American Horticulturist

Choosing a Christmas Tree How to Identify and Care for the One You Want

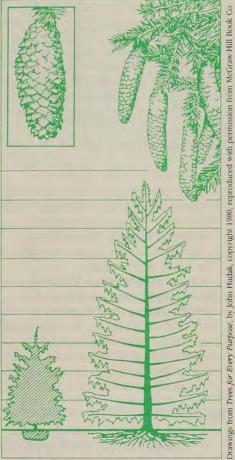
he Christmas season seems to begin earlier each year. Trees decorate department stores before Halloween—even earlier in some retail establishments. Though we may think we are seeing them too early, we still look forward to our own Christmas tree whether we bring out treasured ornaments or style it differently each year.

Below are listed some of the most popular trees grown in the United States as determined by the National Christmas Tree Association. Our brief "tree key" should make it easier for you to search for the tree you want. Be sure to check on a certain tree's availability in your area, however, as all those listed below are not available in every location.

Spruce

Upright, pyramidal, single-trunked trees. Stiff in appearance with horizontal branches produced in whorls. May be used as a specimen tree but is sometimes difficult to establish in the landscape. Loses its branches when planted too close together or densely shaded. Not the best ornamental tree because it is often ragged when mature. Diseases: Cytosperma canker, rust. Propagation: hardwood cuttings or seed.

Picea abies, Norway spruce. May grow to 150 feet. Branches droop; shiny, dark green needles are grouped in four, angled and to ³/₄ inches long; cones grow to seven inches long. Native to Europe, but is

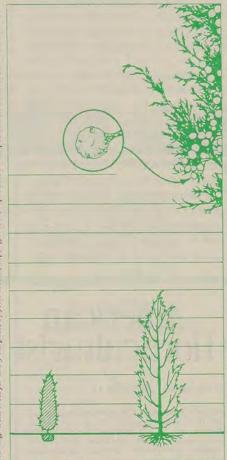


Picea abies (excelsea), Norway spruce

mass produced along the northeastern seaboard (Wisconsin and Minnesota to the Mason Dixon line) and in the Northwest. Prefers cool weather.

Cedar

Cedars are popular for the use of their wood and their ability to look



Juniperus virginiana, Red cedar

aesthetically pleasing in mass plantings. There are many variations in this group that are good for hedging if pruned correctly. They are best in hot, dry, sunny locations and do especially well under urban growing conditions. They grow in either acid or alkaline soil but prefer a soil that

isn't too acidic. Diseases: twig blight, Cedar-apple rust, Cedar hawthorn rust, and Cedar-quince rust. Propagation: seed or hardwood cuttings.

Juniperus virginiana, Red cedar. May grow to 75 feet with scale-like, strongly overlapping leaves. Grows very slowly, and prefers lime regions and poor, dry soil. Native to the northeastern United States, and is mass produced along the eastern seaboard. Does not do well in the extreme northwestern regions of the United States. The wood is very durable and fragrant.

Pines

These evergreens are among the most important in the United States for lumber. They grow widely in the northern temperate regions of the world and are represented well in America. Most pines can grow in good to very poor soils, from the seashore to the highest timberline. They are divided into three groups depending on the number of needles per sheath (bundle). Prune in late spring or early summer when new shoots are half grown. It is important to leave a dormant bud below the cut or otherwise no other shoots will develop. Diseases: White Pine blister rust. Propagation: seed, grafting.

Pinus strobus, Eastern white pine. Grows to 120 feet. Soft, bluishgreen needles are five inches long and in groups of five. Cylindrical cones are up to six inches long.

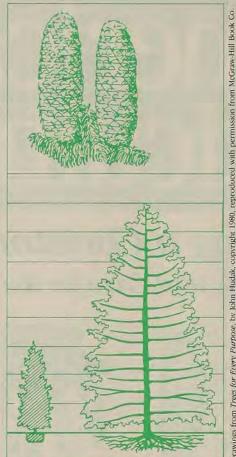
American Horticulturist

VOLUME 66 NUMBER 11

PUBLICATIONS DIRECTOR, EDITOR: Virginia W. Louisell. ART DIRECTOR: Rebecca K. McClimans. ASSOCIATE EDITOR: Brian C. Little ASSISTANT TO THE EDITOR: Marha Palermo. MEMBERSHIP DIRECTOR: Salile Hutcheson ADVERTISING: American Horticultural Society Advertising Department, 80 South Early Street, Alexandria, Virginia 22304. Phone (703) 823-6966

Address all editorial correspondence to: The Editor,
American Horticulturist, American Horticulturial
Society, Box 0105, Mount Vernon, Virginia 22121.

AMERICAN HORTICULTURIST, ISSN 0096-4417, is published
monthly by the American Horticultural Society, 7931 East
Boulevard Drive, Alexandria, Virginia 22308, 703-768-5700.
National membership dues are \$25; foreign dues are \$35, \$12
of dues are designated for AMERICAN HORTICULTURIST.
Copyright © 1987 by the American Horticultural Society. The
American Horticultural Society is a non-profit organization
Contributions are deductible for income tax purposes.
Second-class postage paid at Alexandria, Virginia and at
additional mailing offices. Postmaster: Please send Form
3579 to AMERICAN HORTICULTURIST, Box 0105, Mount
Vernon, Virginia 22121.



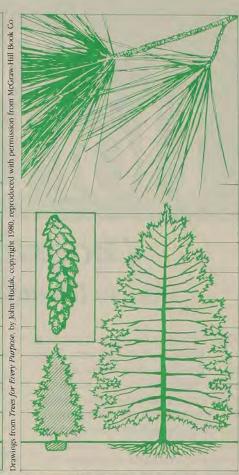
Abies procera, Noble fir

Grows well in moist, sandy soil. Heavily cultivated and seldom found in the wild. Heavily produced along the eastern seaboard and parts of Minnesota, Illinois, and Michigan. Lends itself beautifully to shearing. Has a soft appearance.

Pinus virginiana, Virginia pine, Jersey pine, scrub pine, spruce pine, poverty pine. Grows to 50 feet with needles in fascicles of two, three inches long, stiff and slightly twisted. Cones are 2½ inches long and conic-ovoid. Thrives in barren soil along the eastern part of the United States. Very sweet-smelling gum.

Pinus sylvestris, Scotch pine. Grows to 100 feet or more with stiff, twisted, bluish-green three inch-long needles in fascicles of two. Cones are 2½ inches long and conic-oblong. Important timber tree in Europe; produced heavily throughout Canada and the eastern seaboard, predominately in the north. Prefers cold weather and sandy soil with good moisture content.

Pinus radiata, Monterey pine. Grows to 75 feet with bright green



Pinus strobus, Eastern white pine

four-inch-long leaves in fascicles of three. Cones are seven inches long and conic-ovoid to seven inches long. Many planted worldwide, especially for timber in the Mediterranean climates. This tree is commercially grown on the West Coast in the fogbelt areas of San Francisco and San Diego inward. Prefers a sandy, loamy soil.

Fir

Stately trees with wide trunks and horizontal branches. They prefer high altitudes such as those of the mountains on the West Coast. They produce a soft wood and prefer a cool, moist climate. This tree almost refuses to grow in a hot, dry, drought-stricken area. Pruning is difficult because of its habit not to shoot new growth in the same area. Topping disrupts its stiff pyramid form. Fir cones are always erect. Diseases: needle cast, needle rust. Propagation: seeds, grafting, hardwood cuttings.

Pseudotsuga menziesii, **Douglas fir.** Grows to 300 feet with dark, bluish-green needles one to 11/4

Tips on Tree Care

Almost any freshly cut Christmas tree will last 30 days or more if it is cut off one to two inches from the base. David Baumann, associate executive director of the National Christmas Tree Association, says, "To determine a Christmas tree's freshness, grab the tree midway down the trunk and tap it on the ground three or four times to see if a number of needles fall off. Then, place your hand six to eight inches from the tip of the branch in toward the tree trunk and pull. If more than five to ten percent of the needles drop, ask the owner when the tree was cut. When a tree is cut it will begin to callus over at the base after a few days to maintain its moisture content. This is why it is important to recut the surface to encourage moisture uptake.'

Baumann says that tap water is the best liquid to keep the tree fresh. If you are planning to spend Christmas away from home but still want to have a freshly cut Christmas tree in your house, Baumann's advice is to use a one- to two-gallon reservoir container. This supplies the tree with

water for three days. Plan to bring your tree into the house two or three days before you leave for the holiday, however, for the first day it is indoors it may drink up most of the water. On the second or third day, refill, and then you can leave the tree for three days.

If you are planning to buy a balled tree, please take your "tree key" with you when you shop. Remember that there are cultivars of the trees we have mentioned which mature at different heights and have different forms.

According to Baumann, you should display a balled tree for only one week in your home. The soil must stay moist at all times during this period. A cloth skirt will help minimize evaporation. Also, be sure to place one or two layers of cloth under the container in case it leaks. Prepare the hole as early as possible and cover it with leaves so that the ground does not freeze before you plant. Finally, consult your local nurseryman for directions on planting your tree.

compiled by -Brian C. Little

Northeast and in areas of Michigan, Wisconsin, Minnesota, southern Canada, and Nova Scotia.

Abies fraseri, Frazier fir, Southern balsam fir. Grows to 75 feet with reddish-pubescent branches. Glossy, dark green needles are one inch long, rounded, and slightly notched at the apex. Purple cones are oblong or somewhat ovoid to 2½ inches long. Prefers high elevations. Commercially grown in the Appalachian mountains, Virginia, North Carolina, and Tennessee.

inches long. Branches are rarely glabrous. Cones are $4\frac{1}{2}$ inches long. Excellent ornamental evergreen. Prefers mild, humid climates. Commercially grown in parts of the Northwest, the coast of California, and the west coast of Canada.

Abies procera, Noble fir. Grows to 100 feet with reddish pubescent branches. Bluish-green needles are 1½ inches long, rounded at the apex, and slightly notched. Cones are ten inches long and have a cylindricoblong form, turning purplish-brown when mature. Best in a humid climate with cool, short growing season in elevations of 1,500 to 4,000 feet. Commercially grown in a narrow band in sections of Washington, Oregon, and northern California.

Abies balsamea, Balsam fir. Grows to 75 feet with pubescent branches. Needles are rounded and slightly notched to one inch long. Oblong cones are 2½ inches long and violet-purple. Prefers a cold winter and warm summer, and may be planted in a moist but well-drained soil. Commercially grown in the

Cut Poinsettias?

Christmas decorating possibilities with brilliant red or white bracts are now increased by the news that a simple procedure will keep them attractive for eight to ten days as cut flowers. If the stems are dipped in rubbing alcohol for ten minutes after cutting, the latex flow from the stem, which prevents the uptake of water, will be prevented.



NOW.. BY MAIL!
UNUSUAL, HARDTO-FIND FLOWER
ARRANGING SUPPLIES:
Tools, Techniques, Tricks
of the Trade!

Introducing...

The ORIGINAL FLOWER GATHERER

The patented feature of this precision tool is that a bloom can now be picked, cut from the stem, and held in a single operation! Use for cutting vines as

Use for cutting vines as well as flowers. Made in Switzerland by the makers of the original Swiss Army Officers' Knives.

12.95
Postage & handling included;
Calif. res add sales tax.

M.C. & VISA ACCEPTED

The Keth Company
P.O. Box 645

Corona del Mar, CA 92625 THE CATALOG — 1.00

KELLY NURSERIES

1008 Maple St., Dansville, NY 14437 ()Rush My FREE KELLY Catalog to: PLEASE PRINT

Name

Mailing

Address

Zip_

Kelly NURSERY CATALOG

Call Toll Free 800-828-6977 or in NY 800-462-6836 or send coupon TODAY!





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 \$4.00.

 Maryland (20¢) and Texas (21¢) residents please add tax.
- ☐ Please rush my catalogue by first class mail. Enclosed is \$5.50.
- ☐ 1500 Amhort Road P.O. Box 10 Lilypons, MD 21717-0010 (301) 874-5133
- 1500 Lilypons Road
 P.O. Box 188
 Brookshire, TX 77423-0188
 (713) 934-8525

Name

Address

City

State

Zip

More About Trees

- Researchers at Cornell University have developed a new technique that makes tough-to-propagate trees and shrubs easier to grow. The technique, called blanching, is a method of banding shoots grown in the absence of light. This has been tried before, but researchers found that Velcro was more effective for banding than black plastic electrical tape. Velcro works best because it can be removed without causing injury to the stem, and root-promoting hormones can be applied before the shoot is banded. The sugar maple, paper birch, Chinese chestnut, pin oak, English oak, Scotch pine, and mugo pine are some of the trees successfully cloned by this method
- The black walnut is not as much the villain in a yard as it is claimed to be. Frank Robinson, estate manager at Albermarle Farms, Charlottesville, Virginia, has discovered that there are a number of annuals, perennials, bulbs, vines, and shrubs that will survive beneath its shade. Write the "Gardener's Information Service" to obtain a list of the species and cultivars which appear to be friends of this tree
- A tree breeder at the U.S. Department of Agriculture has a new theory that certain enzymes in trees control whether two trees will grow together when grafted. It is hoped that this tree enzyme research will lead to the availability of new landscape trees in the next decade. Successful grafting that matches the enzymes of good shade and flowering trees with the enzymes of good rooting trees could speed up development of cultivars without waiting years for results. Trees could be developed to tolerate the abuses of urban conditions such as salt, herbicides, poor soils, and air pollution.
- The National Arborist Association recently released its revised *Book of Standards for Tree Care Practices*. Included are standards for pruning, cabling, bracing and guying, fertilizing, hydraulic sprayer calibration, and the installation of lightening protection systems. The standards are illustrated and referenced in the 25-page book, which can be ordered from the National Arborist Association, 174 Route 101, Bedford, NH 03102 for \$12.



Beautiful and Informative New Garden Books

GARDENS OF THE ITALIAN VILLAS

Marella Agnelli, Federico Forquet, Luca Pietromarchi. Photographs by Robert Emmett Bright. Rich in historical anecdote, this beautiful volume describes more than 30 magnificent gardens of the great Italian villas, many of which date from the Rennaissance and have never before been seen by the public. The book includes two villas owned by the author, Marella Agnelli, and her husband, Giovanni Agnelli, grandson of the founder, and present owner of Fiat. 224 pages. 9" × 12" 225 illus., 112 in color. 0825-4. \$50

GARDENS OF LONGEVITY IN CHINA AND JAPAN

Pierre and Susanne Rambach. This beautiful oversize book describes Japanese and Chinese stone gardens, an ancient form of artistic expression which is being revived today. Included are gardens inspired by architects such as Kenzo Tange and Noguchi, who have renewed the art of stone raising in Japan. 216 pages. 11" × 13½" 246 illus., 104 in color, 0837-8, \$85

LANNING ROPER AND HIS GARDENS

Jane Brown. A biography of the famous American-born, Harvard-educated landscape architect who made his reputation mostly in England, designing gardens for such notables as Prince Charles, Lord Snowdon, and the Aga Kahn. "In this handsome and winning biography, Jane Brown reveals Lanning Roper, who died in 1983, as a knowing and tasteful gardener, an engaging human being and a graceful writer."—New York Times Book Review. 224 pages. 9" × 11" 187 illus., 42 in color. 0787-8. \$37.50

ENGLISH HERB GARDENS

Guy Cooper, Gordon Taylor, Clive Boursnell. "An excellent, up-to-date account of the cultivation of herbs in England. A valuable herb glossary lists 42 herbs—culinary, medical, fragrant, and cosmetic."-Oklahoma Home & Carden. "The authors, former directors of the Herb Society of Great Britain, describe the history and design of each of 58 gardens in enough detail to satisfy the serious herbalist."—San Diego Magazine. "Exquisitely illustrated, the 58 gardens pictured will appeal even to those who hate pesto or potpourri."—New York Times. 160 pages. 10"×7½"

TRADITIONAL ENGLISH GARDENS

Arabella Lennox-Boyd, Clau Perry, Graham Stuart Thomas. A lavishly illustrated exploration of the English style of 28 gardens in the care of the British National Trust, including Hidcote Manor, Mottisfont Abbey, and King Henry VIII's hunting lodge. 160 pages. 10" × 7½" 135 color

THE OLD FASHIONED GARDEN

Text by Nancy Lynch, Illustrations by Gill Tomblin. A charming gift and guide for both the novice and the experienced gardener, this pop-up book features four radiant gardens, each in three-dimensional, full color detail, with a diagram and flower key for identification. The book includes a master list of sturdy perennials, a handy bulb-depth chart, plant hardiness zone maps, a pH scale, and a color wheel. A delightful book! 12 pages, all in full color. 4 pop-up spreads.

> \$1.50 per book for shipping and handling. At all fine bookstores, or direct from



597 Fifth Avenue / New York, NY 10017 ISBN PREFIX: 0-8478

OXYGEN PLUS® THE BEST PERFORMING PLANT FOOD YOU CAN BUY! WE'LL PROVE IT.



For greener, healthier, more vigorous houseplants, Oxygen Plus is the best-performing plant food you can buy. University tests prove it.

Mixed with water, Oxygen Plus releases critically-needed oxygen at the root level to protect against the #1 causes of houseplant failure—compacted soil and overwatering. Oxygen Plus delivers essential nutrients everytime you water—even if you overwater.

Oxygen Plus. There's simply nothing better for your plants. Let us prove it.

FREE TRIAL OFFER

Buy one 8 oz. bottle for the regular price of \$2.99 and we'll send the second bottle **FREE!**

Send order with a check or money order to Plant Research Laboratories, P.O. Box 3976, Laguna Hills, California 92654. For additional orders, please call 1 (800) 221-2589 (OUTSIDE CALIE.), (714) 721-0153 (INSIDE CALIE.), or instruct us on your personal stationery.

Name			
Address			
City	State	Zip _	
© 1987, Plant Re	search Laboratories		HOR

Gardener's Dateline

November 4-December 1 Oriental Chrysanthemum Show

Information: Des Moines Botanical Center, 909 East River Drive, Des Moines, IA 50316. (515) 283-4148.

November 6-12 American Society for Horticultural Science and Congress of the Interamerican Society for Tropical Horticulture Annual Meeting

Hyatt Orlando Hotel, Kissimmee, Florida. Information: Dr. William J. Carpenter, Ornamental Horticulture Department, University of Florida, Gainesville, FL 32611, (904) 392-7943.

November 7 California Native Plant Sale

Rancho Santa Ana Botanic Garden, Claremont, California. Hours: 8 a.m. to 2 p.m. Information: Education Department, Rancho Santa Ana Botanic Garden, 1500 North College Ave., Claremont, CA 91711, (714) 625-8767.

November 8-29 Pittsburgh Fall Flower Show

Sponsored by the Pittsbugh Department of Parks and Recreation and Phipps Conservatory, Phipps Conservatory, Schenley Park, Pittsburgh, Pennsylvania. For further information call (412) 622-6915.

November 9-10 International Chrysanthemum Conference and Show

Tokyo Hilton International Hotel, 662 Nishi - Shinjuku, Shinjuku-ku, Tokyo, 160 Japan. Information: The Japanese Travel Bureau, Inc., Foreign Tourist Division Convention Center, 1-13-1 Nihonbashi Chuo-ku, Tokyo 103, Japan Tokyo 03-276-7885, Telex: Tourist J24418.

November 9-11 Penn State Golf Turf Conference

Keller Conference Center, The Pennsylvania State University, University Park, PA. Sponsored by The Pennsylvania Turfgrass Council, Inc. Information: Dr. Joseph Duich, Dept of Agronomy, 21 Tyson Bldg, University Park, PA 16802, (814) 865-9853.

November 10 Table Decorations Workshop

Williamsburg, Virginia. Registration Fee: \$32. Information: Eugenia Corrigan, Williamsburg Flower Workshops, P.O. Box C, Williamsburg, VA 23187, (804) 220-7206.

November 11-13 Regional Meeting on Water Management

Sacramento, California. Sponsored by the United States Committee on Irrigation and Drainage. Information: Larry Stephens, United States Committee on Irrigation and Drainage, P.O. Box 15326, Denver, CO 80215, (303) 236-6960.

November 12-15 Annual Conference and Show

Sponsored by Professional Lawn Care Association of America. San Antonio, Texas. Information: Douglas K. Moody, Professional Lawn Care Association of America, 1225 Johnson Ferry Road, N.E., Suite B-220, Marietta, GA 30068, (404) 977-5222.

November 14-30 Annual Mum Festival—"Growing Chrysanthemums the Cypress Gardens Way"

Florida Cypress Gardens. Information: National Chrysanthemum Society, 2139 Vegas Valley Drive, Las Vegas, NV 89109. (Florida) 1-800-282-2123; (National) 1-800-237-4826.



November 18 Christmas Wreath Workshop

Williamsburg, Virginia. Registration Fee: \$32. Information: Eugenia Corrigan, Colonial Williamsburg Flower Workshops, P.O. Box C, Williamsburg, VA 23187, (804) 220-7206.

November 21 - December 27 "Christmas at Oatlands"

Oatlands, Leesburg, Virginia. Admission: \$5, 10 a.m. to 5 p.m.; Candlelight tours, \$6, after 6 p.m. Information: Michael T. Sheehan, Oatlands, Rt. 2, Box 352, Leesburg, VA 22075.

November 29 - December 3 "Evolution 87" Entomological Society of America Annual Meeting

Sponsored by the Entomological Society of America. Boston, MA. Information: Entomological Society of America, P.O. Box 177, Hyattsville, MD 20781.

December 1 Used Plant Sale

Information: Des Moines Botanical Center, 909 East River Drive, Des Moines, IA 50316.

December 3-4 Meeting on Toxics in Agricultural Water

Sponsored by the U.S. Committee on Irrigation and Drainage. Alexis Park Hotel, Las Vegas, NV. Registration: \$80; \$110 after November 19th. Information: US-CID, P.O. Box 25326, Denver CO 80215, (303) 236-6960.

December 12-January 10 Holiday Flower Show

Sponsored by Pittsbugh Department of Parks and Recreation and Phipps Conservatory. Phipps Conservatory, Schenley Park, Pittsburgh, Pennsylvania. Admission: Adult city resident, \$2.00; Adult non-city resident, \$2.50; Senior citizen/children 2-12, 75¢. Hours: 9 a.m. to 5 p.m. For further information call (412) 622-6915.

December 13 American Horticultural Society Christmas Open House

7931 East Boulevard Drive, Mt. Vernon, VA. Hours: 11 a.m. to 4 p.m. Admission: free. Information: Margaret Burke, AHS, P.O. Box 0105, Mt. Vernon, VA 22121, (703) 768-5700.

December 16-18 Desert Turfgrass Conference and Show

Sponsored by the Nevada Cooperative Extension, University of Nevada-Reno. Tropicana Resort, Las Vegas. Information: Robert Morris, Nevada Cooperative Extension, S.T.& P. Bldg, Suite 207, 953 E. Sahara, Las Vegas, Nevada 89104 (702) 731-3130.



The Garden and Leisure Furniture Specialists

A superior collection of diverse designs from England's major joineries and custom workshops.

SOLID TEAKWOOD BENCHES • CHAIRS • TABLES SWINGS • PLANTERS

Immediate shipment from our own Maryland warehouse, Country Casual pays the freight.

Colour catalogue \$2.00 Call or write for more information

COUNTRY CASUAL - CAH 17317 Germantown Road Germantown, MD 20874-2999 (301) 540-0040



ENSURE AUTHENTICITY SPECIFY

MADE IN ENGLAND

Its Nor'East for the Very Finest in Miniature Roses

We carry the best selection, featuring the very best of the older and the very newest varieties.

Cata	Send log T			Color
Name		-	-	-
Addre	SS			
City				
State			Z	lip

NorTEast Miniature Roses, Inc.

58 Hammond Street, Dept. AH Rowley, Massachusetts 01969

Build a 10' x 12' portable greenhouse for under \$299!



- Attractive, specially-engineered hoop design with 4' wide beds, 2' wide door.
- Expandable in 4' lengths (no limit).
- Convenient, sturdy galvanized steel tubing/plywood/greenhouse film construction.
- Flexible enough to follow the contour of your land.
- · Usually, no building permit is required.
- Easy assembly/breakdown.
- Can expand your growing season by up to 4 months!



GOPHER IT!

Eliminate Burrowing Rodents

At last an effective means to rid the vard and garden of Gophers, Moles and Shrews.

NEW The electronic stake vibrates and emits a noise

in 15 second intervals causing underground dwellers within 1000 square vards to flee. Has been proven effective.



Protect your Lawn, Garden and Trees.

FEATURES

- · No more gas, traps or poison.
- Safe for children and pets.
- Each stake is effective for 1000 square yards.
- · Battery powered (4 "D" cell - not included).
- · Waterproof.
- No servicing required.
- 1 Year Warranty.

1-800-628-2828 ext. 433





Please send a check or money order for \$49.95 each (plus \$4.00 shipping). Save money and buy 2 for \$94.95 (plus \$6.00 shipping). CA Residents add 6%

M.O. Xpress

4330 Barranca Pkwy. • Suite 101E Irvine, CA 92714 • (714) 559-1831

Gardener's Check List

t is already November. Are you keeping up with your garden chores for this month and next? Whatever November means climatically in your part of the country, there are things to be done. To instruct you (or merely nudge you to get started), we contacted several knowledgeable persons across the nation for a checklist.

Northeast

- ☐ Mulch perennials and roses after a hard freeze to minimize freezing and thawing.
- Mound soil around the base of roses and then add evergreen boughs. ☐ Put up windbreaks around broadleaf and needle-leaf evergreens. Wooden frames are good for wind and snow protection.
- ☐ Check for insect infestations in house plants, and cut out inside branches to encourage light penetration.
- ☐ Cut back water and fertilizer to half strength to discourage "leggy" growth of house plants.

-Lois Berg Stack. University of Maine, Orono, Maine

South

- ☐ Plant spring flowering bulbs. For extended flowering, select early, midseason, and late-flowering varieties.
- Plant trees and shrubs. Plan for the mature size as well as cultural requirements in order to locate them properly in the landscape.
- ☐ Muscadines can be pruned in December. Pruning too early in the fall or too late in winter results in bleeding of canes.
- ☐ When cutting hollies and other evergreens for holiday decorations, prune lightly. Heavy pruning can result in winter damage.

-Alta Kingman, Residential Horticulturist. Clemson University Clemson, South Carolina



Inland

- ☐ Plant cool-season crops.
- ☐ Plant strawberry plants November 1-15. Use plastic mulch.
- ☐ Repair hotbeds and cold frames for January use.
- ☐ Clean up garden.

David N. Sasseville, State Horticulture Specialist University of Missouri & Lincoln University, Columbia & Jefferson City, Missouri

- ☐ Use a lawn fungicide to guard against snow mold.
- Remove leaves of diseased roses. ☐ Cover root crops and roses with mulch to minimize freezing and
- Delay pruning until spring to minimize snow damage from excess pruning.
- ☐ Continue to water shrubbery to guard against winter drought and windburn.
- ☐ Clean debris from the base of fruit trees to discourage mouse girdling. -Larry Sagers,

Ornamental Horticulture Specialist, Salt Lake City, Utah

- ☐ Apply the second application of lawn fertilizer.
- ☐ Prune large trees.
- ☐ Move house plants to brighter locations. —Deborah Brown Extension Horticulturist,

Saint Paul, Minnesota

Southwest

- ☐ Test soil for salt build-up.
- ☐ Add soil conditioners (manure, compost, or comPRO) to the soil.

☐ Plant spring bulbs. ☐ Plant trees, especially fruit and nut trees. ☐ Start bare root shrubbery in December.	FIRST & ONLY Greenhouse/Screenhouse Year-Round Combination!	PLANTS NEED MINERALS NOT MIRACLES Order Toll Free: 800-841-1105 In CA & Alaska: 415-362-0660
☐ Start pruning later in November. ☐ Inspect and repair all equipment. — John E. Begnaud, Extension Horticulturist, San Angelo, Texas	SUN-PORCH WINTER SUN SPACE CONVERTS TO A SUMMER SCREEN ROOM!	That's why we formulated Multimineral GREEN CROSS Wintercare (2-20-10), an exclusive granular nutritional formula specifically designed to harden stems, strengthen roots, reduce winter, wind, dieback, acid rain and drought injury. Loaded with CALCIUM, MAGNESIUM, IRONALL
West ☐ Harvest cool-season crops. ☐ Plant perennial vegetables. ☐ Plant bulb onions; use direct seed or transplants.	1" THICK DOUBLE-WALL INSULATED GLAZING	MINERALS—NO FILLERS. GREEN CROSS Wintercare fortifies and protects roses, camellias, rhododendron, azaleas, trees, shrubs, perennialsall plants. Results are cumulative with continued use. Patent Pending. 1.5 lbs.—\$7.95 (Treats 6 Plants)
☐ Plant containerized woody plants and perennials. ☐ Plant pansies, Calendulas, snapdragons, California poppies, sweet peas, sweet allysum, stock, and African daisies for splashes of winter color.		5.0 lbs.—\$14.95 (Treats 20 Plants) 25 lbs.—\$32.99 (Treats 100 Plants) * SPECIAL 10% OFF ORDERS OF 100 LBs. OR MORE Prices Postpaid in USA. Canada, AK, HI, PR add 25%. Orders shipped UPS. Send check to: Green Cross Wintercare Inc.: 26 Bay. Suite 207, AH San Francisc CA 94133. Name:
☐ Start a wildflower meadow for flowers six to eight weeks later. ☐ Cover crops, such as annual rye grass, should be planted in a steep area for slope stabilization.	☐ Bronze aluminum ☐ Shatter-resistant glazing ☐ No foundations required ☐ Easy do-it-yourself assembly ☐ Ideal spa/hot tub room. Send \$2 for Color Catalogues, Prices,	Address: State: Zip: Phone: Please RUSH a FREE Brochure.
☐ Continue to build garden soil. —Dennis Pittenger, University of California, Riverside, California	SUNBEAM STRUCTURES P.O. Box 2235, Dept. AH-87 New York, NY 10163	Also available through Gardener's Supply Co. catalogs and the finest horticultural nurseries. DEALER INQUIRIES INVITED YOU CAN TRUST THE GREEN CROSS!
☐ Garlic, onion sets, peas, and other cool-season crops can be planted. ☐ Fava beans may be planted later in the month to minimize top growth. ☐ Lime soil to raise pH, or use	Now you can hang the beautiful hanging baand plants in your gr	skets eenhouse
weathered manure to increase nutrient content. Plant bare root fruit trees. Prune trailing blackberries to five new canes per plant.	• Allows full of plants	rotation
☐ Prune red raspberries to five feet and leave 10 strong canes per plant. ☐ Plant woody shrubs and trees now so they may be established before next year's stressful periods. ☐ Propagate broadleaf evergreens. ☐ Prune evergreens for Christmas. ☐ Helly begries and leaves about the	• Insert foot tighten wi	luminum Illation (no tools needed) in channel and
☐ Holly berries and leaves should be dipped in a hormone to prolong their freshness during display. ☐ Turn house plants once every other day or once a week to retain their shape.	Radco Box 614 Wayne PA 19087 Fits the following greenhouses Lord & Burnham National Janco Four Seaso Please check box for your greenhouse	50—\$65.00
☐ Check spruce trees for aphids. —George Pinyub, Extension Horticultural Agent, Washington State University, Pullman, Washington	Please send plant hangers Enclosed is my check or money order for \$ Name	Shipping \$.75 PA residents add 6% sales tax

Address ___

City __

Gardener's Information Service

State Zip _



A VOYAGE TO THE BAJA PENINSULA

February 13-20, 1988 San Deigo Extension February 20-24, 1988

Mexico's Baja Peninsula is that long narrow arm of land which dangles southward from California between the Pacific Ocean and the Sea of Cortez. For eight exciting days we'll cruise from Cabos San Lucas to San Diego on the 80 passenger M.S. Polaris. This expedition will be led by specialists who return year after year to experience Baja's rugged magic where the 'mountain-rimmed coastline harbors countless whales and species of plants and animal life found nowhere else.' A walk the seath a deapt in bloom a west to the 'Availate.

plants and animal life found nowhere else. A walk through a desert in bloom, a visit to the breeding grounds of a thousand elephant seals, a night sail into a luminescent lagoon, a close encounter with the gentle gray whales—this trip offers something for everyone.

A stay in San Diego is being offered as an extension of the trip. Here we will focus on the natural and botanical wonders of the Zoo, the Gardens of Balboa Park and other public and private gardens of interest.

This trip has been specially arranged for the AHS by PASSAGES UNLIMITED.

The Charm of Old Roses for Your Garden

Rare and unusual roses...over 230 varieties. Our 80 page descriptive catalog is full of history and detailed gardening information. Send only \$2.00.

ROSES OF TENTEMATE TODAY

802-4 Brown's Valley Road Watsonville, CA 95076 (408) 724-2755

Q&A

New Feature! A Column of Questions and Answers Starts This Month

ne of the valuable AHS member benefits is the Gardener's Information Service. Every week an average of 30 to 40 letters asking for help arrive from puzzled gardeners. The questions are varied, come from all over the United States, and, together with their answers, form a body of quick and factual information that can be useful to many other members.

We felt that all readers should be able to share in the horticultural knowledge that comes from the research by Brian Little, Gardener's Information Service horticulturist, in preparing the answers. "Questions and Answers" (keep those letters coming!) will be a continuing feature of the *News Edition*.

Q: I have some Liriope plants in my border that are turning greyish-white at the tips. What can I do to prevent this?

-S.C., Martinsville, VA

A: I think you have an infestation of thrips. If you look closely at the center region of the plant, you will notice insects resembling brown or straw-colored wood slivers moving around. They can become a widespread problem because they are carried by wind. However, you can spray with Liquid Seven, Malathion, or an insecticide containing Diazinon. Repeat, spraying every seven to ten days, until there are no more signs of thrips. In the fall, be sure to remove all grass piles, or other such materials, to discourage thrips from wintering in your yard. In the summer, be sure not to water from 11 a.m. to 4 p.m. or you will scorch your leaves.

Q: Enclosed are samples of flowering shrubs I collected at Martha's Vineyard. Can you identify them?—M. L. G., Elnore, NY

A: Unfortunately, the samples that you sent are not large enough for us to identify. However, if you follow the guidelines below in the future. we will not have a problem identifying your sample. (1) Submit only portions of plants that have reached full maturity. (2) Send only fresh material. Dried plant material is very brittle and often difficult to handle. (3) Include information about the form of the plant you want identified; for example, a vine, shrub, tree or other. (4) If the plant is flowering, be sure to include all flowering parts or mention the color and size of the flowers. (5) If you know when the plant flowers, be sure to give that information as well. (6) Indicate the current height of the plant. (7) State whether the plant is growing in sun or shade. (8) Note whether the plant is deciduous (losing its leaves in the winter) or evergreen. (9) Tell where you saw this plant growing-in a wildflower meadow, forest, public garden, etc. (10) Senu flattened portions of the plant to be identified along with a self-addressed, stamped envelope to Gardener's Information Service at the Society.

Q: I want to learn about flowers and shrubs that will grow in sandy soil. I live near Nags Head, North Carolina, and I find it almost impossible to garden in sandy soil. I want continuous bloom, month after month, year after year. Can you belp me?

—M. D., Wanchese, NC

A: Wyman's Garden Encyclopedia (MacMillan, New York, 1986) has a section on seashore gardening that is helpful. This book is available at most local libraries. Also contact your local extension office and inquire about gardening in your type of soil. The extension office is listed in the phone book under "County Government." Remember that large amounts of composted leaf mold, peat moss or comPRO will help to improve the amount of organic matter in the soil. You may even incorporate wood ashes to increase the amount of potash in the soil. Be sure

not to add too much; you could raise the pH considerably and make the soil too alkaline, thereby causing acid-loving plants to become severely stressed. Consult your local extension agent to determine the correct amount of potash that is best for your conditions.

Once your soil is well conditioned, you should contact the Perennial Plant Association to obtain a list of perennials that will bloom all season long. Their address is: Perennial Plant Association, Box 86, Kensington, CT 06037.

Q: I have a winter-flowering azalea that has twisted leaf tips. I tried spraying with an insecticide containing Malathion and Benomyl to control any type of insect infestations, but they have no effect. What else can I do for it?

-B. C., Melrose Park, PA

A: If you have not noticed any insects around your azalea, I would think that the azalea has a calcium deficiency. Too much or too little calcium causes a chlorosis in the earlier stages, severe tip burn on young expanding leaves, or slightly yellow twisted leaf tips. A severe condition could lead to death of terminal and lateral buds.

Don't use hydrated lime because it releases calcium too fast. Ordinary superphosphate contains a sufficient amount of calcium for azaleas and will not reduce the acidity level in the soil.

Q: I need to know what is happening to several of my azaleas. Many of the leaf ends puff up like puffed wheat. Sometimes the whole leaf is affected, and it turns from green to white. What is the problem?

-D. K., Westmont, NJ

A: Your azalea has a leaf gall which is a disease caused by a fungus (*Exobasidium vaccinii*). The spores of this disease are carried by wind or splashed from plant to plant by rain, and it favors damp areas with low air circulation. Remove all galls from the leaf to prevent further damage, then spray with a fungicide containing tribasic copper sulfate or zineb before the buds open. Repeat this process

every two weeks until two or three new sets of leaves have matured. Be sure to space your azaleas to allow proper ventilation, and avoid deeply shaded areas.

Q: I have recently been given a few Arcauria arcauran (monkey puzzle tree) seeds, and I have no idea what to do with them. They are not common around here, so no one has information on how to propagate them. Can you give me any information on the tree and any instructions on growing it from seed?

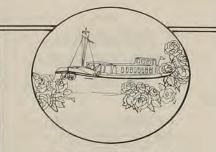
-A. S., Seattle, WA

A: Arcauria arcauran is a tall, evergreen, coniferous tree that has closely overlapping ovate-lanceolate leaves that are sharply pointed, leathery, and one to two inches long. The male cones are three to five inches long and two inches wide. Female cones are four to seven inches long and three to five inches wide. It is native to Chile and thrives vigorously in areas with mild winters, but can grow in USDA Zone 7.

This tree can be cultivated from seed, but in the industry it is most commonly propagated from cuttings. However, when raised from seed, the plants' tiers are sparse and thus less attractive than the parent tree.

Arcauria seeds have a short viability and must be sown within one month after collecting. If the seeds cannot be sown within this time frame, take the seed and place it in a plastic bag or on a moist napkin in an airtight container, then store at 38° F. The seeds will stay viable for almost six years. This particular tree's seeds need shade in order to germinate. Sow on a well-prepared bed and cover with ¾ inch of sawdust.

Provide full overhead protection until the seeds germinate, then 75 percent shade for the first two or three months of shoot development, followed by 50 percent shade for the next three months. Do not give the young seedlings full light until after the first year. Transplant seedlings in pots after they are six to nine inches tall, or two years old. Germination may take ten days if conditions are between 70 and 80° F., or 50 days or more if it is very cool. The period of germination could also depend on the quality of seed. Good luck!



AHS TRAVEL 1988 with PASSAGES UNLIMITED, INC.

In 1988 Passages Unlimited has again designed three unique trips for the Society's membership. It is our great good fortune to have Dick Hutton, Board member and President of Conard-Pyle/Star Roses, as our tour leader for two of these offerings. Back by popular demand is his trip to see The Gardens of the Riviera & Burgundy (June 11-25), featuring one week in the south of France and one week on the barge Janine in Burgundy. In October we will Fall Into Spring when Dick will also lead a three week trip to New Zealand, Tasmania and Australia to see gardens and do some botanizing in this extraordinarily beautiful and rugged part of the world.

By contrast to these exotic destinations we are also presenting the *AHS 'At Home' In Virginia* (April 23-May 1) with a tour during Historic Garden Week to visit many Restoration and private gardens. We will conclude our week's visits with a gala at the Society's Headquarters, *River Farm*.

For information, please check below & mail
this coupon to: Passages Unlimited, Inc.
14 Lakeside Office Park
Wakefield, MA 01880
or Call 1-617-246-3575
☐ Gardens of the Riviera & Burgundy
(June 11-25)
☐ Fall Into Spring
(October 20-November 5)
☐ AHS 'At Home' In Virginia (April 23-May 1)
Name
Address
Address
CityStateZip
Phone

AMERICAN HORTICULTURAL SOCIETY

OFFICERS 1987-1988

Mrs. Carolyn Marsh Lindsay Rochester, New York

President

Mrs. Harry J. Van de Kamp Pasadena, California

First Vice President

Mrs. John M. Maury

Washington, D.C. Second Vice President

Mrs. Charles W. Allen, Jr.

Glenview, Kentucky Secretary

Mr. Richard J. Hutton

West Grove, Pennsylvania Treasurer

Mr. Everitt L. Miller

Kennett Square, Pennsylvania Immediate Past President

BOARD OF DIRECTORS

Mrs. Charles W. Allen, Jr. Glenview, Kentucky

Mr. Richard C. Angino Harrisburg, Pennsylvania

Gerald S. Barad, M.D. Flemington, New Jersey

Mrs. Benjamin P. Bole, Jr. Cleveland, Ohio

Mr. J. Judson Brooks Sewickley, Pennsylvania

Dr. Henry M. Cathey

Washington, D.C. Mr. Russell Clark

Boston, Massachusetts

Mrs. Erastus Corning, II

Albany, New York

Mr. Edward N. Dane
Boston, Massachusetts

Mr. Richard J. Hutton West Grove, Pennsylvania

Mrs. Carolyn Marsh Lindsay Rochester, New York

> Mrs. John M. Maury Washington, D.C.

Mr. Everitt L. Miller Kennett Square, Pennsylvania

Mrs. Edward King Poor, III Winnetka, Illinois

Dr. Julia W. Rappaport Santa Ana, California

Mrs. Philip Temple Little Compton, Rhode Island

Mr. Roy G. Thomas

Mrs. Harry J. Van de Kamp Pasadena, California

Mr. John H. Whitworth, Jr. New York, New York

Mrs. Jean Verity Woodhull Dayton, Ohio

> Dr. John A. Wott Seattle, Washington

EXECUTIVE DIRECTOR
Mr. Pieter F. Oechsle

What's Happening at AHS



Mary Read Cooper contributed her weeding skills when needed and, on other days, her writing and organizing talents.

Thanks, AHS Volunteers!

River Farm receives invaluable gifts of time and talents from volunteers who work at everything from weeding flowerbeds to giving tours. To recognize their contributions, a luncheon was held September 15, and gifts were presented to those who logged the highest and second highest number of volunteer hours during the past year. Certificates of achievement were given to every-

one—some 50 volunteers in all. Volunteers, visitors, staff, and members appreciate that special feeling of community at River Farm. AHS members who are too far away to drop in are urged to include a visit to this beautiful spot whenever they might be in the area. The grounds are open from 8:30 a.m. to 5:00 p.m., Monday through Friday. Please come visit us.

River Farm Events

Dahlia Day at River Farm, planned for September 12, turned into a washout as heavy rains made the grounds too soft for walking or parking. But it revived the lawn and brought the dahlias to their peak. Spectacular blooms lasted right through the Fall Festival, October 4.

The next event, Christmas Open House, is scheduled for December 13. Usually attendance is around 1,000, but this year it is likely to exceed that. In addition to the large collection of decorative greens that are traditionally offered, the Cottage Shop will have kissing balls of River Farm boxwood, herb vinegars, potpourri, handmade beeswax candles, Christmas tree ornaments, and many other seasonal items. As always, Colonial mulled cider will be served to guests.

Plants Wanted

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

Searchers for rare or hard-to-find plants are invited to submit their lists, including genus, species, common name, and a brief description to "Plants Wanted" in care of the Society. Please type or print names clearly. Requests will be published on a space-available basis after a check for sources in the Society's

catalog file.

• Aralia racemosa, Spikenard. Perennial herb that grows to six feet, becoming slightly shrubby. Sparse leaves are 2½ feet long, two to three pinnate, leaflets are ovate and serrate to eight inches long. Flowers are borne ten to 25 in each umbel, fruit is brown to purple. Rhizomes are used medicinally.

Robert J. Boklund, 612 Weller Ave., La Porta, IN 46350.

- Prunus cerasifera, cherry plum. Small tree that grows to 25 feet. Leaves, one to three inches long, ovate to obovate, and somewhat serrate, smooth above and hairy beneath. Solitary white one-inch flowers appear before leaves in spring. Native to Central Asia. David L. Poor, Hickory Lane, Box 535, Clemson, SC 29633.
- Quercus frainetto, Italian oak. Deciduous tree that can grow to 120 feet. Leaves are obovate to seven inches long with usually seven very deep lobes, dark green above and pale green below. Cup enclosing one-third to one-half of the nut. David and Michele Thomas, 6126 Hadley, Merriam, KS 66202.
- Solanum muricatum, Pepino, melon shrub. Erect perennial subshrub that grows to three feet with spiny young gray to white hairy new growth. Leaves, oblong to ovate lanceolate, two to three inches long and somewhat silky. Flowers, bright blue. Fruit, violet to purple, ovoid four to six inches long, flesh firm, aromatic. Fruit is edible. Jeanne Schwaller, 1926 Hayselton, Drive, Jefferson City, MO 65101.

Endangered Wildflowers 1988 CALENDAR

• Funds raised from sales will be used to support conservation projects

• 16 full-color photographs

Information on all plants pictured
Large 8½" by 11½" format (8½" by

23" when open)

• Reward offer: calendar owners are encouraged to help rediscover populations of plants thought to be extinct

To Order Calendars:

Send \$6.95 per calendar; \$6.25 for AHS members. (For orders of 3 or more mailed to the same address: \$6.45, non-members; \$5.75, AHS members.) Please add \$1.00 per calendar for postage and handling. Postage paid for orders of 5 or more calendars. Mail orders to Jeanne Eggeman, AHS, P.O. Box 0105, Mount Vernon, VA 22121. Virginia residents, please add 4½% sales tax.

My club or society would like to help sell the Endangered Wildflowers Calendar. Please send me information.

Name:	
Address:	
City:	
State:	Zip:
Price/Calendar: \$	Total # ordered:
Postage & handling: \$	Enclosed is my check for: \$



Stokes Seed Catalog

Almost 200 pages of delicious vegetables and brilliant flowers including the newest introductions plus all your old favorites. The huge selection includes more than 95 tomato varieties.

Accurate descriptions tell you exactly what to expect from each variety. Exacting temperature and humidity controlled storage of our seed assures you of extra seed vigor and plant performance. If you demand the maximum performance from your garden, plant Stokes Seeds.

SEND TODAY-FREE CATALOG

STOKES SEEDS, 1108 Stokes Bldg. Box 548, Buffalo, NY 14240

Mailing Address	

Come Explore the Spectacular Private Gardens that Abound in Atlanta
A Warm Southern Welcome Awaits You

AHS - 88

ATLANTA

AHS 43rd Annual Meeting April 14-16, 1988
Atlanta, Georgia

Classifieds



Classified Ad Rates:

85¢ per word; \$17.00 minimum per insertion. 10% discount for three consecutive insertions using same copy. Copy must be received two months prior to publication date. Send orders to: American Horticultural Society Advertising Department, 80 South Early Street, Alexandria, Virginia 22304. Or call (703) 823-6966.

AROID SOCIETY

Interested in Anthuriums, Dieffenbachias, Philodendrons, etc? Join the International Aroid Society: Monthly Newsletter, Quarterly Journals. Dues \$15, annually. Write: INTERNATIONAL AROID SOCIETY, PO Box 43-1853, Miami, FL 33143.

AUTHENTIC ANTIQUE PUBLICATIONS FLORA AND ALMANACS

Rare "FLORA OF THE STATE OF NEW YORK"

SHOW YOU LIKE TO GARDEN!



Sweats, T-shirts & Tote Bags Perfect Gifts for the Gardener You Love.

Choose green garden-gate or multi-colored vegetable design for any shirt or tote

100% cotton crew-neck shirt S.M.L.XL sky blue, pale peach, cloud white 50/50 poly-cotton crew neck S,M,L,XL sky blue, lemon yellow, cloud white \$9.95

50/50 women's scoop-neck S,M.L,XL lilac, champagne, lemon yellow \$11.95 50/50 poly-cotton crew neck sweatshirt S,M,L,XL \$17.95 sky blue, cloud white

Tote Bag - 15 x 12 x 4 in natural \$11.95 Style Design Size

Order Now for Christmas!

Add \$1.50 per shirt/\$2.00 per sweatshirt or tote (CA res. add 6% tax), send check/Money Order/VISA or MASTERCARD to:

Print Name					
		77.5			
Address					_

City/State/Zip_

THERE'S ALWAYS THE GARDEN

Expires: 32 W. Anapamu #267-AH, Santa Barbara, CA 93101 Vol. II, John Torrey, printed 1843. Cover poor, contents good. Approx. 85 engravings (9" × 11") for tinting/framing. \$850.00. SCRAPBOOK dated 1868, 15 hand-tinted floral engravings (6" × 8") \$275.00. FARMER'S ALMANACKS, 15 issues 1811-1834, good condition. \$375.00. Original signed WATERCOLOR about 1885, romantic fuchsia/ stocks, (13" × 14" unframed) \$65.00. Cashier's check, money order only. Thurman Maness-WILDWOOD. Rt. 3, Box 165, Pittsboro, N.C. 27312.

THE AVANT GARDENER

DIFFERENT, EXCITING, GREAT FUN TO READfor 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. 18th year. Awarded Garden Club of America and Massachusetts Horticultural Society Medals for outstanding contributions to horticulture. Curious? Sample copy \$1. Serious? \$10 full year (reg. \$15). THE AVANT GARDENER, Box 489M, New York, NY 10028.

AZALEAS & RHODODENDRONS

HARDY AZALEAS & RHODODENDRONS: Northern grown and acclimated. Proven hardy here without winter protection. Big sizes! Big selection! Personal service! Two Year Catalog Subscription: \$2.00 (deductible). CARLSON'S GAR-DENS, Box 305-AHA1187, South Salem, NY 10590. (914) 763-5958.

BONSAI

Bonsai Trees, Supplies. Catalog \$2.50. We ship anywhere. M/C. VISA. BONSAI CREATIONS, P.O. Box 7511, Fort Lauderdale, FL 33338 (305) 463-8783

BOOKS

OUT-OF-PRINT BOOKS: Bought and Sold: Horticulture, Botany, Landscaping, Herbology. Large Catalogue \$1.00. POMONA BOOKS, Rockton, Ontario, Canada LOR 1X0.

"HOW TO MURDER YOUR PLANTS" the book that makes you a plant expert overnight! Discover secrets to indoor plant care, selection, design, and more. Free details or \$12.95 to: WE CARE, Dept. AHA, 8033 Sunset Blvd. #2628, Hollywood, CA 90046.

DRIED BOUQUETS SO REAL THEY LOOK FRESH! Show-and-Tell books: Step-By-Step BOOK OF DRIED BOUQUETS, over 285 Photos: Williamsburg, Modern, Country, Victorian, Gifts. (\$12.95 ppd.). Step-By-Step BOOK OF PRE-SERVED FLOWERS, professional secrets for preserving 100 flowers, includes Microwave, (\$3.95 ppd.) BOTH BOOKS \$15.90 ppd. FREE NEWSLETTER, send stamp. ROBERTA MOFFITT, PO Box 3597, Wilmington, DE 19807

1985 Edition EXOTICA 4, with 16,300 photos, 405 in color, 2,600 pages in 2 volumes, with Addenda of 1,000 Updates, by Dr. A. B. Graf, \$187. TROP-ICA 3, revised 1986, 7,000 color photos, now 1,156 pages, \$125. Exotic Plant Manual, 5th Ed., 4,200 photos, \$37.50. Exotic House Plants, 1,200 photos, \$8.95. Circulars gladly sent. ROEHRS, Box 125, E. Rutherford, NJ 07073.

BULBS

Bulbous Plant Journal, HERBERTIA and Ouarterly Newsletter. Color-filled articles on bulbs, corms & tubers of Amaryllidaceae and related families. \$20/Year. APLS-AH, PO Box 5355, Pasadena, CA 91107-0355.

CACTI & SUCCULENTS

"CATALOG OF UNUSUAL SUCCULENTS" Discover the largest selection of weird and unusual succulents—picture book catalog of succulent crests, variegates, living stones, and oddballs. Send \$1.00 today. "CATALOG OF UNUSUAL SUCCU-LENTS," Dept. A-11, 553 Buena Creek Road, San Marcos, CA 92069.

ATTRACTIVE and UNUSUAL CACTI, Lithops, and other succulents all seed grown. Government licensed; ship anywhere. Informative catalog \$1.00 (redeemable). REDLO CACTI AH, 2315 NW Circle Blvd., Corvallis, OR 97330.

CARNIVOROUS PLANTS

Carnivorous, woodland terrarium plants and supplies. Book, The World of Carnivorous Plants, \$8.95 postpaid. Catalog FREE. PETER PAULS NURSERIES, Canandaigua, NY 14424.

CATALOGS

96-page color catalog has many sensational values on more than 1,300 varieties of Peonies and Daylilies, plus timely tips. \$2.00 (deductible on first catalog order). GILBERT H. WILD & SON, INC., AH-1187 Joplin Street, Sarcoxie, MO 64862.

DAYLILIES

DAYLILIES GALORE! Beautiful named hybrids. Quantity discounts. Send now for FREE informative catalog. LEE BRISTOL NURSERY, Box 5A, Gaylordsville, CT 06755

FREE 24-HOUR HORTICULTURAL **ANSWERS**

The horticultural answer men at Green Cross Wintercare answers all horticultural questions 24 hours a day, 365 days a year. Call 1-800-841-1105: leave question ... answer by mail. In California (415) 362-0660. Or write: H.A.M., 260 Bay, Suite 207, San Francisco, CA 94133.

GARDEN ORNAMENTS

Bronze, Lead, and Stone including Topiary. 400 page catalog available \$8.00. Hard bound library edition over 2,000 illustrations showing bird baths, benches, bronzes including tablets, cisterns, compasses, cupids, curbing, dolphins, eagles, elephants, finials, frogs, foxes, fruit baskets, gates and gate posts, Japanese lanterns, lead figures, lions and lion masks, mermaids, planters, St. Francis, weathervanes. KENNETH LYNCH & SONS, 78 Danbury Road, Wilton, CT 06897.

GARDENING GLOVES

GOATSKIN GLOVES. Tough, lightweight goatskin stretches and becomes form-fitting, giving wearer ultimate in fit, grip, dexterity. Natural lanolin in leather keeps hands soft. Sizes 7-10 or send outline of hand. \$8.50 postpaid. PUTNAM'S, Box 295C, Wilton, NH 03086.

GREENHOUSE ACCESSORIES

COMPLETE MIST PROPAGATION SYSTEMS. Get phenomenal propagation results, indoors-outdoors. Completely automated. FREE BRO-CHURE. AQUAMONITOR, Dept. 4, Box 327, Huntington, NY 11743.

GREENHOUSES

Redwood/fiberglass kits. Free Brochure. GOTHIC ARCH GREENHOUSES, PO Box 1564-AH, Mobile, AL 36633. Toll Free 1-800-255-0284 after tone 1059.

HORTLINE

Back in print: *Hortline*, the "when to-how to" horticulture newsletter! \$15.00/yr. for 12 monthly issues. USDA zones 4, 5, 6 and 7. Make checks payable to: TOM'S WORD HORTICULTURE CONSULTING, PO Box 5238, Charleston, WV 25361.

HOUSE PLANTS

JASMINES! BEGONIAS! Exotics from the far corners of the world! Logee's 1986-88 profusely illustrated mail-order catalog features 2,000 rare indoor plants for your windowsill or greenhouse. Catalog—\$3.00. LOGEE'S GREENHOUSES, Dept. AH, 55 North Street, Danielson, CT 06239.

ORCHIDS, GESNERIADS, BEGONIAS, CACTI & SUCCULENTS. Visitors welcome. 1986-87 catalog \$1.75. LAURAY OF SALISBURY, Rt. 41 (Undermountain Rd.), Salisbury, CT 06068 (203) 435-2263.

IRIS CALENDAR

1988 IRIS CALENDAR: A fine Christmas gift! Size when hanging, 12" × 9"; fifteen color plates. Make \$5 check to *The American Iris Society*; send to Ronald Mullin, Rt 3, Box 84, Pawnee, OK 74038.

JASMINES

Assorted Jasmines, Thunbergia Erecta or Pentas four for \$7.50. List 30¢. EDNA WELSH, Rte. 3, Box 1700, Madison, FL 32340.

LONGWOOD FELLOWSHIPS IN PUBLIC HORTICULTURE ADMINISTRATION

Newark, Delaware and Kennett Square, Pennsylvania. University of Delaware's Longwood Graduate Program is accepting applications through 31 January 1988 for the 1988-90 class. The two-year program yields the M.S. degree in Public Horticulture Administration with emphasis in administration and management of public gardens. The Program offers students academic study at the University of Delaware and practical experience working with business, education, horticulture and maintenance staff of Longwood Gardens in Kennett Square, Pennsylvania. The Longwood Graduate Program is appropriate for individuals interested in professional careers in arboreta, botanical gardens, horticultural societies, park systems, civic garden centers and related institutions. Further information and applications may be requested by contacting Dr. James E. Swasey, Coordinator, Longwood Graduate Program, 153 Townsend Hall, University of Delaware, Newark, DE 19717-1303. Tel. 302-451-2517.

MUSHROOMS

GROW SHIITAKE/EXOTIC MUSHROOMS

Producers & suppliers of the highest quality commercial strains for mushroom growers. Consulting, Supplies, Spawn. Serving the industry with state of the art solutions backed by scientific and applied research. Send \$2 for catalog (refund w/purchase) to: NORTHWEST MYCOLOGICAL

CONSULTANTS, Dept. A, 702 NW 4th St., Corvallis, OR 97330.

NURSERY STOCK

Send one dollar for catalog of hard-to-find trees and shrubs. BEAVER CREEK NURSERY, 7526 Pelleaux Rd., Knoxville, TN 37938.

ORCHIDS

Help! We need room. Mature Cattleya orchid plants, our selection, \$8.00 each. Minimum order five plants. Packed five maximum per box, bareroot. Include \$5.00 per box shipping. FOX OR-CHIDS, INC., 6615 West Markham, Little Rock, AR 72205, 501-663-4246.

PEONIES

Including rare hybrids. Also DAYLILIES, JAPA-NESE IRIS, HOSTA 1987 catalog through November 15 or reserve your February 1988 copy— \$1.00 (refundable). CAPRICE FARM NURSERY, 15425 SW Pleasant Hill, Sherwood, OR 97140. (503) 625-7241

PERENNIALS

We offer a good selection of sturdy plants. Send \$1.00 for Plant List (refundable). CAMELOT NORTH, R2, Pequot Lakes, MN 56472.

Large Selection of Perennials for sun and shade. Tall, Medium and carpeting Sedums. Extensive collection of annual and perennial herbs. Catalog \$1.50. WRENWOOD, Rte. 4, P O Box 361, Berkeley Springs, WV 25411.

PLANTS—CHOICE AND AFFORDABLE

Extensive Selection: ★ American Natives ★ Outstanding Ornamentals ★ Uncommon Conifers ★ Perennials ★ Potential Bonsai ★ Hardiest Eucalyptus ★ Wildlife Plants ★ Affordable containerized starter-plants. Informative catalog—\$2.00. FORESTFARM, 990 Tetherah, Williams, OR 97544.

PLUMERIA! GINGERS! HIBISCUS! BOUGAINVILLEAS!

DAYLILIES, TROPICAL BULBS, BOOKS. A COLLECTOR'S DREAM CATALOG OF EASY-TO-GROW EXOTIC PLANTS—\$1.00. HANDBOOK ON PLUMERIA CULTURE—\$4.95. RELIABLE SERVICE, GROWING INSTRUCTIONS, SPECIALTY FERTILIZERS. SPECIAL OFFER: Plumeria cuttings, five different colors (our selection) \$25.00 (postpaid, USA). PLUMERIA PEOPLE, Dept. AH, PO Box 820014, Houston, TX 77282-0014.

RHODODENDRONS

RHODODENDRONS for landscape, woodland and rock gardens. Free descriptive listing. CARDINAL NURSERY, Rt. 1, Box 316M, State Road, NC 28676. (919) 874-2027.

RHODODENDRONS & AZALEAS

SPECIALIZING IN THE UNUSUAL. Dwarf Rhododendrons, Evergreen & Deciduous Azaleas, Dwarf Conifers, Companion Plants. Catalog \$1.00, refundable. THE CUMMINS GARDEN, 22 Robertsville Rd., Marlboro, NJ 07746. (201) 536-2591.

RHODODENDRONS AND AZALEAS—Select from 1,000 varieties with many new exciting introductions. Also Laurel, Andromeda, Holly, Conifers, Rare Plants and Trees. Mail-order catalog \$2.00. ROSLYN NURSERY, Dept. AH, Box 69, Roslyn, NY 11576. (516) 643-9347.

ROOTING

CLONE your favorite plants with the CLONPOT[®] Kit. Special plastic and clay containers, supplies and complete instructions for rooting cuttings \$13.95, \$2.00 handling. SKOGEN P. SUPPLY, P.O. Box 753, Grand Haven, MI 49417.

ROSES

HARD TO FIND ROSES: Old and New varieties including: HT Elizabeth Taylor, HT Lemon Sherbert, HT Maid of Honour, HT Marijke Koopman, HT Nantucket, HT Sandringham Centenary. We carry the hardy Canadian Explorer roses, and a large selection of the new Austin English Shrub Roses which combine old rose fragrance and appearance with HT and Ft. flowering frequency. Excellent additions from McGredy: HT Penthouse (pk), HT Freshie (salmon pk), HT Redwood (very dark pk), HT Peachy (peach), and Ft. Red Hot (reddish). Free list on request. HORTICO, INC., R.R. #1, Waterdown, Ontario, Canada LOR 2HO. (416) 689-6984.

ROSES IN PORCELAIN. Our rose necklaces are unique. Handpainted and set in sterling silver. Send \$1.50 for color photo/brochure. P & S Porcelains, P.O. Box 844, Holly Hill, FL 32017.

SEEDS

THE WORLD'S LARGEST and most famous seed catalog. Over 225 pages, 4,000 varieties, 1,000 color pictures. A major book of reference. The Encyclopedia of how and what to grow from seed. Vegetables, potted plants, exotics, perennials, alpines, rockery, latest and best annuals, trees, shrubs, bulbs from seed; includes rare items unobtainable elsewhere. Write for free copy, allowing three weeks, or enclose \$2 for first-class mail: THOMPSON & MORGAN, INC., Dept. AHC, PO Box 1308, Jackson, NJ 08527.

WORLD FAMOUS SELECTION of rare seeds from every continent. Thousands of exotics, wildflowers, trees, Himalayan alpines. Gourmet vegetables, culinary herbs. Catalog \$1.00 J.L. HUDSON, Seedsman, Box 1058-AT, Redwood City, CA 94064. Rare and uncommon seeds and bulbs. Mostly tropical: Heliconia, Banana, Cashew, Mangorsteen, Carambola, numerous palms and protea. We ship WORLD WIDE. For catalog send 50¢ or stamps. THE BANANA TREE, 715 Northampton St., Easton, PA 18042.

VIDEOTAPES

NEW VIDEOTAPES! Increase your vegetable/flower yield; tour famous gardens. Over forty titles. Free Catalog (800) 331-6304, California call collect (415) 558-8688. THE ORIGINAL HOME GARDENER'S VIDEO CATALOG, Box 410777, Dept. AH, San Francisco, CA 94141.

WILDFLOWERS

UNCONVENTIONAL, RARE AND FAMILIAR NATIVE WILDFLOWERS AND CULTIVATED PERENNIALS for formal or naturalistic areas. Top quality nursery propagated plants. Free list of mail-order plants or descriptive catalog \$3.00. NICHE GARDENS, Rte. 1, Box 290, Dept. A., Chapel Hill, NC 27514.

WOODLANDERS

RARELY OFFERED SOUTHEASTERN NATIVES, woody, herbaceous, nursery-grown. Many hardy northward. Also newly introduced exotics selected for Southern gardens. Send 39¢ postage for extensive mailorder list. WOODLANDERS AH, 1128 Colleton Ave., Aiken, SC 29801.



New Publications

• Wildflowers in The Carolinas. This is a handy, carry-along volume with 200 color photographs and over 500 descriptions of wildflower species growing from Vermont to Georgia. The book provides scientific as well as common names, plus information on habitat, distribution, flowers, fruits, stems, leaves, and more. The author, Wade T. Batson, is a noted botanist and an emeritus professor of biology at the University of South Carolina. University of South Carolina Press, Columbia, SC 29208. Hardcover, \$24.95; softcover,

\$11.95

- One Circle: How to Grow a Complete Diet in Less Than 1000 Square Feet. David Duhon, with other contributors, shows how to design diets consisting of foods that can be grown in a small space yet are able to supply all necessary nutritional requirements. For the backyard gardener, the six chapters cover intensive nutrition theory plus culture of the crops necessary to provide the diets. Send \$9.50 to Ecology Action, Ridgewood Road, Willits, CA 95490.
- Plants for Coastal Dunes of the Gulf and South Atlantic Coasts and Puerto Rico. How to stabilize coastal sand dunes with vegetation is clearly presented in this USDA publication. The information applies to coastal dunes and beaches of Puerto Rico, Texas, Mississippi,



Louisiana, Alabama, Florida, and Georgia, and includes information on how dunes are formed and the ecosystem created by dunes. Available free from the Soil Conservation Service, U. S. Department of Agriculture, P.O. Box 2890, Washington, DC 20013.

- The Tumbleweed Gourmet: Cooking with Wild Southwestern Plants. Amaranth meal in your pancakes, mesquite meal in your cakes, saguaro seed piecrust, cactus honey sherbert, and prickly pear juice added to tequila and orange juice for an Arizona Sunrise! Dishes prepared from this off-beat cookbook using wild plants available in backyards and city lots of the Southwest will introduce interesting and nutritious meals to residents of the Sunbelt. No pounding on rocks necessary in the preparation of these indigenous plants, as modern equipment and techniques are used throughout. By Carolyn J. Niethammer. The University of Arizona Press, Sunnyside Building, 250 E. Valencia Rd., Tucson, AZ 85719. Retail price, \$20.00.
- *The Urban Naturalist*. This is a nature guide for the city. The urban

ecosystem is more extensive and more complex than you might have realized. Constantly changing, it counteracts natural changes and manmade degradation of the environment which account for loss of species by invasion of new species and the range extension of others. Steven Garber has provided us with a handbook to guide us through our urban flora and fauna. It covers wildflowers, grasses, trees, insects, fish, amphibians, reptiles, birds, and mammals. To complement your garden volumes, and to discover how exotic your city has become, read this softcover volume (232 pages) by Steven D. Garber. John Wiley & Sons, 605 Third Avenue, New York, NY 10158-0012. Retail price, \$12.95

• Meanings of the Garden. What does your garden mean to you? In May 1987, horticulturists, landscape architects, artists, journalists, historians, psychologists, and others gathered to define and debate what role gardens play in individual lives and in society. Papers presented fell into two categories: theoretical perspectives on the roles gardens play in peoples' lives and stories which summarize one or more cases of a garden's relationship or meaning. For a copy of the proceedings, Meanings of the Garden, send \$24.50 plus \$2.75 shipping and handling to the Center for Design Research, Department of Environmental Design, University of California, Davis, CA 95616. Make checks payable to the Regents of the University of California.

American Horticulturist

P.O. Box 0105, Mount Vernon, VA 22121

2ND CLASS
POSTAGE
PAID AT
ALEXANDRIA, VA
AND AT ADDITIONAL
MAILING OFFICES