '92 flower exhibition in Columbus, Ohio, and various commercial products.

Of Thieves and Physicians

Your November cover illustration shows a horticultural version of the staff of Aesculapius, the Greco-Roman god of medicine. But it doesn't. It shows the staff of Mercury, the god, among other things, of rogues and thieves.

The mistake—two twined serpents instead of one—is an old one. It first appeared around 1912 as the symbol of the Army Medical Corps.

Russell Williams, M.D.
Monterey, California

We checked with the American Medical Association on this one. A spokesman said that although the AMA uses Aesculapius for its own symbol, Mercury's staff—the caduceus—has long been used as a symbol for the medical profession, and they do not consider its use incorrect. However, given the background of the two symbols, we agree with the AMA staffer's comment that Aesculapius is "more pleasant."



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