Versatile Ground Covers

Pachysandra and ajuga unify the lines of a home landscape (left), while a combination of ajuga, yew, and evergreen euonymus softens and stabilizes the look of a set of stone garden steps (right).

Long considered the perfect solution for areas where turf is difficult to establish, ground covers have much to offer in their own right, especially when the choice is expanded to include more than just spreading evergreen plants under one foot tall (though there are some excellent plants that fall in this category). Ground covers can unify a landscape, soften a visual effect while other, slower-growing plantings are becoming established, provide seasonal interest, save mowing time, prevent erosion, and tie together a wide variety of other plant shapes, textures, and colors. Their versatility is mitigated by initial costs, which can be high if you have a large area to cover, and by a labor-intensive period while the ground cover is being planted and becoming established, but ground covers will eventually provide a beautiful, low-maintenance addition to most landscape designs.

The ideal ground cover, according to Gary Koller, supervisor of the Living Collections at The Arnold Arboretum of Harvard University, is “dense, aggressive, and persistent over time.” A plant’s usefulness as a ground cover is usually a product of its horizontal growth habit, accomplished by the plant’s sending out suckers or underground rhizomes, or sometimes by the plant’s low branching habit. Many ground covers also flourish in partial to complete shade, in contrast to turf, which often will not grow well in shade. And quite a few plants not usually considered to be ground covers, such as ferns, ornamental grasses, and many perennial plants, make excellent ground covers as well for selected areas, even when they don’t fit the usual pattern of being low, spreading, and evergreen. With
an imaginative approach, the list of ground covers expands to include an exciting array of possibilities in addition to the usual reliable standbys.

**Planting Time**

Careful soil preparation is essential before planting ground covers, just as it is when establishing a fine lawn. Often the first step is the elimination of noxious weeds or the elimination of turf, which can be either physically lifted or, in the case of very large areas, eliminated with an herbicide. Depending on weather conditions it may take up to two weeks for the area to brown off after the application of an herbicide; it will then be ready to be prepared (by rototilling) and planted. Add six to eight inches of organic matter and a balanced fertilizer if necessary. You may need to add extra phosphorus or lime, depending on your soil's composition and your plants' needs. Once established, ground covers will spend many years in the same location, making it well worth the effort to spend some time in the beginning preparing the soil and providing for additional care and irrigation needs for the period while the plants are settling in.

Once the area to be planted is cleared, lay plants out over the area in pots, moving them around in various configurations until you arrive at a pleasing design. If you are planting bare-root plants, don't lay them out in large amounts — they will begin to dry out. Staggered rows usually look best and provide the most effective protection against erosion. The best time to plant depends on your location: where winters are cold, plant in spring to allow plants to settle in over a two-year growing season; where winters are mild, plant in fall. The long, cool growing season will help plants get established before the onset of summer heat. It is a good idea to mulch your plants, since they will need a moist soil to enable runners or stems growing on the surface to take root. Mulching also helps keep down weeds.

### Different ground covers can be used together for interesting effects: combine evergreens with deciduous ground covers, or woody and herbaceous types, taking care not to use an overly aggressive plant.

A Wealth of Possibilities

One of the sturdiest, most reliable, and most-used evergreen ground covers is also one of the best for very large areas. Ivies (*Hedera* spp.) beautifully fulfill some of the most basic requirements of a ground cover: they spread rapidly, require little maintenance, and thrive in both sun and shade. An undulating carpet of ivy can serve to unify a varied selection of plants that would otherwise appear chaotic. Ivies should normally be planted in well-prepared soil on about a 12-inch center, closer if the area slopes steeply. Careful mulching and frequent watering during the first season or two will usually result in a completely-covered area within two growing seasons. *Hedera helix* 'Baltica' is a popular and handsome choice, with dark-green, triangular-shaped leaves and prominent white veins; *H. helix* 'Buttercup', which was awarded the Pennsylvania Horticultural Society's Styer Award of Garden Merit for outstanding new plants earlier this year, provides exciting color interest with chartreuse leaves that change to butter-yellow and then to dark green as the plant matures. 'Buttercup' has been successfully grown in full sun; its color is less prominent when it is planted in shade.

**Creeping myrtle or periwinkle (Vinca minor)** is another favored standby that performs well in shady areas. The plant is evergreen with long, dark green leaves and a trailing habit; small, light-blue flowers appear in the spring. Mary Hirshfeld, curator at Cornell Plantations in Ithaca,
Epimedium spots; its unusual leaf texture and uniform species. Pachysandra will thrive in deep element that can either stand alone or unify areas, though it is not as vigorous as the especially effective in brightening shady areas, though it is not as vigorous as the other plant groupings. This plant, which truly lives up to its low-maintenance designation, produces a thick mat whose glossy-green leaves contrast with white flowers in spring. The plants will tend to mat rather than rise above the leaves. Epimediums are easily increased by divisions in spring or fall. 

**Galium odoratum** (syn. *Asperula odorata*), or sweet woodruff, is becoming more popular, according to Oslund, for its unique leaf arrangement and texture; it thrives in shady gardens with moist soil. He also recommends bishop's weed (*Aegopodium podagraria*) as a beautiful plant, though it tends to be invasive. If you have a tough site, this is the one to choose—it will grow anywhere. A strong caution is in order with this plant—it should only be used in situations with poor, dry soil and never in a site where it might get into other parts of your garden; neither should it be used in a design with other ground covers. It is highly invasive and very difficult to get rid of once it is established.

European ginger (*Asarum europaeum*) is another effective ground cover, according to Ruh, with very shiny green leaves that form a glistening carpet. The plant is shade-tolerant and self-seeds very readily.

**A Host of Hostas**

*Hosta* makes an impressive ground cover. Of the many excellent hostas Ruh singles out the cultivars 'Royal Standard' (a medium-sized all-green-leaved hosta), 'Krossa Regal' (a blue-leaved type), 'Antioch' (a variegated hosta with green leaves and gold borders), 'Gold Standard' (green-edged with a yellow-to-gold center), 'Sugar and Cream' (variegated green leaves with white borders), 'Honeybells' (a tall, fast-growing, fragrant, green-leaved hosta), and 'Blue Cadet' (with small, heavily-textured blue leaves). He also recommends the 'Tardiana group,' hybrids of *H. tardiflora* and *H. sieboldiana*; a group of medium and small blue-leaved hostas.

Ruh describes hostas as heavy feeders and recommends working one to one and a half inches of compost into the soil in the spring—he uses leaf mold, peat moss, or aged horse or sheep manure. In fall Ruh gives the plants a dose of combined rock phosphate and glauconite (one tablespoon of each per plant); he waters the plants in summer with a seaweed fertilizer. He avoids chemical fertilizers, which he says tend to burn hostas. Though hostas rarely need to be divided, for increase they do divide easily in the spring.

**A Taste of the Unusual**

Kurt Bluemel of Kurt Bluemel, Inc., Baldwin, Maryland, recommends the small shrub *Sarcococca hookerana* var. *humilis*, or sweet box, as an underused but excellent evergreen ground cover for deep shade. Sweet box, which spreads by rhizomes, is virtually maintenance-free, according to Bluemel, and its abundant white late-winter blooms and sweet scent are one of the first ambassadors of spring. Other suggestions are *Lamium galeobdolon*, or yellow archangel, *L. galeobdolon* 'Hermans Pride', and *Lamium White Nancy' and 'Beacon Silver', all of which will perform well in deep shade. For a sunny location try *Ceratostigma plumbaginoides*, a semi-prostrate plant with deep blue flowers and reddish autumn foliage; or try *Hypericum calycinum*, an evergreen subshrub that performs well in sandy soils. Bluemel recommends this plant for problem areas.

Bluemel suggests ornamental grasses as excellent ground covers providing subtle and interesting effects. For wet, problem areas
he suggests Carex flacca, or blue sedge; he recommends the extremely hardy Carex morrowii 'Variegata' in plantings with ferns. Luzula nivea, the snowy wood rush, and Luzula sylvatica, the greater wood rush, adapt well to shade. Pennisetum setaceum is a good performer in a sunny location. And for a dry, full-sun location, the chartreuse September-blooming Ceszorya autumnalis is a lovely and effective alternative.

Going Native
Koller provides a list of native American ground covers: Xanthorhiza simplicissima, a taller plant (up to two feet), has a less managed look than most ground covers and is tolerant of wet, dry, sunny, or shady conditions; Asarum canadensis, with attractive, heart-shaped leaves, works well in dry shade and spreads rapidly. Polystichum acarbis, an 8- to 12-inch evergreen, withstands extreme shade or drought and produces a wonderful, dense, year-round mat that turns a nice bronze color in the fall. Dryopteris dilatata, the bearberry or kinnikinnick, sports red fruit and bronze foliage in winter. It grows in full sun to partial shade.

Ferns as Ground Covers
Judith Jones of Fancy Fronds Hardy Ferns in Seattle, Washington, tells us that Blechnum penna-marina, the alpine water or little hard fern, is a wonderful, compact evergreen creeper, six to eight inches tall, that prefers early morning and late afternoon sun in the Pacific Northwest, and light shade in general in the rest of the country. It makes an impenetrable mat of luscious, brownish-green fronds. Onoclea sensibilis, the sensitive or head fern, is a very rapid colonizer with beaded, fairylike wands that stay up all winter. It prefers most conditions. Jones cautions that most Onoclea is wild-collected, so it's important to ask the origin of plants before buying them. Athyrium filix-femina 'Pictum', the Japanese painted fern, is sturdy and will continue growing "until frost knocks it down." Polypodium vulgare holds beautifully all winter but in summer looks like "death warmed over," according to Jones.

She recommends maidenhair fern (Adiantum venustum) as a versatile choice that will adapt well in diverse areas of the country. Care should be taken to plant this fern very shallowly. Cystopteris fragilis, though it is not showy, is a very good deciduous plant, a graceful colonizer that is "fantastic for dark, shady corners that might get a little dry."

Jones cautions that many people mistakenly think ferns grow where nothing else will; i.e., in deep, dry shade with severe root competition. This isn't the case, and dry shade is particularly a problem for ferns. She recommends a minimum of three years' conscientious care while ferns are becoming established, with an annual light top dressing of compost or manure. For problem areas she suggests buying a good-quality ground cloth made of propylene or very high-quality plastic and topping it with eight inches of soil. This discourages weeds and prevents tree roots from coming through while it allows good drainage.

Ferns prefer an open and moisture-retentive soil. Jones incorporates pumice, chicken grit, or pea gravel to open it up, along with well-rotted manure or compost and peat moss. Residents of areas with very hot summers may have to take care to compensate for excess heat without creating overly wet conditions.

Combination Plantings
Ground covers can be combined with a host of other plants, yielding interesting and delightful effects. Bulbs are an excellent choice with ground covers, especially some of the autumn-flowering plants such as colchicums or fall-blooming crocuses; they can be planted at the same time as the ground cover plants. Other suggestions from Gary Koller are bleeding-heart, trillium, and Jack-in-the-pulpit. Different ground covers can also be used together for interesting effects: combine evergreens with deciduous ground covers, or woody and herbaceous types, taking care not to use an overly aggressive plant.

Ferns combine well with a wide variety of plants to form interesting ground cover combinations, according to Jones. Some possibilities are hostas, asilbes, primulas, ruellias, trilliums, dianthus, and anemones, which can even be worked under the ferns as they rise up and arch over gracefully. She points out that while people seem to be very concerned about heights when choosing a ground cover, some taller ferns, such as Dryopteris dilatata, provide a graceful, weeping structure with an almost skeletal effect that can lead the eye down through the planting.

Ground covers are enjoying a definite resurgence of interest, but their variety, versatility, and design potential are probably still undervalued by a large number of home gardeners who continue to see them as a stopgap solution for difficult sites. Though they can and do perform this function with admirable sturdiness and grace, their potential is far greater; it deserves to be maximized by imaginative gardeners who are exploring new horizons as well as solving garden "problems."

-Kathleen Y. Riley, Editor
Interested in something more than zinnias and asters for your cut flower garden? Whether you have a separate cutting garden or some space in your vegetable plot, or if you just enjoy having flowers for cutting throughout your landscape, consider trying something a bit different when planning next year’s garden. Always plant more than you think you will need, as—unlike tomatoes—too many flowers is never a problem. Flowers in your home, on the kitchen table, in the living room, or in the bedroom, are mood improvers, cheering you by bringing the outside in. As a gift, a home-grown bouquet is always appreciated, and unlike zucchini bread or a bottle of wine, lasts almost a week!

Trying something new is exciting, and not necessarily any more difficult than growing old standbys. The following list contains both annuals and perennials which are not commonly seen, though they are easy to cultivate and make long-lasting cut flowers. A small investment in plants or seeds can lead to armfuls of beautiful, unusual flowers for arranging or giving away.

Some Unusual Annuals for Cutting
- **Ammi majus** (white lace flower)—flat-topped clusters of white flowers similar to the common roadside Queen Anne’s lace.
- **Asclepius curassavica** (bloodflower)—umbels of milkweed-type flowers, each intricately shaped and colored both scarlet-red and orange.
- **Centaura moschata** (sweet sultan)—a frilly bachelor’s button on long stems; comes in shades of pink, purple, white, and yellow.
- **Chrysanthemum × spectabile** (hybrid daisy)—large daisies with white ray flowers and golden centers.
- **Emilia javanica** (tassel flower)—scarlet or yellow tassel-like flowers on tall wiry stems.
- **Iberis amara** (rocket candytuft)—fragrant snow-white flowers in conical clusters which elongate with age.
- **Salvia viridis**—grown for its leafy bracts in watercolor shades of pink, purple, and white with prominent veining.

Some Unusual Perennials for Cutting
- **Asparagus officinalis** var. *pseudoscaber*—dwarf version of the garden asparagus; provides delicate feathery foliage for cutting all season long.
- **Astrantia major** (masterwort)—delicate heads of flowers surrounded by a “collar” of bracts, making each bloom resemble a Victorian nosegay in shades of silvery white, pink, and rose.
- **Cephalaria gigantea**—a garden giant, to six feet, producing large creamy yellow scabiosa-type flowers with greenish centers.
- **Eryngium spp.** (sea holly)—all of the sea hollies have long-lasting, thistle-like flower heads in shades of gray, blue, or purple, often with a metallic luster.
- **Scabiosa ochroleuca**—great masses of primrose yellow flowers all summer and into fall.
- **Thalictrum speciosissimum** (meadow rue)—fluffy yellow flowers on tall plants; the glaucous blue-green foliage is useful for cutting throughout the growing season.
Crape Myrtles Sport Dazzling New Colors

Gardeners are advised to keep their eyes open for some glitzy new colors in crape myrtles in the coming seasons, largely as a result of work done by Agricultural Research Plant Breeder Donald Egolf.

Seventeen cultivars have been developed in the last several years by the U.S. National Arboretum, sporting new color variations as a bonus along with an increased resistance to powdery mildew, a disease that encrusts and kills the flowers and leaves of the South's most widely-cultivated summer-flowering tree.

The plants are hybrids bred from the common crape myrtle (Lagerstroemia indica), a southeast Asian species brought to America by European colonists, and a mildew-resistant Japanese species (L. fauriei). The first cross-breeding was done in 1962 at the Arboretum. The new flower colors include blue-reds, peach-blush reds, and shades of new pinks and purple lavenders—a richer and more diverse color palette than the basic red, white, pink, or lavender flowers of common crape myrtles.

Many of the new plants also boast “magnificent bark characteristics,” according to Egolf, which appear on some of the hybrids when they reach about five years old. As the bark peels from the trunks, sinuous, mottled patterns of brown, cinnamon, and tan emerge, taking the tree from the category of summer-flowering plant to a plant with year-round interest.

The hybrids range in size from dwarfs to 35-foot trees. They have better tolerance to cold weather than the common crape myrtles; in fact, according to Egolf, some hybrids at the National Arboretum withstand temperatures well below zero degrees Fahrenheit, although he still does not recommend crape myrtle north of Baltimore. “These new hybrids will do much better in the northern edge of the South,” says Egolf. The hybrids have been released to wholesale nurseries in 18 states for further propagation; three of the 17 cultivars have reached retail nurseries and garden centers.

Each cultivar has been given the name of a native American tribe in order to give the plants a distinctive American identity. Here are some of the new cultivars:

Lagerstroemia 'Biloxi', 'Miami', and 'Wichita', mildew-resistant small trees whose sinuous, mottled trunks begin peeling at about three to five years old. These cultivars flower profusely in early summer and continue to flower through September. 'Biloxi' has pale-pink flowers, orange-red to dark-red leaves in autumn, and a mottled gray-brown and dark-brown trunk. 'Miami' has red-purple flowers, orange to dark russet leaves in autumn, and a dark chestnut trunk color. 'Wichita' has light magenta to lavender flowers, russet to mahogany leaves in autumn, and a mottled dark-brown trunk.

Lagerstroemia 'Acomi', 'Hopi', 'Pecos', and 'Zuni', with densely branched mounds of finely textured leaves. They are suitable as container plants, foundation plants, or border hedges. 'Acomi' has pure white blossoms from late June to September and dark purple-red leaves in autumn. 'Hopi' is the most cold-hardy, withstanding temperatures of -24°F without winter injury. Flowers are clear pink; leaves are bright orange-red in autumn. 'Pecos' has pink flowers, maroon leaves in autumn, and peeling dark brown bark in winter. 'Zuni' has lavender flowers, with autumn leaves which turn orange-red to dark red.

Growing Tips

These growing hints are taken from The Lagerstroemia Handbook/Checklist by Donald Egolf and Anne O. Andrick:

Crape myrtle, which has a shallow, branched, fibrous root system, does not require special care and is best planted in late spring or early summer. It thrives in a warm, sunny location and will flower only sparsely in partial shade and not at all in heavy shade. The planting site should be well-drained, slightly elevated, and with a southern exposure to promote flowering and control mildew and avoid winter damage. The plant does not have exacting soil requirements and prefers a reasonably good soil of a heavy loam to clay texture, with a pH of 5.0-6.5. Nutrient requirements are minimal, though a light application of a 5-10-5 fertilizer in late spring might be indicated for larger plants or for those with poor soil. Choose an older plant if you live in a marginal hardness zone; to further ensure survival, use a mulch over the roots or wrap the trunks with straw, burlap, or bamboo matting. Provide periodic deep watering during dry periods. It is better to surface-water the area under the plant than to use sprinklers, which may lead to wet foliage and subsequent mildew problems. Take particular care to thoroughly soak recently transplanted plants when they are planted and to maintain the moisture content of the soil throughout the plant's first two seasons. Don’t water excessively in mid- to late-season, though—this may encourage vegetative growth and later winter injury of unhardened wood.

Pruning should be done from late autumn to spring. In areas where serious winter injury occurs, pruning is best delayed until late spring.
Experts from across the country share notes and knowledge on gardening issues affecting specific regions.

> Steve Cohan of Rancho Santa Ana Botanic Garden in Berkeley, California, reminds gardeners who plant California natives that these plants have special cultural requirements that may make them difficult to integrate into some of the subtropical landscaping designs common in California. Overwatering can be a problem with these plants, leading to root decay, and though they need some supplemental watering while they are getting established, they will do best without watering from June to October. Plant California natives in fall so they can benefit from winter rains; when planted in spring they tend to put out summer growth and suffer from insect problems. They don’t need much fertilizer; Cohan suggests a granular slow-release product. They like a well-drained, gritty soil. Two popular California natives that perform well: Cleothus and Arctostaphylos (manzanita).

> Kenneth Asplund of The Arboretum at Flagstaff in Flagstaff, Arizona, reminds mountain-area gardeners that August is the best planting time for trees and shrubs, especially in places where the weather is starting to get cooler. Difficult winters make it especially important to give root systems time to get as big as possible. Fall vegetable gardens should also go in during the first week in August.

> Bob Brackman of the Dallas Botanical Garden in Dallas, Texas, encourages Texas gardeners to consider the use of plant materials not normally used as bedding plants. “Tropicals work beautifully as summer bedding plants,” suggests Brackman. He recommends Hibiscus, Homelita, “super for this area and very underused,” and Mandevilla, “which is beautiful in summer and thrives in hot weather.” These can still be planted in July.

> Karen Smith of the Holden Arboretum in Mentor, Ohio, recommends that herbs be harvested before they begin to get overgrown in August. Midsummer is also a good time to sow seeds of perennials indoors in flats or in containers; put them outdoors in shade and overwinter in a cold frame. Divide and transplant oriental poppies and iris (check iris for borer infestation). Though Ohio tends to be wet in spring it can get very dry in summer, Smith recommends that lawns and newly-planted shrubs be given at least one inch of water a week (measure with a garden hose). They don’t need much fertilizer; Smith suggests a balanced granular fertilizer. They like a well-drained, gritty soil.

> Chris Pfeiffer of the Washington Park Arboretum at the University of Washington in Seattle reminds Pacific Northwest gardeners that plants native to this region tend to be tolerant of dry summer climates. She describes the Pacific Northwest as a modified Mediterranean climate, with most rainfall occurring in winter when plant evapo-transpiration levels are lowest; she recommends that gardeners concentrate on plants that are adapted to this, and suggests that they will have to compensate with extra summer irrigation when they are using plants native to other regions. This is a conservation issue as well as one which affects horticulture: the over-dependence on plants that require compensatory summer irrigation may put a strain on the resources of the region in especially dry summers. Plants which adapt well to this climate include: Arctostaphylos wou-ursi (kinnikinnik), Arbutus unedo (strawberry tree), Prunus laurocerasus (cherry laurel), Cotinus coggyria (smokebush), and Myrica californica (California bayberry).
Gardener's Dateline


- July 17-20. Third International Herb Growing and Marketing Conference, Hyatt Regency Hotel and Commonwealth Convention Center, Louisville, Kentucky. Information: Tom Robertson, Room 116 Stewart Center, Purdue University, West Lafayette, IN 47907, (317) 494-7220.


The Great Escape: AHS Travel for 1988-89

October 2-8, 1988
New England Autumn Display
Visit the great houses, gardens, and museums of New England as we follow the breathtaking foliage trail from Stockbridge, Massachusetts to Shelburne, Vermont.
Serendipity Tours, Three Channing Circle, Cambridge, MA 02138 (617) 354-1789

October 15-21, 1988
Gardens of the Chesapeake
Join us for a spectacular fall cruise to see the gardens of the Chesapeake aboard the M.V. Nantucket Clipper.
Leonard Haertter Travel Company, 7922 Bonhomme Avenue, St. Louis, MO 63105 (800) 942-6666

October 20-November 6, 1988
Fall Into Spring
This trip to the lovely island nation of New Zealand will feature a wildflower walk on the slopes of Mt. Cook.
Passages Unlimited, 14 Lakeside Office Park, Wakefield, MA 01880 (617) 246-3575

January 21-28, 1989
Gardens of the Leeward Islands of the Caribbean
This exciting garden cruise adventure takes us to the tranquil islands of the Caribbean Leeward Chain. Visit tropical rain forests, botanic gardens, and private estates never open to the public, as we stop at such secluded islands as Montserrat, St. Kitts, St. Martin, and Antigua.
Leonard Haertter Travel Company, 7922 Bonhomme Avenue, St. Louis, MO 63105 (800) 942-6666

March 22-29, 1989
Pacific Coast Gardens
Travel from San Diego to San Francisco on this horticultural visit to botanical and private gardens of California, with excursions to the Hearst castle and the San Miguel Mission.
For further information contact Liz Smith, AHS Special Events, (703) 768-6700.

May 2-17, 1989
The Gardens of Coastal Iberia
Ports of call on this cruise from Lisbon, Portugal, to Folkstone, England, will include Guernsey, the Channel Islands, and New Haven. Experience a most unique program of sightseeing ashore that will include exceptional public and private gardens.
Leonard Haertter Travel Company, 7922 Bonhomme Avenue, St. Louis, MO 63105 (800) 942-6666

June 2-5, 1989
Seaside Gardens of Rhode Island
Tour members will visit historic homes and gardens in Providence and the secret gardens of Newport, as well as Blithewold Arboretum and other outstanding gardens of Rhode Island.
Triple A Travel, Polo Center, 700 Aquidneck Avenue, Middletown, RI 02840 (401) 847-5833

August 1-21, 1989
U.S.S.R. and the Caucasus
Highlights of this special tour to the Soviet Union will include the botanical gardens of Moscow, Kiev, and Leningrad, as well as the alpine plants of the Teberda Nature Preserve on the northern slopes of the Caucasus. The group will be accompanied by a botanical expert familiar with the flora of the U.S.S.R.
Coming Soon, Box 431, Albany, NY 12201 (518) 463-2160

October 7-14, 1989
Cruising the Hudson River
Timed to coincide with spectacular fall foliage, this cruise will feature some of the most important homes and gardens along the Hudson River—America's Rhine—all the way to Albany. Included will be private entertainment and visits to Wave Hill, the New York Botanical Garden, and Sleepy Hollow Restorations.
Bellinger Davis Company, Inc., 150 East 58th Street, New York, NY 10155 (212) 759-1590
Most container plant failure—and death—comes from over-watering. The drowning roots can't absorb water or the nutrients they need. The plant suffocates. But when you use Oxygen Plus, you deliver vital oxygen and essential nutrients right to the roots. No other plant food, no emulsion, no spike, no ordinary fertilizer can match the performance of Oxygen Plus.

Proven in university tests, and praised by professional horticulturists and happy gardeners all over the country, Oxygen Plus helps your plants look better, grow better and thrive.

Oxygen Plus. It’s the breath of life for your plants.

Look for Oxygen Plus at your quality lawn and garden retailer, wherever garden products are sold—or send for your FREE brochure: The Truth About Plant Foods.

PLANT RESEARCH LABORATORIES
P.O. Box 3976
Laguna Hills, CA 92654
1-800-221-2589
In California: (714) 721-0153

Plants Wanted

Members who are growing or who have access to any of the plants or seeds listed below are invited to help fellow members locate seeds, plants, or cuttings. Those who can provide such information should write directly to the persons listed below.

- Pyxidanthera barbulata (pyxie or flowering moss). Creeping evergreen shrublet, native to sandy pine barrens from New Jersey to South Carolina. Also,
- Polygonaella polygama (October flower). Perennial herb with jointed stems, closely related to Polygonum, native to southeastern United States. George K. McLeccan, Route 3, Box 702, Gloucester, VA 23601.
- Parnia obovata (goon). Perennial herb, flowers rose to white (only the white form commonly in cultivation), golden stamens around a crimson center, blue seeds, native to China and Japan. Rosemary C. Mancuso, P.O. Box 411, 162 Essex Road, Williston, VT 05495.

AARS Designates Two Miniatures

For the first time in the 50-year history of the All-America Rose Selections, Inc., two miniatures are among the outstanding roses selected to receive the AARS designation for 1989. This is good news for the increasing number of home gardeners who want hearty flowering plants but have space limitations, since these miniature roses are particularly suited to container growing on balconies, patios, and window ledges.

The two miniature rose cultivars are ‘Debut’ and ‘New Beginning’. ‘Debut’ is a showy red-blend miniature rose featuring rich scarlet buds which open to double blooms of 20 large petals. The blooms, which may reach two inches across, are deep red at the outer edge, softening to creamy white and almost yellow at the petal base. ‘Debut’ was introduced by the Conard-Pyle Company of West Grove, Pennsylvania, and was hybridized by Jacques Mouchette of Selection Meilland, Antibes, France.

‘New Beginning’ is a colorful orange-red and yellow blend that blooms profusely through the summer and into late fall. It exhibits excellent vigor and disease resistance. ‘New Beginning’ was developed by Harmon Saville, president of Nor’East Miniature Roses, Inc., of Rowley, Massachusetts.

In addition to their container-growing capacities, both miniature roses are described as excellent for overall garden decoration, including borders and specimen plantings. Their long, continuous blooming cycles make them particularly attractive for home gardeners.

Elliottia racemosa Now Available

The superb Elliottia racemosa, or Georgia plum, long unavailable because of difficulties in propagation and germination and very sparse seed production, is now becoming more available thanks to experiments conducted by researchers at The Arnold Arboretum of Harvard University. This rare Georgia native is a deciduous ericaceous shrub that reaches 10 to 35 feet and is hardy to -10°F; it blooms for six weeks, from mid-June through July in the Southeast and later in the North. The plant bears slightly fragrant pure white flowers in upright racemes at the branch tips; it requires humus-rich, well drained, sandy, acid soil and does best in full sun to light shade.

Discovered in 1773 by William Bartram and finally grown from wild-collected seed by Alfred J. Fordham of The Arnold Arboretum in 1969, this choice native is now offered by some commercial nurseries.
The largest attendance in recent years marked the American Horticultural Society's 1988 Annual Meeting, held April 14-16 in Atlanta, Georgia. Members and friends from across the country and around the world gathered to listen, learn, and exchange ideas with horticultural experts and, most important, with others of similar interests and background. Enthusiasm ran high as this very cohesive group of avid gardeners from varied walks of life celebrated and enjoyed a common passion: plants. The 1988 meeting truly offered something for everyone, from the advanced horticulturist to the home gardener.

The meeting was shorter than it has been in previous years to allow members to attend without leaving their gardens for too long at one of the busiest times of the year; sessions were shortened as well, to permit a more comprehensive selection of topics. Attendees were especially appreciative of the variety of choice in subject matter and of the fact that some sessions were held one after another in the same room whenever possible. Sessions were not highly technical but were designed to be lively and interesting and to stimulate questions and point out new directions for further exploration.

The Awards Banquet was a beautiful meal, elegantly presented; flower arrangements were designed and executed by the Federation of Garden Clubs, Rome, Georgia, under the direction of Mrs. Grace Brinson. The Georgia Garden Club, Inc., under the direction of Mrs. Deen Day Smith, created the lovely floral designs for the Gone With the Wind theme dinner.

This was one of the busiest meetings ever, with a wide variety of tours and visits to appeal to every gardening taste. Visitors toured a formal courtyard garden, a garden featuring an eclectic selection of styles, a country estate, a city garden featuring an elegant combination of woodland gardens and formal terraces, and an herb garden laid out in traditional beds.

The AHS Annual Meeting presents a priceless opportunity for gardeners to get together and take advantage on one of the most valuable benefits of Society membership: the chance to share ideas, information, and fun with other gardeners. The 1989 Annual Meeting will be held in July in Minneapolis, Minnesota. See you there!

May Issue Missing?
Members who failed to receive their May issue of American Horticulturist News Edition are asked to let us know so that we can send them a replacement copy. Apparently there was some problem with labels falling off the newsletters between the Post Office and final destination; several copies were returned to us here at AHS. Write to us at: American Horticultural Society, 7931 East Boulevard Drive, Alexandria, VA 22308.

FALL INTO SPRING
October 20 - November 6, 1988

Forest primeval and living volcanos—cosmopolitan cities and peaceful farmland—this is New Zealand. There is no place on earth where so many different landscapes and sensations are contained in so relatively small an area.

This October the American Horticultural Society invites you to venture forth to the far reaches of the South Pacific to "Fall Into Spring" on both the North and South Islands of New Zealand and to see what man, as gardener, has contributed to his overwhelmingly beautiful natural surroundings.

In leading his fourth AHS tour, Dick Hutton will have as his local counterpart Mary Burnard, a native of Wellington, author of "Garden Heritage of New Zealand," garden consultant and professional photographer. With her assistance we have arranged visits to many private gardens rarely accessible to the public. We have also timed this trip to take full advantage of the extraordinary profusion of rhododendrons and azaleas for which New Zealand is justly famous.

Please join us on this exciting and surely-to-be-unforgettable journey as we Fall Into Spring.

---

May Issue Missing?
Members who failed to receive their May issue of American Horticulturist News Edition are asked to let us know so that we can send them a replacement copy. Apparently there was some problem with labels falling off the newsletters between the Post Office and final destination; several copies were returned to us here at AHS. Write to us at: American Horticultural Society, 7931 East Boulevard Drive, Alexandria, VA 22308.

---

FALL INTO SPRING
October 20 - November 6, 1988

Forest primeval and living volcanos—cosmopolitan cities and peaceful farmland—this is New Zealand. There is no place on earth where so many different landscapes and sensations are contained in so relatively small an area.

This October the American Horticultural Society invites you to venture forth to the far reaches of the South Pacific to "Fall Into Spring" on both the North and South Islands of New Zealand and to see what man, as gardener, has contributed to his overwhelmingly beautiful natural surroundings.

In leading his fourth AHS tour, Dick Hutton will have as his local counterpart Mary Burnard, a native of Wellington, author of "Garden Heritage of New Zealand," garden consultant and professional photographer. With her assistance we have arranged visits to many private gardens rarely accessible to the public. We have also timed this trip to take full advantage of the extraordinary profusion of rhododendrons and azaleas for which New Zealand is justly famous.

Please join us on this exciting and surely-to-be-unforgettable journey as we Fall Into Spring.

---

May Issue Missing?
Members who failed to receive their May issue of American Horticulturist News Edition are asked to let us know so that we can send them a replacement copy. Apparently there was some problem with labels falling off the newsletters between the Post Office and final destination; several copies were returned to us here at AHS. Write to us at: American Horticultural Society, 7931 East Boulevard Drive, Alexandria, VA 22308.

---

FALL INTO SPRING
October 20 - November 6, 1988

Forest primeval and living volcanos—cosmopolitan cities and peaceful farmland—this is New Zealand. There is no place on earth where so many different landscapes and sensations are contained in so relatively small an area.

This October the American Horticultural Society invites you to venture forth to the far reaches of the South Pacific to "Fall Into Spring" on both the North and South Islands of New Zealand and to see what man, as gardener, has contributed to his overwhelmingly beautiful natural surroundings.

In leading his fourth AHS tour, Dick Hutton will have as his local counterpart Mary Burnard, a native of Wellington, author of "Garden Heritage of New Zealand," garden consultant and professional photographer. With her assistance we have arranged visits to many private gardens rarely accessible to the public. We have also timed this trip to take full advantage of the extraordinary profusion of rhododendrons and azaleas for which New Zealand is justly famous.

Please join us on this exciting and surely-to-be-unforgettable journey as we Fall Into Spring.

---

May Issue Missing?
Members who failed to receive their May issue of American Horticulturist News Edition are asked to let us know so that we can send them a replacement copy. Apparently there was some problem with labels falling off the newsletters between the Post Office and final destination; several copies were returned to us here at AHS. Write to us at: American Horticultural Society, 7931 East Boulevard Drive, Alexandria, VA 22308.

---

FALL INTO SPRING
October 20 - November 6, 1988

Forest primeval and living volcanos—cosmopolitan cities and peaceful farmland—this is New Zealand. There is no place on earth where so many different landscapes and sensations are contained in so relatively small an area.

This October the American Horticultural Society invites you to venture forth to the far reaches of the South Pacific to "Fall Into Spring" on both the North and South Islands of New Zealand and to see what man, as gardener, has contributed to his overwhelmingly beautiful natural surroundings.

In leading his fourth AHS tour, Dick Hutton will have as his local counterpart Mary Burnard, a native of Wellington, author of "Garden Heritage of New Zealand," garden consultant and professional photographer. With her assistance we have arranged visits to many private gardens rarely accessible to the public. We have also timed this trip to take full advantage of the extraordinary profusion of rhododendrons and azaleas for which New Zealand is justly famous.

Please join us on this exciting and surely-to-be-unforgettable journey as we Fall Into Spring.

---

May Issue Missing?
Members who failed to receive their May issue of American Horticulturist News Edition are asked to let us know so that we can send them a replacement copy. Apparently there was some problem with labels falling off the newsletters between the Post Office and final destination; several copies were returned to us here at AHS. Write to us at: American Horticultural Society, 7931 East Boulevard Drive, Alexandria, VA 22308.
Our Gardener’s Information Service mailbox contains a fund of information to be shared with members.

Q: I was given a Streptocarpus as a gift and am very impressed by its fuss-free flowering. Isn’t streptocarpus related to the African violet? Can it be propagated in a similar manner?

A: African Violets and streptocarpus (sometimes called cape primrose) are related; both are members of the Gesneriaceae. The ability of an African violet to grow a new plant from a severed leaf, without a greenhouse or mist bench, has sparked many a gardener’s interest in propagation. Streptocarpus has similar regenerative properties, but due to differences in leaf morphology, leaf cuttings rather than leaf petiole cuttings is the preferred method. Two types of leaf cuttings will work, one taking advantage of the prominent midrib of a streptocarpus leaf, the other using lateral veins. For midrib cuttings, slice the leaf widthwise at right angles to the midrib in sections not more than two inches long. For lateral vein cuttings, slice the leaf lengthwise into two pieces, removing the midrib completely and exposing the cut ends of lateral veins.

The procedure for rooting both types of cuttings is the same. Insert cuttings (cut edge side down) into a sterile, moist rooting medium, just deep enough to hold them erect. Use clean, sterilized containers and tools, as sanitary conditions will avoid root rot. Spray with fungicide for extra insurance. Place containers of cuttings in a warm, humid environment. Keep the medium moist but not wet, and place in bright but indirect light. A propagation box would be useful to maintain ideal conditions, or a makeshift alternative such as a plastic pot covered with a clear plastic bag. In two to three months, new plantlets should be ready to pot on.

Q: I have a snowberry on order and read somewhere that it needed others of its kind to produce berries. How can I know if I need more than one shrub in order to get fruit? Shouldn’t catalogs tell you if a plant is dioecious?

A: Yes, catalogs should mention this, and most reputable nurseries will inform you if a shrub is dioecious (has male, pollen-bearing flowers and female, fruit-bearing flowers on separate plants) and needs a male pollinator for reliable fruit set. However, this is not always the case. The best defense is knowledge—if you know which flowers and shrubs exhibit this trait, you can avoid frustration by obtaining male plants along with the females. Fortunately, the list is not too long and snowberry (Symphoricarpos) is not included. When you are choosing plants for your garden, the dioecious characteristics of the following trees and shrubs may influence your decision. In most cases, abundant fruiting will not occur without the presence of a male in the vicinity.

**Aucuba japonica.** Japanese aucuba. The aucubas have attractive red fruits effective throughout the winter, although the display is often obscured by the thick glossy leaves for which the plant is grown. A few male plants must be planted among the females to obtain these decorative fruits. USDA Zone 7-9.

**Celastrus scandens.** American Bittersweet. Although not the best vine for garden use due to its vigorous and ungraceful nature, many gardeners choose to grow bittersweet for its autumnal fruits, a favorite for dried arrangements. Disappointment occurs when a vine does not produce the characteristic yellow and orange fruits after years of healthy growth. The plants are usually dioecious; you must have a female vine and a male nearby for fruiting. USDA Zone 7-9.

**Chionanthus virginicus.** Fringetree. The fringetree, an excellent small flowering tree for the home landscape, is not normally grown for its fruits, but instead for its fringe-like flowers. However, this native tree is dioecious, and the differences between the sexes could make a difference to your garden. Male trees are more decorative in flower, having longer petals than female plants. The blue, fleshy fruits, not showy but of interest nonetheless, are relished by birds. Again, a male plant is necessary to obtain fruit on female trees. USDA Zone 5-9.

**Ginkgo biloba.** Maidenhair tree. The sex differences of male and female ginkgos have been widely discussed. The major point is reiterated here: Female trees produce fleshy fruits which have a very offensive odor. Unless you desire these fruits for culinary purposes or whatever reason, it is best to seek out and plant male trees. USDA Zone 4-8.

**Hippophae rhamnoides.** Common Seabuckthorn. This tree or large shrub, particularly useful for sandy soils and areas exposed to salt spray, produces (if female) an abundance of bright orange fruit. A male plant must be present to achieve fruiting. One male to every six females is suggested for mass plantings. USDA Zone 3-7.

**Ilex spp.** Holly. Most experienced gardeners know that the lack of a male pollinator in the case of hollies can lead to big disappointment come fall. Named male cultivars of many holly species are available to provide necessary pollen. When ordering or purchasing hollies from a nursery, include a few male pollinators to insure a magnificent crop of fruit. For mass plantings of shrubby hollies like winterbitter (I. verticillata), include one male plant for every 10 to 12 females. An American holly, or any prominently located Ilex specimen, will fruit reliably if a male plant is within at least 300 feet. You may be able to take advantage of a neighbor’s pollen-bearing plants. A few hollies, like the Chinese holly (I. cornuta), will produce fruit without the benefit of pollination. This is an exception to the general rule. Zone 4-9 (depending on species).

**Myrica pensylvanica.** Bayberry. This adaptable shrub produces small, grayish, waxy drupes on female plants only. The fruit has been used to produce bayberry candles, and all parts of the plant are aromatic when crushed. Male and female plants are required for adequate fruiting. Several other Myrica spp. are occasionally used as landscape plants; these are dioecious as well. USDA Zone 3-9.
Skimmia japonica. Japanese skimmia. The bright red fruit of skimmia resembles that of holly, but the evergreen foliage has a softer, less prickly demeanor. Creamy white, slightly fragrant flowers add interest in the spring. At least one male plant is suggested to six females to achieve a good crop of fruit. In some cases the male clones of skimmia are grown for their flowering characteristics, as male plants have larger clusters of flowers. 'Rubella' is a male cultivar selected for its large open panicles of pinkish-burgundy buds, which provide interest all winter long. In the early spring, the buds give way to sweet-smelling white flowers. A somewhat smaller, related species is S. reevesiana. This skimmia is not dioecious, and a single plant will produce fruit. USDA Zone 7-9.

Taxus spp. Yew. The commonly planted yew is not grown for its fruits, but for its attractive evergreen foliage and general adaptability. However, most people are aware of the fleshy red arils produced by yews, which when crushed between the fingers exude a mucilagenous substance. These fruits occur only on female plants; therefore, knowledge of the plant's sex will help you choose fruiting (female) or non-fruiting (male) yews, depending on your preference. Many named cultivars of yews exist, both male and female. If the sex of the plant is unknown, it can be determined by the morphology of the reproductive structures. USDA Zone 4-6.

The above list is not exhaustive, but includes most of the dioecious plants commonly encountered where the fruiting characteristic is of interest.

Q: I have had trouble establishing oriental poppies (Papaver orientale) in my garden. Bare-root planting in August is often suggested by gardening books—is that the best way to treat them?

A: With proper treatment, oriental poppies should not be difficult to establish. The biggest problems are standing water in winter and excessive moisture when plants are dormant in summer; either may cause root rot. Usually the problem is brought about by poor drainage (don't site plants in wet areas) or overwatering. If your poppies are planted in a perennial bed which you water consistently and deeply all summer, an application of fungicide applied as a drench during the dormant stage will prevent rot.

When choosing poppies, obtain named cultivars that have been propagated vegetatively. Many beautiful cultivars exist in a range of colors, and seed-grown plants will be inferior.

Pot-grown poppies (young plants grown from root cuttings taken the previous year) planted in the late fall or early spring will have a very good survival rate and are more foolproof than bare-root plants. Bare-root poppies planted in late summer when plants are dormant, if shipped fresh and handled carefully, can also be successful, but this is a bit tricky, as bare-root plants are more susceptible to dessication or rot.

The crown of the oriental poppy should be beneath the soil surface, and this can sometimes cause confusion. Bare-root plants should be planted so that the top of the crown is two to three inches beneath the soil surface. Use the greater depth if your soil is light and sandy. Pot-grown oriental poppies should be at the appropriate depth in their pots, and can be planted in the garden at the same level. If they appear to be planted too shallowly, plant deeper. If you are planning on mulching, however, planting depth should be shallower to compensate.

—Laura E. Coit
Assistant Editor, Horticulture

Lilypons Water Gardens

Begin your water garden today with a Lilypons catalogue featuring page after page of beautiful water lilies, lotus, bog plants, fish, statuary, and the essentials for keeping it all working together.

No pool? Choose a fiberglass or PVC pool from the many sizes shown in the Lilypons catalogue.

☐ Please send the new Lilypons catalogue plus informative newsletters with seasonal sales. Enclosed is $85.00. California (90¢), Maryland (25¢) and Texas (5¢) residents please add tax.

☐ Please rush my catalogue by first class mail. Enclosed is $85.75.

☐ 1500 Amholt Road
P.O. Box 10
Lilypons, MD 21717
(301) 674-6186

☐ 1500 Lilypons Road
P.O. Box 188
Brookshire, TX 77423-0188
(713) 994-8865

☐ 1500 Lilypons Way
P.O. Box 1430
Thermal, CA 92274

Name __________________________________________________________________________

Address ________________________________________________________________________

City ____________________________________________________________________________

State __________________________________________________________________________

Zip _____________________________________________________________________________
CLASSIFIEDS

AFRICAN VIOLETS

THE AVANT GARDENER
DIFFERENT, EXCITING, GREAT FUN TO READ—for the gardener who wants to get more out of gardening! Subscribe to THE AVANT GARDENER, the most useful, most quoted of all gardening publications. Every month this unique news service brings you the newest and most practical ongoing information—new plants, products, techniques, with sources, plus feature articles, special issues. 20th year. Awarded Club of America and Massachusetts Horticultural Society Medals for outstanding contributions to horticulture. Curious? Sample copy $1. Serious? 10 full years (reg. $15). THE AVANT GARDENER, Box 4851, New York, NY 10029.

AZALEAS & RHODODENDRONS
SUMMER BLOOMING! Winter Hardy Azaleas & Rhododendrons. Northern grown and acclimated. Proven hardy here without winter protection. Two Year Catalog deductible. $2.00 deductible. CARLSON'S GARDENS, Box 905-AH/788, South Salem, NY 10590. (914) 733-5595.

BONSAI
Bonsai Plants, Pots, Tools, Books, Supplies. Great Hobby or Business. Catalog $1.00. BONSAI FARM, Box 130, Laveninas, NY 12713.

BOOKS

HOW TO BECOME A LANDSCAPE CONTRACTOR. Landscaping Contractors' Handbook. First steps and beyond. Complete Book. 150 pages. Send $9.95 to: HORTICULTURE PROMOTIONS, PO Box 78, Mountainair, AR 72856.


BROMELIADS
TILLANDSIAS—GROW WITHOUT SOIL. Selection available on our Free Price List. Distributorships available. Wholesale, Retail, Mail order. HOLLADAY JUNGLIE, Dept B, PO Box 3277, Fresno, California 93755 (209) 298-9858.

BULBS
Unusual winter and early spring flowering bulbs. Send $1 for list, deductible with order to: WILLETTS, PO Box 446, Moss Landing, CA 95039.

Choosing flower bulbs? Our unique catalog and planning guide lists over 400 varieties with help to you make smart choices. Free Copy. McCLURE & ZIMMERMANN, Dept 50, PO Box 368, Freeland, MI 49416.

BUSINESS OPPORTUNITIES
Bloomings nursery/landscaping business in North Georgia Real estate, equipment, inventory. Call for brochure. Susan C. Doss (404) 536-6730 or Pat Harrelle (404) 536-6644. SOLD-WILLIAM HERITAGE REAL ESTATE (404) 536-9700.

CARNOVULUS PLANTS

DAYLITIES

DAYLIES
DAYLIES! WITH VIOLETS & PEAONIES FROM THE FAMOUS WILDS GARDENS OF MISSOURI. More than 100 years in the business. Wild's brings you experience and quality plants to help you create a beautiful garden display. Send $2.00 for our 92 page catalog with over 1,300 varieties ($2.00 deductible on first order). GILBERT H. WILD & SON, INC., AR784-7jpln St., Sarcoxie, MO 64862.

EMPLOYMENT
GARDENING EDITOR'S DREAM: Million of devoted readers. Industry leader in book club and direct-mail books. Editing experience necessary. Send resume, samples of your work and salary requirements to: Maggie Balitas, ROSALIE PRESS, INC., 33 East Minor Street, Emmaus, PA 18049. E.O.E.

EVERGREEN SEEDS
Seeds, free sample and price list of evergreen seeds, WAUKEHANA SEED COMPANY, PO Box 1820, Waukeha, WI 53187.

FLORAL SUPPLIES
Purchase the Products Professional Floral Designers have been successfully using in their shops for years, including FloraLute Cut Flower Food for extending flower life, designer wearers. Mail order. Catalog—FREE. THE FLORAL MAILBOX, PO BOX 235, Lombard, IL 60148-0235.

FLORAL SUPPLIES
Purchase the Products Professional Floral Designers have been successfully using in their shops for years, including FloraLute Cut Flower Food for extending flower life, designer wearers. Mail order. Catalog—FREE. THE FLORAL MAILBOX, PO BOX 235, Lombard, IL 60148-0235.

GARDENING GLOVES
GOATSKIN GLOVES. Tough, lightweight goatskin stretches and becomes form-fitting, giving wearer ultimate in fit, grip, wood, cut. Size A through Z. Ask for outline of hand. $8.50 postpaid. PUTNAMS, Box 295C, Wilton, NH 03086.

GIFTS
BONSAI TREES, pottery, books, tools, supplies and gifts. Catalog $2.50. BONSAI CREATIONS, PO Box 7511AH, Ft. Lauderdale, FL 33385. (954) 485-3788.

GREENHOUSE ACCESSORIES
COMPLETE MIST PROPAGATION SYSTEMS. Get phenomenal propagation results, shade-out outdoors. Environment sensitive controlled. FREE BROCHURES. HUMIDIFIER, Dept. 4, PO Box 327, Huntington, NY 11743. Tel: (516) 425-6315.

GREENHOUSES
HOOP HOUSE GREENHOUSE KITS FOR UNDER $299. For color list and grower's supply catalog, send $1.00 to: FOX HILL FARM, Dept. A-78, 20 Lawrence Street, Rockville, CT 06066; (821) 875-6976.

HEATHS & HEATHERS
HARDY HEATHERS FOR ALL YEAR GARDEN COLOR! Send SASE for descriptive mail-order list. Fast Service. HEATHER GROWERS, Box 850, Elma, WA 98541.

HERBS

THE BUSINESS OF Herbs. Comprehensive reporting, business news, marketing hints, sources and resources. Sample issue $3. BROCHURE. SASE to: WILDFLOWER. Box 2, P.O. Box 2464, Shelton, WA 98584.

HOUSE PLANTS

IRISES

ORCHID CACTUS

ORTHS
Help! We need room. Mature Cathals orchids, our selection. $8.00 each. Minimum order five plants. Packaged five maximum per box, bareoot. Include $5.00 per box shipping. FOX ORCHIDS, INC., 6615 West Markham, Little Rock, AR 72205. (501) 684-2476.

PINEES, TREE PINEES, DAFFODILS AND HOSTAS

PERENNIALS
We offer a good selection of sturdy perennial and groundcover plants. Send $1.00 for Plant List (refundable). CAMELOT NORTH, R2. Poolet Lake, MN 55672.

DAYS silicones, Winter Hardy Azaleas & Rhododendrons. Northern grown and acclimated. Proven hardy here without winter protection. Two Year Catalog deductible. $2.00 deductible. CARLSON'S GARDENS, Box 905-AH/788, South Salem, NY 10590. (914) 733-5595.

HOW TO BECOME A LANDSCAPE CONTRACTOR. Landscaping Contractors' Handbook. First steps and beyond. Complete Book. 150 pages. Send $9.95 to: HORTICULTURE PROMOTIONS, PO Box 78, Mountainair, AR 72856.


BROMELIADS
TILLANDSIAS—GROW WITHOUT SOIL. Selection available on our Free Price List. Distributorships available. Wholesale, Retail, Mail order. HOLLADAY JUNGLIE, Dept B, PO Box 3277, Fresno, California 93755 (209) 298-9858.

Chinese Garden Scissors
These beautiful, precision scissors are made to last a lifetime. In production for over 300 years. For delicate or heavy pruning.

The Complete Book of Topiary

Billed as an easy-to-use guide to the art of shaping and training plants, this book describes 75 topiary creations that can be tackled even by the beginner. Indoor and outdoor projects include an herbal knot garden, a flowering jasmine bird, espaliered dwarf fruit trees, and a tree tunnel. The book is amply illustrated with line drawings and contains a source guide, glossary, and resource guide. By Barbara Gallup and Deborah Reich. Workman Publishing, 1 West 20th St., New York, NY 10014. Publisher's price: $10.95; AHS member price: $8.75. Code: WORKM 05710.

Peter Chan's Magical Landscape

Peter Chan, master gardener, landscape authority, and artist, shares his secrets with the home gardener in this book featuring illustrations from his own award-winning gardens. Chan escorts the reader on a guided tour of his garden, with prose illustrations and step-by-step instructions that assist the reader in developing a "private paradise" on his own property. By Peter Chan. Garden Way Publishing, Inc., Pownal, VT 05661. Publisher's price: hardcover, $21.95;softcover, $10.95. AHS member price: hardcover, $17.55;softcover, $8.75. Code: hc, GARDE 05790.

101 Home Landscaping Ideas

Does your mind go blank when you think of producing a landscape design for your property? This book is a fund of ideas and graphic hints for those who find it difficult to visualize a landscape plan that fits in with the size of their property and meshes well with their lifestyle and their personality. The book contains sections on specialty gardens, patios, decks, and pool areas; children and pets; low-maintenance gardening; storage, privacy, and screened views; and shade or sunshine. A great help for the gardener wishing to personalize a home garden. By Joel M. Lerner. Price: Stern, and Sloan Books, 360 North La Cienega Boulevard, Los Angeles, CA 90048. Publisher's price: $9.95. AHS member price: $7.95. Code: PRICE 05840.

Landscape Photography: A Kodak Guide

Composition, depth-of-field, lighting, framing techniques, scale, and perspective are a few of the subjects covered in this in-depth treatment of landscape photography, which teaches the photo-hobbyist how to read the land, analyze its visual components, and use them in adhering to a central theme. Over 150 color and black-and-white photographs by leading landscape photographers illustrate this outstanding guide, which also covers the various types of photographic equipment needed to produce top-quality landscape photographs. By Jeff Wignall. McGraw-Hill Book Company, 11 W. 19th St., New York, NY 10011. Publisher's price: $12.95; AHS member price: $10.95. Code: MCGRA 05830.
New Videotape Demonstrates Pruning Techniques

As interest in the pruning of landscape plants increases, due in large part to an increasing awareness of their value in enhancing aesthetic and property values of homes, consumers are looking for more effective ways to learn and apply pruning techniques. A new videotape to be released by the University of Idaho would seem to fill the bill handsomely by demonstrating various pruning techniques for woody landscape plants. Titled "Pruning Your Own Shrubs and Small Trees," the video covers tools, sanitation, diseased plants, and types of pruning cuts. The second part of the tape covers specific pruning techniques for five categories of plants: deciduous shrubs, deciduous trees, coniferous shrubs, coniferous trees, and broadleaf evergreens. The effects of pruning plants at various times of the year are emphasized for deciduous shrubs and trees, and specifics are provided on when to prune plants grown for flowers, fruit, or foliage.

Actual pruning sequences are shown, starting with an overgrown plant and leading to the finished product. A table of contents and an on-screen time clock make it easy to locate various subjects on the tape. The tape is geared to homeowners, horticultural students, cooperative extension agents, and landscape maintenance personnel; it is 51 minutes long and is available in VHS, Beta, and 3/4-inch formats. For more information contact the Agricultural Communications Center, Room 11 Agr. Sci. Bldg., University of Idaho, Moscow, ID 83483.

Perennial Herbs from Seed—Some to Avoid

Thomas DeBaggio of Earthworks, a commercial nursery in Arlington, Virginia, reports in the Herb, Spice, and Medicinal Plants Digest on growing perennial herbs from seed. Though this is a good, low-cost way to produce a permanent addition to the garden, there are some varieties to avoid, either because they don't come true from seed or because they are sterile.

If you try to grow tarragon from seed, for instance, you will get the rank, flavorless plant sometimes referred to as Russian or Siberian tarragon. Culinary (French) tarragon, _Artemisia dracunculus_ var. sativa, is sterile and must be propagated from cuttings. English thyme, _Thymus 'Broad-leaf English'_, is a female plant and must also be propagated vegetatively. DeBaggio cautions against all seed-grown mints, which don't have the quality of cutting-produced plants. Peppermint (_Mentha X piperita_) is sterile.

Lavender seed is so variable that it's best grown from cuttings from correctly-named plants. And much of the oregano offered by large seed houses is _Origanum vulgare_, not the culinary version, which is _Origanum vulgare_ subsp. _hirtum_, the version usually sold as Greek. Though the Greek version will come true from seed, the seed is difficult to find and sometimes is a mix of varieties.

Rosemary has such a low germination rate (20 percent at best) that it's most effectively grown from cuttings, which is the only reliable way to propagate named cultivars.

—Adapted, with permission, from the Herb, Spice, and Medicinal Plants Digest, Vol. 5, No. 4, University of Massachusetts Cooperative Extension, Amherst, Massachusetts.