

AMERICAN HORTICULTURIST

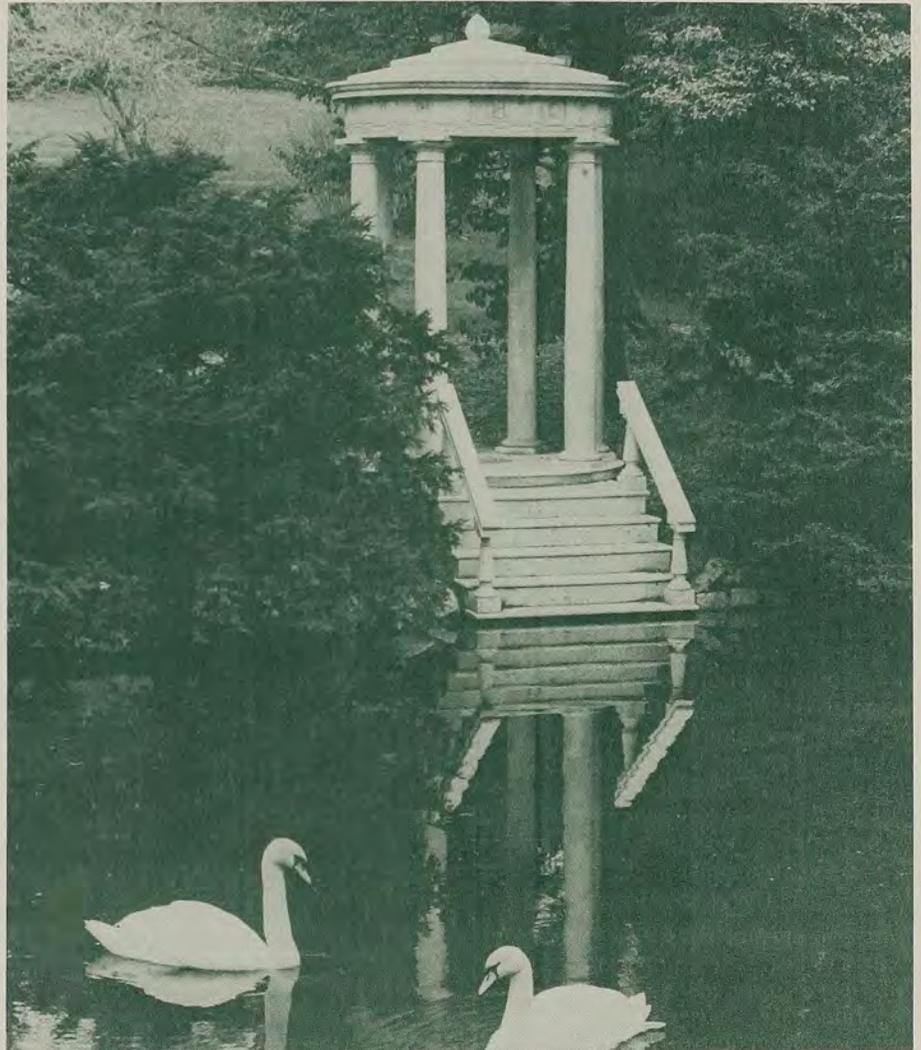
NEWS EDITION—MAY 1983

Join Us in Philadelphia

Society members from across the country will be gathering in Philadelphia for our 38th Annual Meeting this September 14-18. Philadelphia was not only the cradle of liberty in the 18th century, it was also the cradle of American horticulture, nurtured by the Bartrams and a host of botanists, plant collectors, seedsmen, naturalists and horticulturists living in and around the Delaware Valley from the colony's very founding in 1683. With its rich garden history and tradition, this city is regarded as the gateway to the gardens of America. Today it boasts more gardens and arboreta accessible to the public than any city in the nation. This is a city proudly aware of its garden heritage, as evidenced by the collaborative projects of its many garden institutions, and by its popular and prestigious Philadelphia Flower Show in the spring.

The Pennsylvania Horticultural Society, which sponsors that mighty show, is graciously helping us plan an exciting program for you, our members, this fall. Among the activities planned will be a cocktail reception at the P.H.S. headquarters; morning lecture and panel discussions; and afternoon bus tours to the Main Line, Longwood, the Wilmington area and the Brandywine Valley, where we will visit both public and very special private gardens. There also will be a full-day tour of gardens in Chestnut Hill and north, with lunch at the Morris Arboretum. Saturday night will feature the presentation of AHS awards for horticultural excellence at our Annual President's Banquet.

At the close of the Annual Meeting there will be a Post Conference Tour of fine public and private gardens on the Eastern Seaboard. Visits



The Morris Arboretum is one of the gardens the Society will visit during its September Annual Meeting in Philadelphia.

include the outstanding Duke Gardens in New Jersey, the Princeton Nurseries and Rutgers University Arboretum. In New York State we

will visit the Planting Fields Arboretum and Old Westbury Gardens. Stops in the Hudson Valley will include
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River Farm Notes

Our appeal for help to bring a greenhouse to River Farm brought tremendous response from Society members. At this writing, in early March, we have received a total of \$37,562.68 from our members. Your enthusiasm is contagious: we're all very excited and very thankful.

Industry has also responded to our appeal. A well-known greenhouse designer has been kind enough to donate his services to design our greenhouse. His expertise in solar design will help us to achieve the energy-efficient structure we need. By the time this news edition of *American Horticulturist* reaches you, the designer will have completed his preliminary drawings and will be well into the final stages of his construction drawings. If all goes according to plan, construction will begin this summer. It won't be long after that when we first walk



through the door of our finished greenhouse.

The designer's generosity is not the only helping hand we will receive from outside our general membership. I've learned recently that a corporation has generously offered to supply the glazing material we'll need. We are hoping other companies will donate more of the essentials: automatic timers, automatic watering systems, environmental monitoring systems, pots, implements, soil ingredients, plant carts and additional supplies of pesticides and fertilizers. We want to construct the most exemplary greenhouse modern technology can provide. I will keep you informed of our progress in future articles.

Once completed, this greenhouse will provide the Society with one of

the most important teaching tools it has ever had—a greenhouse specifically designed to meet our educational goals.

Our greenhouse will be approximately 40 feet by 20 feet and will feature an energy-efficient uneven span design. It will look something like a huge lean-to with its long slope oriented to the south for improved sun collection. Its northern wall will be insulated for reduced heat loss. Every aspect of the design of this greenhouse will be of educational value.

As you might expect, we will use our greenhouse largely to produce plants for our numerous displays here at River Farm, but beyond this, we want to use this structure as an actual classroom for students of all ages and levels of ability. We plan to conduct classes in propagation, greenhouse growing, greenhouse design and greenhouse management. Our greenhouse will serve as a place for AHS student interns to gain practical experience and will also function as a plant research site. Our plans abound, and we cannot wait to begin their implementation.

In months to come, I will be telling you much more about our greenhouse and plans for its use. Because of your generosity, the Society's new greenhouse will be very, very special. —Steve Davis

AMERICAN HORTICULTURIST

VOLUME 62 NUMBER 5

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Member of Society of National Association Publications

New "Plants Wanted" Column Started

Many of you are familiar with the Society's plant locator service, one of our most often used membership benefits. With this issue of the newsletter we are expanding that program in hopes of helping members looking for rare and unusual species that are unavailable in commerce. In our new "Plants Wanted" column we will publish a list of plants and the names and addresses of members who are looking for them. Individuals who are growing, or who have access to any of the species listed, can write their fellow member to help them obtain these plants.

Please send your "Plants Wanted" lists, including genus, species, common name and a brief description, to the Editor, *American Horticulturist* news, in care of the Society. We

will publish them on a space available basis after checking for retail sources through our catalogue file.

The Society's Acting Director, Dr. Gilbert S. Daniels, has agreed to start the "Plants Wanted" column with two species he has been trying to locate for several years. If you are growing or know of a source for either of these plants, please write to Dr. Gilbert Daniels, c/o AHS, PO Box 0105, Mount Vernon, VA 22121.

Lysichiton americanum, an ornamental skunk cabbage commonly called yellow or western skunk cabbage.

Lysichiton camtschaticense, a species of skunk cabbage from northern Japan.

Gesneriads Can Harbor TMV

Scientists at the University of Florida have found that tobacco mosaic virus (TMV), a disease most commonly associated with tomatoes and tobacco, occurs in several genera in the gesneriad family. Six gesneriad collections were surveyed, and all had virus in a percentage of the plants. The incidence ranged from 11 to 81 per cent, and TMV was found in 14 of the 20 genera tested, including *Columnea*, *Codonanthe*, *Episcia*, *Gloxinia*, *Kohleria*, *Nematanthus*, *Sinningia*, *Smithiantha* and *Streptocarpus*. TMV has not yet been found in African violets, *Saint-paulia* sp.

Foliage symptoms of TMV in members of the Gesneriaceae are often inconspicuous, making it difficult to recognize and dispose of in-

fectured plants. It is probably a good idea to discard any plants that remain unhealthy for long, because if virus is responsible the plant will never recover. TMV can persist in smoking tobacco and can be transferred from a smoker's hands to a plant. The precautions orchid enthusiasts take to prevent the spread of virus in a collection will help keep virus from spreading in a gesneriad collection as well. Wash your hands thoroughly after handling each plant or group of cultivars, and always use clean propagating tools. Orchid growers flame or dip-sterilize their tools; gesneriad growers should use clean razor blades after grooming or propagating each plant.

—*The Gloxinian*,
March, April, 1983

More New Plants For Your Garden

Several interesting new plants will be available this spring, including a thornless blackberry, a chocolate-colored sweet pepper, a vineless, shorter season sweet potato, an apple for sub-tropical areas and a new, hardy strawberry.

'Hull Thornless' is a genetically thornless blackberry cultivar. Unlike thorn-free cultivars, where the trait is the result of a chance mutation, its sprouts will always remain thornless. 'Hull Thornless' bears firm, sweet, attractively colored fruit, and should be available at local nurseries and garden centers. It was developed and released by the U.S.D.A. Agricultural Research Service at Beltsville, Maryland.

'Coco' pepper bears large, long, pimento-type fruit that has a sweet, mild flavor. The fruit is an unusual, shiny, chocolate brown. 'Coco' pepper is available from Gleckler's Seedmen, Metamora, OH 43540. Their catalogue is free.

'Vardaman' is an attractive new sweet potato with dark-green foliage and a vineless growth habit that makes it easy to cultivate between rows. It produces excellent tasting potatoes and yields are better than average. "Baby bakers" can be harvested in 90 days; full sized yams take a few days longer. 'Vardaman' is available from Steele Plant Com-

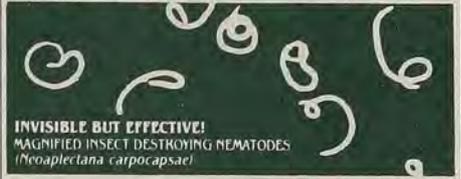
pany, Gleason, Tennessee 38229. Send a self addressed, stamped, business-sized envelope for their catalogue.

'Gordon' apple trees produce crisp, juicy, attractive, sweet-tart fruit that is suitable for cooking or eating. Best of all, they require only 300 to 500 hours of temperatures at 45° F or below to produce fruit. Most apples require more than 1,000 hours of sub 45° F temperatures to blossom and fruit. 'Gordon' was developed in Whittier, California, just south of Los Angeles in U.S.D.A. Zone 9, and is available on both standard and semi-dwarf root stocks. It should be available at your garden center and nursery, but it also can be ordered through the mail from Armstrong Nurseries, Inc., PO Box 4060, Ontario, CA 91761. Their catalogue is free.

'Northland' strawberry is an extremely hardy, productive cultivar that produces runners freely and bears its fruit in midseason. Its attractive, large- to medium-sized fruit is bright red both inside and out and is mild flavored. 'Northland' was developed and released by the Minnesota Agricultural Experiment Station, St. Paul, and should be available in local nurseries and garden centers in Minnesota and other areas where hardiness is a problem.

NEW! PUT THESE "SEEK AND DESTROY" INSECT KILLERS TO WORK IN YOUR LAWN OR GARDEN. SEEK™ ELIMINATES THE MOST DAMAGING SOIL COMPLEX INSECTS A HOMEOWNER CAN FACE... WITHOUT CHEMICALS... WITHOUT HARMING PLANTS.

These special insect-eliminating nematodes actually seek out and then destroy-sod webworms (lawn moth larvae), armyworms, white grubs, cutworms, onion maggots, wireworms, root weevils, cabbage root maggots, earwigs, and other dreaded soil complex insects... **WITHOUT CHEMICALS, WITHOUT DAMAGE TO PLANTS, AND WITHOUT HARMING THE ENVIRONMENT.**



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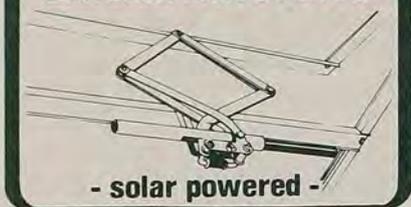
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Denver Garden Features Water-Conserving Landscaping



Visitors to the Denver Water Department Grounds can learn about ways to conserve water in their home landscapes.

Visitors to Denver should take time to visit the grounds of the city's Water Department Administrative Office, transformed last summer into a garden demonstrating a new concept in water conserving landscaping called xeriscaping, a word derived from the Greek word for dry, *xeros*. Xeriscaping involves a comprehensive approach to landscaping that combines design, plant selection, construction, irrigation, soil preparation, drainage, mulching and maintenance to produce an attractive landscape that requires a minimum amount of water.

To many, the idea of a water conserving landscape in a dry region suggests expanses of gravel accented by an occasional yucca or cactus, but the xeriscaped grounds of Denver's Water Department prove that a low water landscape can be colorful, inviting and varied. In all, 68 species of plants, both introduced and native, are represented in the garden, and a separate area demonstrates five types of sod that were specifically developed for their drought tolerance.

The garden is divided into separate areas demonstrating varying degrees of water conserving landscapes. The so-called "Typical Zone" is planted with commonly used plants but demonstrates that certain precautions, such as proper soil preparation and mulching, can help reduce the amount of water needed to maintain the landscape.

The largest and most prominent part of the garden is devoted to very drought tolerant plants, most of which can survive on natural rainfall alone and still maintain their appearance throughout the year. Here the visitor will find sempervivums, blue fescue, sedums, zinnias, several species of juniper, potentilla, sumac, yucca and several species of trees.

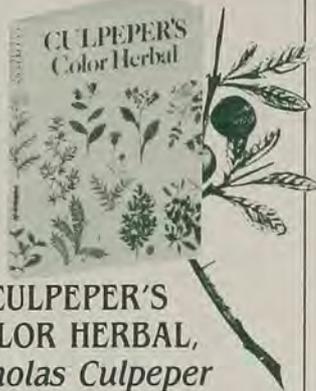
The garden won a National Water and Energy Conservation Award from the Irrigation Association and an award from the Associated Landscape Contractors of America. It is located at the Denver Water Department Administrative Office, 1600 West 12th Avenue, Denver, Colorado.

Sempervivum Newsletter

Sempervivum enthusiasts familiar with the British publication on their favorite plant, called *Houseleeks*, may not know there is an American publication to which they can subscribe. *The Sempervivum Fanciers Association Newsletter* has been published quarterly since 1975, and each six- or eight-page issue contains at least one photograph. The subscription price is \$10 per year, \$12 for foreign members. For more information or a subscription write Dr. C. William Nixon, 37 Ox Bow Lane, Randolph, MA 02368.

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The 17th century astrologer and physician Nicholas Culpeper has provided information on almost 400 important herbs and plants; where they can be found, their flowering time, their astrological character and rulership, along with their medicinal virtues and recipes. Then, for each plant, herbalist David Potterton adds comments about how it is used by today's herbalists and those who follow homeopathic medicine.

It includes hundreds of magnificent, accurate, full-color illustrations of the herbs and plants described in the book, plus a reference index of diseases and their herbal remedies. Herbalists, gardeners, healers, and even students of the occult will treasure this spectacular book. 224pp. 7 1/4 x 9 3/4. Paperback \$12.95 retail, \$10.30 to members of AHS.



**THE LORE OF FLOWERS,
 Neil Ewart
 With illustrations by Nina O'Connell**

This rare and romantic look into the stories behind flowers includes all the legends, herbal lore, historical associations, and name origins of familiar flowers, along with a revealing look into the "language of flowers"—their meanings and the significant sentiments they expressed in earlier times.

66 pages of exquisite illustrations—44 of them in full color—depict many of the species in their natural environments, taking you through a paradise of gardens, fields, and meadows. You will read about how Tulipmania, lasting for seven years, was responsible for the winning and losing of many family fortunes—about how the Thistle became the national flower of Scotland—and how the tragic death of a young man gave the Crocus its name. Also included is a list of each official state flower in the U.S., plus a sprinkling of appropriate poems written by such bards as Shakespeare, Wordsworth, and Shelley. This enchanting potpourri of beauty and charm will inform and delight the naturalist, botanist, gardener, historian, writer, and the little bit of poet that's in all of us. 192pp. 7 1/2 x 9 3/4. Hardcover \$19.95 retail, \$15.20 to members of AHS.



**ORCHIDS AS INDOOR
 PLANTS, Brian and
 Wilma Rittershausen**

Have you been told that Orchids are delicate and difficult to grow? That they survive only under the most controlled conditions in the care of specialists? It's not true! In this instructional book, two of the world's foremost orchid experts show you how to grow vigorous, beautiful orchid plants in your own home, and 29 photos—12 in full color—show you how to use these exotic blooms to decorate your kitchen, living room, bedroom or study!

Described are dozens of orchid species (with thousands of varieties), plus invaluable information on:

- How to select places in your home for growing orchids
- Providing the right amount of light, warmth, and moisture
- Caring for the foliage and flowers
- Repotting, rooting, and propagating techniques
- Dealing with pests, cultural faults, damaged plants and more!

For indoor plant enthusiasts, orchid lovers, and even interior decorators on the lookout for different dramatic decors, this book is the answer to successfully growing orchids at home. 90pp. 5 1/2 x 8 1/2. Paperback \$7.95 retail, \$6.86 to members of AHS.

**GROWING
 PLANTS
 WITHOUT SOIL,
 Hans-August
 Rotter**



Did you know that plants can actually grow better, larger and healthier in water without soil? This book, based on the modern science of hydroponics, shows you how plants can flourish without the need for messy potting soil.

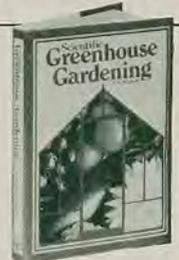
Also includes invaluable tips on light requirements, fertilization, temperature, water needs, pest control, growing outdoors, in greenhouses, and in professional nurseries. Learn to polish, shade, stake, train, cut back, prune, trim, transplant, and propagate. With special advice on keeping your plants healthy while you're away, creating decorative arrangements, and growing them in business offices, there's no reason not to immediately get started with this groundbreaking method to plant cultivation! 120pp. 7 3/4 x 8 1/2. Hardcover \$12.95 retail, \$10.30 to members of AHS.

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 John I. Wright**



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GARDENER'S DATELINE

MARCH 1-AUGUST 31

Atlanta Historical Society Exhibition

Celebrating Georgia's 250th Birthday

Theme: Land of Our Own: Landscape and Gardening Tradition in Georgia 1733-1983
Atlanta Historical Society, 3101 Andrews Drive, N.W., Atlanta, Georgia

Information: Susan V. Levine, Atlanta Historical Society, 3101 Andrews Drive, N.W., Atlanta, GA 30305, (404) 261-1837

APRIL 23-MAY 8

46th Annual Maryland House and Garden Pilgrimage

Information: Maryland House and Garden Pilgrimage, 1105 A Providence Rd., Towson, MD 21204

MAY 1

Private Gardens of Annapolis Tour

Annapolis, Maryland

Information: Historic Annapolis Tours, Inc., Old Treasury Building, State Circle, Annapolis, MD 21401, (301) 267-8149

MAY 5-8

American Rhododendron Society 39th National Convention

Red Lion Inn-Lloyd Center, Portland, Oregon
Information: Harvey Welch, 4155 S.W. Hillsdale Avenue, Portland, OR 97201, (503) 227-4252

MAY 7

Brandywine Conservancy Wildflower Plant and Seed Sale

Brandywine River Museum, Chadds Ford, Pennsylvania

Hours: 9:30 a.m. to 2 p.m.

Information: Brandywine River Museum, Brandywine Conservancy, PO Box 141, Chadds Ford, PA 19317, (215) 388-7601

MAY 7-8

Annual Geranium and Pelargonium Show

Plummer Park, 7377 Santa Monica Boulevard, Hollywood California

Hours: Saturday Noon to 5 p.m.; Sunday 10 a.m. to 4 p.m.

Information: (213) 469-8665, 837-8827

MAY 12-13

Fourth Annual Menninger Flowering Tree Conference

Florida Cypress Gardens

Information: Florida Nurserymen and Growers Association, PO Box 16796, Temple Terrace, FL 33687

MAY 15

Spring Open House

American Horticultural Society
River Farm, Mt. Vernon, Virginia

MAY 15

Lilac Sunday at Arnold Arboretum

Jamaica Plain, Massachusetts



The garden of the Peoples Republic of China at the International Horticultural Exhibition in Munich.

Information: The Arnold Arboretum of Harvard University, Att: Kate Nixon, The Arbor Way, Jamaica Plain, MA 02130, (617) 524-1718

MAY 15-21

African Violet Society of America, Inc., 37th Annual Convention

Red Carpet Hotel, Milwaukee, Wisconsin

Information: Mrs. Barbara Zimmerman, Registration Chairman, W238 S3712 Big Bend Road, Waukesha, WI 53186, (414) 542-0616

MAY 19

Herb Education Day

United States National Arboretum, 24th and R Streets, NE, Washington, D.C.

Hours: 10 a.m. to 3 p.m.

Information: National Arboretum, 24th and R Streets, NE, Washington, D.C. 20002, (202) 472-9279, 472-9100

MAY 21-22

San Diego Bromeliad Society Annual Show and Sale

Casa del Prado, Balboa Park, San Diego, California

Hours: Saturday 1 to 5 p.m., Sunday 11 a.m. to 5 p.m.

Information: Joyce Brehm, Corresponding Secretary, San Diego Bromeliad Society, (619) 277-1030

MAY 25-27

Royal Horticultural Society Chelsea Flower Show

Chelsea, London, England

Information: The Royal Horticultural Society, Vincent Square, London, England SW1P 2PE, Telephone 01-834-4333

MAY 25-29

Greater New York Orchid Society Show

New York Botanical Garden, Bronx, New York

Information: The New York Botanical Garden, Bronx, NY 10458, (212) 220-8616, 8637

MAY 26

Roses and May Flowers Day

William Paca House and Garden, 186 Prince George Street, Annapolis, Maryland

Hours: 10 a.m. to 7 p.m.

Information: Historic Annapolis Tours, Inc., Old Treasury Building, State Circle, Annapolis, MD 21401, (301) 267-8149

MAY 26-JUNE 9

AHS Tour of Germany and the International Horticultural Exhibition

Information: See page 9 of this newsletter

MAY 26-28

African Violet Society of Canada National Show and Convention

Delta River Inn, Richmond, British Columbia, Canada

Information: Mrs. Anita Thomas, 7818 Main Street, Vancouver, B.C., Canada V5X 3K6

JUNE 3-5

American Rock Garden Society Annual Meeting

Cornell University, Ithaca, New York

Information: ARGS Annual Meeting, Box 3, North Campus Union, Cornell University, Ithaca, NY 14853

JUNE 4-5

Delaware Flower Show

Hagley Soda House, off Buck Road, Greenville, Wilmington, Delaware

HORTICULTURAL EXPLORATIONS



Europe in the autumn offers horticultural delights to our American Horticultural Society members and friends on these exclusively designed trips. Local horticulturists accompany you. The arrangements are high quality with first-class hotels, most meals and tips included. Besides public and private gardens, visits to diversified nurseries are included.

AUTUMN ENGLAND

September 8-22

A different itinerary than our spring trip takes you on a private tour of Blenheim Palace, the charming Cotswolds, the Annual Show in Harrogate, the fine Cambridge Botanic Garden, the Royal Botanic Garden at Kew. A large portion of the time is spent in private gardens such as Sheila MacQueen's Westwick Cottage. Also several days in London for sightseeing and shopping.

AUTUMN GERMANY

September 6-20

An autumn version of our spring exploration. The highlight is IGA '83, the International Horticultural Exhibition. This 180-acre park will be one of the finest shows to be held in Europe with flower breeders, nurserymen and gardeners from all over the world. Also included are magnificent Berlin Botanic Garden, one of the world's finest, as well as Nurnberg, Wurzburg, and Kassel.

Other horticultural exploration available in 1983 are: Bermuda (April 30-May 7), Spring Japan (April 28-May 18), Spring and England (May 12-26), Germany and IGA '83 (May 26-June 9), Canadian Rockies (July 16-30), South Africa (Sept. 9-29), Fall New England (Oct. 3-14), Fall Orient (Nov. 1-24).

For any of these programs, please write for your free brochure to the Education Department, American Horticultural Society, Mt. Vernon, VA 22121. OR telephone 1-703-768-5700.

Let Your Greenhouse Do the Talking

Have you ever been away from home and wished you could adjust a vent in your greenhouse by remote control? Well, with the new Environmental Greenhouse Operations Reporter, EGOR for short, it's possible. EGOR is a complete environmental control system for the greenhouse that can be accessed by telephone and can "talk" to you by means of a computer synthesized voice. After telephoning EGOR and giving the proper password, the telephone's push buttons become a computer input panel. Pushing one button, for example, may prompt EGOR to verbally respond, "the temperature in the greenhouse is 79° F;" another key or combination of keys will instruct him to operate vents, cooling or heating systems,

pumps or give other verbal reports about greenhouse conditions. EGOR can measure all key environmental factors, even those required by hydroponic growers. He even has a telephone alarm system through which he can automatically call and tell you the exact nature of a problem in the greenhouse.

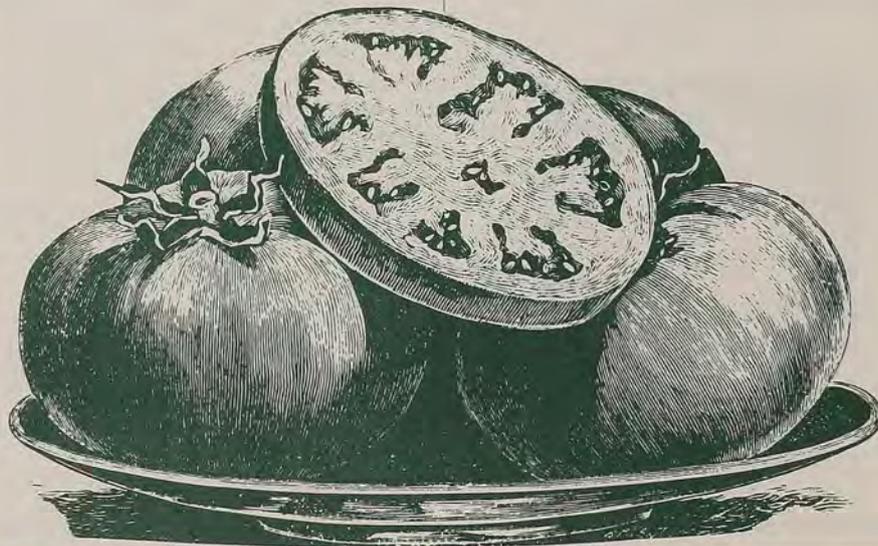
EGOR is a system for professionals, or for amateurs with large, valuable collections. Since his price tag starts at \$5,600, those of us with smaller collections will have to wait for technological developments that may one day bring his price down. For more information on EGOR, write or call Hoppmann Corporation, 14560 Lee Road, PO Box 601, Chantilly, VA 22021, (703) 631-2700.

New Directions in Tomato Breeding

South American species tomatoes and genetic engineering are playing important roles in current tomato breeding programs. Two companies interested in producing cultivars for the commercial processing market, Campbell and Heinz, are using genetic engineering to reduce water content in the fruit, thereby reducing the need for irrigation. Low-water-content fruit could be transported from the field to the processing plant more easily and would also require less cooking. In another program Heinz is crossing a Peruvian species of tomato, found in the An-

des at altitudes of 12,000 feet, to introduce drought and disease resistance as well as salt tolerance into the breeding lines. Cornell University is using a Brazilian species whose fruit does not produce ethylene in its breeding programs. Fruit that does not produce ethylene will ripen more slowly. Scientists hope cultivars with this characteristic could be allowed to ripen on the plant before shipping—thereby improving the taste of supermarket-purchased fruit.

—*FloraScope*,
February, 1983



Upcoming AHS Events

The Following Society Sponsored tours and other events have been scheduled for this spring and summer. For information about any of these events write or call the Society's Office of Education.

May 12-26

Our annual trip to the famed Chelsea Flower Show. Also scheduled are visits to public and private gardens in Sussex and the Cotswolds, including Sissinghurst and Pusey.

May 26-June 9

Tour of West Germany's great parks, public and private gardens. The International Horticultural Exhibition in Munich will be a highlight.

July 17-31

Exploration of the Canadian Rockies and the West Coast. Visits to Banff, Lake Louise, famed Butchart Gardens and many of the area's best private gardens are planned.

September 9-29

Tour of South Africa

October 3-14

Autumn in New England Tour

Society Founded

Gardeners with an interest in cone-bearing trees, including such species as *Cupressus*, *Pinus*, *Picea*, *Juniperus* and *Thuja*, will want to join the newly-founded American Conifer Society. This new, non-profit society will devote itself to developing, preserving and propagating conifers as well as educating the public about these valuable plants and clarifying nomenclature.

Membership will include a subscription to a quarterly publication and invitations to annual meetings. For more information write Mr. Jean Iseli, Secretary, American Conifer Society, 15241 SE Tickle Creek Road, Boring, OR 97009 or Robert Fincham, President, American Conifer Society, 425 North 5th Street, Lehigh, PA 18235.

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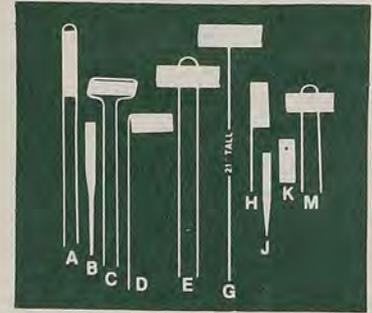
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Controlling Lead Uptake in Urban Gardens

Large quantities of organic matter and a soil pH maintained at a near neutral level are the answer to a problem faced by many urban gardeners—lead contaminated soil. According to scientists at Cornell University, adding large quantities of well-rotted compost, manure or other organic matter (at least 25

percent by volume) and keeping the soil pH between 6.5 and 7.0 will prevent plants from taking up lead through their roots. In experiments conducted by plant physiologist Nina L. Bassuk, program leader of Cornell's Urban Horticultural Institute, lettuce grown in soils with low levels of organic matter took up

much more lead than lettuce grown in highly organic soils. "In soils containing large quantities of organic matter (40-50 per cent or greater by volume), the lead uptake was zero, even though lead concentrations were as high as 3,000 parts per million," she says. Leafy vegetables and root crops (lettuce, spinach, potatoes, beets) are more likely to absorb lead than vegetables grown for their fruit such as tomatoes, squash or peppers.

Much of the lead in urban soils comes from lead-based paint from demolished buildings, but air-borne lead from auto emissions can also be a problem. It pollutes the soil as well as adheres to plant parts. Bassuk advises against planting vegetables near busy roads, but if that is unavoidable, shield the plants with a fence or hedge. All urban-grown vegetables should be washed meticulously. Bassuk has found that washing with pure water removes only a small portion of the lead adhering to leaves, and that wash water containing one per cent vinegar or one-half percent dishwashing liquid is much more effective.

Pesticides Decompose in Alkaline Water

Pesticides can be ineffective in controlling pests for several reasons, including incorrect application rate, improper timing, inappropriate chemical used for the insect involved and old chemicals that have outlived their effective shelf life. One seldom-considered factor is water quality. Most pesticides will lose some degree of their effectiveness in alkaline water (a pH value of seven is considered neutral, values above that are alkaline) through a decomposition process called alkaline hydrolysis. This process, which begins as soon as the chemical is mixed with

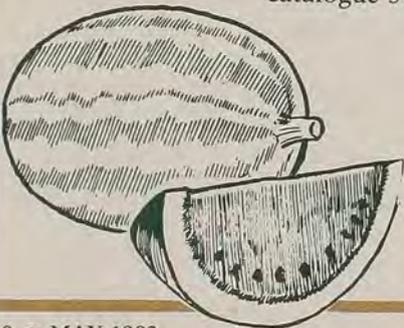
water, continues after it has been sprayed onto the plants and can greatly reduce the effectiveness of a pesticide. The rate at which this process occurs varies according to the chemical involved and the alkalinity of the water. Malathion, for example, loses its effectiveness very quickly in water that is just above neutral. Other pesticides affected by alkaline water include Parathion, Sevin, Orthene, Di-Syston and Lanate. Some fungicides also are pH sensitive and should not be combined with materials such as hydrated lime or mixed in alkaline water. These include Captan, Botran, Lesan and Carbamate fungicides.

Greenhouse Grower, February, 1983, recommends you take four precautions to reduce the effects of alkaline hydrolysis: 1) frequently check the pH of your water 2) read pesticide labels to see if material is sensitive to alkaline water 3) do not mix pesticides until you are ready to use them, especially if you are combining pesticides 4) if your water is alkaline, and you are using a sensitive pesticide, add a product to neutralize the pH such as Spray-Aide, Buffer-X, Nutrex, Sorba spray or Tri-fol. These should be available from your local garden center or nursery, especially if alkalinity is a problem in your area. Adding commercial vinegar (acetic acid) to the water has been suggested as a home remedy, but, according to Dr. Christine Stephens, a professor of vegetable and ornamental diseases at Michigan State University, it "is not reported to give satisfactory results because of its instability and failure to remain on leaf surfaces."

World Record Watermelon

A father and son team from Tulsa, Oklahoma broke the record for the largest watermelon with a cultivar named 'Carolina Cross', which they have been developing since 1977. The record-breaking fruit, which exceeded the existing record by 19 pounds, weighed 219 pounds, was 34 1/2 inches long and had a circumference of 61 1/2 inches.

'Carolina Cross' is available from Grace's Gardens, 10 Bay Street, Department 112, Westport, CT 06880, catalogue 50¢.



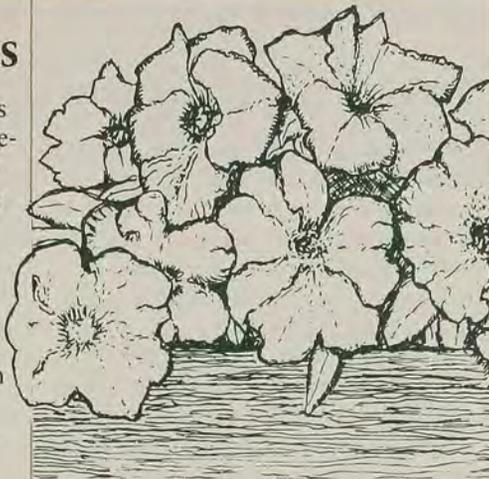
Bird of Prey Scarecrows Effective

If your scarecrow isn't doing its job, try using a model of an owl or hawk to scare the crows and black-birds out of your garden. Stationary models work for a short time, but birds quickly become used to them. Michael R. Conover, writing for the Connecticut Agricultural Experiment Station's publication *Frontiers of Science*, reported that the most effective models he used in a series of tests he conducted were kites with hawks painted on the underside. The kites were suspended 60 feet beneath a helium balloon and flown 90 feet above the ground. Evidently, the movement of the hawk-kites prevented the birds from becoming habituated to them. The kites reduced bird damage to blueberries by 35 percent, and, in a test on ripening corn, by 83 percent.

Pinch Your Petunias

Get ready to pinch your petunias as soon as the hot weather appears. Petunias are thermoperiodic, so their growth habit varies according to temperature and daylength. At temperatures of 62° F and below, the plants will always be well-branched, bushy, compact and multi-flowered. From 63° to 75° F, day length affects the plants' growth habit. If they receive less than 12 hours of daylight at these temperatures they will be single stemmed and have only one flower. Long days at these temperatures will produce more ideal-looking plants. At temperatures over 75° F, day length no longer has an effect, and the plants will always be tall and leggy and bear very few flowers.

Pinch petunias at planting time in the early spring to encourage branching and flowering. By the second week in July they need a second



pinching. Cut off each stem about three or four inches above ground level, weed, fertilize and clean up dead and dying leaves. You will have flowers again in about two weeks. Pinch again in mid August and near the end of September (early in September if frost dates in your area come early) to maintain the display.

Gypsy Moth Control Methods Tested

Since its introduction in the 1960's, scientists have worked to develop new strains and improved formulations of *Bacillus thuringiensis* (Bt) that are more effective in controlling gypsy moths and other destructive caterpillars. The U. S. Forest Service and the Connecticut State Department of Environmental Protection tested the effectiveness of three new strains of Bt on gypsy moths in 1981 and 1982. They found the most effective control was two applications of a formulation called Dipel 4L applied at a dose of one quart per acre mixed in one gallon of water. Three per cent of a

spreader/sticker called AcrylocoatTM was added to the mixture. Single applications at a higher dose (1.5 quarts per acre and 2 quarts per acre) were also tested and proved effective. They reduced defoliation to about six and eight percent, respectively, and saved the cost of making a second application. Untreated control plots were 72 per cent defoliated in 1982.

Bt is more effective against small, younger caterpillars, so spray applications were made early in the season (May 17) for this reason.

—*Frontiers of Plant Science*,
Fall 1982

Gardeners Prepare for '84 Olympics

Californians are planning to plant, clean up and beautify a 200-mile area around the city of Los Angeles in preparation for the 1984 Summer Olympics. AHS California members who would like to help should write or call L. A. Beautiful, 404 South Bixel, Los Angeles, CA 90017, (213) 482-1655.

—*Florascope*, February, 1983

The official rose for the 1984 Olympics is 'Olympiad', a red rose from Armstrong Nurseries. 7,000 'Olympiad' roses will be planted in and around Los Angeles before the games. 'Olympiad' will be available in December, 1983 from Armstrong Nurseries, PO Box 4060, Ontario, CA 91761.

—*Florascope*, March, 1983

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First Yellow Geranium Introduced

One of the most exciting plants introduced this year is the yellow flowered geranium hybrid offered by Thompson and Morgan. This new plant represents a color breakthrough among cultivars of the common bedding geranium, and its appearance promises many more yellow flowered cultivars in years to come.

The plant bears semi-double, primrose-yellow flowers that fade to cream as they age. Its foliage is medium green and resembles that of an ivy geranium. Although the plants are attractive, compact and relatively free flowering, hybridizers at Thompson and Morgan see room for improvement, and their breeding program continues. One of the objects of the program is to produce a plant with brighter yellow flowers. They are also looking for a stronger, more vigorous plant. This first yellow flowered geranium is only recommended for use as a house plant because it is not as tough as the common bedding or zonal geranium. Finally, they are looking for a plant that bears as many flowers as zonal geraniums and for flowers that keep their petals in heavy rain. These geraniums breed true from seed, producing yellow flowered offspring, although each plant produces very few seeds.

The yellow flowered geranium has an interesting history. Its appearance was a sheer stroke of luck, say representatives of Thompson and Morgan. The plants appeared unexpectedly in the breeding program that produced the 'Startel' series of stel-

lar geraniums, whose star-shaped flowers come in all of the commonly known geranium colors. The yellow flowered plants appeared accidentally among the seedlings of a cross between *Pelargonium quinquelobatum* and a named cultivar of the common bedding geranium.

Thompson and Morgan has contracted with a California firm specializing in tissue culture to propagate enough yellow geraniums for distribution in this country. The plant also will be available in the British Isles and Europe, but plants sold there will be cutting-propagated. Supplies are very limited, and, as a result, the plants are quite expensive—\$12.00 per plant plus \$2.95 to cover shipping and handling for each plant. Even at this price, the company is limiting each customer to only two plants. To order a yellow geranium write Thompson and Morgan, Department SP3, PO Box 100, Farmingdale, New Jersey 07727. Cultural instructions will be sent with each shipment.

Temperature Key to Germination

Improve verbena germination by storing seed packets in the refrigerator for seven days before sowing. After sowing, alternate day and night temperatures. During the day, soil temperatures should be 75° F. Nighttime temperatures of 60° F are ideal.

—Florascope, March, 1983

New Horticultural Society Greenhouse

The Horticultural Society of New York announced the opening of its new greenhouse on February 14, 1983. The 23-foot-long, 12-foot-high structure envelops the entire front of the Society's headquarters at 128 West 58th Street in New York City. The greenhouse will be filled with new and unusual plants, seasonal exhibits and displays designed to complement the lectures and courses taught at the Society.

The plants will be for sale and come with growing and care instructions.

The Horticultural Society of New York's new greenhouse, as well as their library and gallery, are open weekdays from 10:00 a.m. to 4:00 p.m. Call or write The Horticultural Society of New York, 128 West 58th Street, New York, NY 10019, (212) 757-0915 for more information and a free educational brochure.

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Soil type, pH and organic matter. Recommendations sent with results. Send two representative tablespoons in baggie, in regular envelope. \$6.00. LifeSci, PO Box 276A, Waldwick, NJ 07463.

GLADIOLAS

Flowering size, mixed 30 for \$4.35. By color—white, peach, crimson, yellow and violet—30 bulbs \$6.35 postpaid. HANCOCKS, Rte 4, Box 933, Manchester, TN 37355.

GREENHOUSE ACCESSORIES

PROPAGATORS! AQUAMONITOR mist controls get the highest in plant survival and profits. Write, we will prove it! FREE! AQUAMONITOR, Box 327-B, Huntington, NY 11743.

GREENHOUSE GROWING

Hard-to-find hobby, greenhouse equipment and supplies. Unique Catalog. \$2.00, refundable. CHARLEY'S GREENHOUSE, 12815-AH Northeast 124th Street, Kirkland, WA 98033.

HELP WANTED

Head gardener, former historic house museum and public garden. Estate background and knowledge of herbaceous plantings essential. Must have had supervisory experience. Housing available. Write: Director, Old Westbury Gardens, PO Box 430, Old Westbury, NY 11568.

HERB PLANTS

10 Herb plants—\$8.00. State inspected. UPS paid. Send 25¢ for list. ABC HERB NURSERY, Rte. 1, Box 313, Lecom, MO 65540.

HERBS

A HERITAGE OF HERBS by Bertha Reppert now in paperback; \$7.50 postpaid includes catalog. THE ROSEMARY HOUSE, Mechanicsburg, PA 17055.

HORTICULTURAL GIFTS

"HORTICULTURAL TREASURES"—A stunning catalog collection of juried gifts for men and women who garden. Specialty hand tools, solid teak British garden seats, Colonial style oak hayforks, traditional egg baskets, pot pourri cottages, antique doll sawdust ornaments, gold floral jewelry-pins, tie tacks, cuff links, floral screenprints, guill art florals, lace impressed stoneware wall basket filled with a Williamsburg style floral bouquet, and more. Free catalog—Country Casual "Horticultural Treasures," 17317 Germantown Rd., Germantown, MD 20874. (301) 428-3434.

HOSTAS FOR SHADE

Many varieties. Listing 50¢ (deductible). SAVORY'S GREENHOUSES, Hosta Specialists, (612) 941-8755, 5300 Whiting Ave., Edina, MN 55435.

HOUSE PLANTS

ORCHIDS, GESNERIADS, BEGONIAS, CACTI & SUCCULENTS. Visitors welcome. 1982-83 Catalog \$1.25. LAURAY OF SALISBURY, Rt. 41 (Undermountain Rd.), Salisbury, CT 06068 (203) 435-2263.

INDOOR GARDENING/GREENHOUSE SUPPLIES

START YOUR SEEDLINGS! Tools, equipment and information for greenhouse and indoor gardeners. Prompt service. Catalog .50¢. GRO-TEK, South Berwick, ME 03908.

INTERESTED IN A SHADY DEAL?

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More than 1,500 varieties of Bearded Iris at affordable prices. Catalog \$1.00, refundable with first order. CAL-DIXIE IRIS GARDENS, 14115 Pear Street, Riverside, CA 92504.

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Matsu-Momiji Nursery—Rare & Unusual Maples + Pines. New descriptive catalog \$1 (refundable) PO Box 11414, Philadelphia, PA 19111 (215) 722-6286.

MISCELLANEOUS

Learn organic gardening & farming first hand! As a member of Sativa, you can arrange to visit working Midwest farms/homesteads for a weekend or longer. Room & board provided FREE! Yearly \$8 membership provides 6 annual newsletters with opportunities & locations. Write: SATIVA, Box 2410, Champaign, IL 61820.

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ORCHIDS

ORCHIDS! ORCHIDS! ORCHIDS! Bromeliads, Staghorn Ferns, Books, Peters Fertilizer, Potting Mixes, Supplies for indoor and greenhouse culture. REQUEST CATALOG. FOX ORCHIDS, INC., 6615 West Markham, Little Rock, AR 72205.

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PEONIES, HERBACEOUS, double, single, Japanese, shown May, June. FREE descriptive list available. A&D PEONY NURSERY, 6808 180th S.E., Snohomish, WA 98290.

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Outstanding collection of rare and choice herbaceous perennials at reasonable prices. Send \$1.00 to SWEET SPRINGS PERENNIAL GROWERS, Dept. AH, PO Box 1315, Arroyo Grande, CA 93420.

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Blooming size, values to \$20.00. Minimum order 3 plants, \$9.50 each, postpaid. Catalog \$1.00, credited on first order. GREEN VALLEY ORCHIDS, RT 1, Box 2335, Folsom, LA 70437. (504) 796-5785.

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BEAUTIFUL PLANT HANGERS. Colors for any decor. CARDEE-HOUSE OF MACRAME, 5317 North Arrow Drive, Peoria, IL 61614.

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POSITION WANTED

Married couple wishes gardening position on estate with greenhouse. Both Sandhills Community College horticulture grads. With grounds maintenance and greenhouse experience. Resume/References. Paul M. Schmidt, 2812 Robinhood Road, Greensboro, NC 27408.

Expert property care. Land, flora, structures, administration, capably handled. Permanent position sought with on-site housing. L.S., P.O., Box 761, Ojai, CA 93023.

Gardener/Groundskeeper. Fourteen years experience. College certified in landscape horticulture and Washington State Master Gardener. Resume upon request. Contact James Trainer, 1739 Trenton Avenue, Bremerton, WA 98310 (206) 373-8834.

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LANDSCAPE SIZES requiring no coddling—choice, hardy Rhododendrons and Azaleas. Catalog \$2.00 (deductible). CARLSON'S GARDENS, Box 305-AH32, South Salem, NY 10590.

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GROW EVERGREENS from seed year round. Indoors, outdoors and in greenhouse. Complete instructions \$1.00. Send stamp for price list. FREE sample pkt. with all inquiries. RECOR'S TREE SEED, 640 El Paso, Denver, CO 80221.

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THE INTENSIVE GARDENING HOE. Here's a hoe to grow old with. Ideal for precision work in perennial borders, or where plants are close. Remove weeds under and close to plants a traditional hoe can't. Send \$14.95 (includes shipping) to EARTHLY PLEASURES, 183 Park Ave., Lexington, KY 40508.

TREE PROBLEMS—BOTANICAL OR LEGAL

For Directory of members of the American Society of Consulting Arborists—the experts in tree care and appraisals for legal matters, write: ASCA, 315(AH) Franklin Road, North Brunswick, NJ 08902.

UNUSUAL INDOOR PLANTS

Unusual Indoor Plants. 1,800 Varieties—Begonias, Ferns, Geraniums, Herbs, Exotics. NEW 1982-84 catalog with more color \$2.50. LOGEE'S GREENHOUSES, AH, 55 North Street, Danielson, CT 06239.

UNUSUAL PLANTS

Begonias, African Violets, Geraniums. Cuttings or plants. 12 African violet leaves \$10.50 ppd. Price list SASE. KRISTY'S CREATIONS, 3111 Windsor, Dept AH55, Waco, TX 76708.

WILDFLOWERS

Spring planting. Guaranteed highest quality tubers, rootstock, etc. FREE descriptive catalog. MASTER GARDENS-C, 8044 Ray Mears Blvd., Suite 111-148, Knoxville, TN 37919.

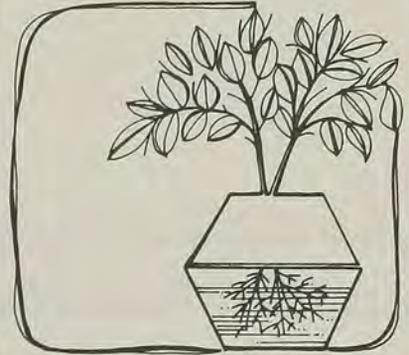
Erratum

The cover article in the November, 1982 issue of *American Horticulturist* news stated horticulturist Peter Ascher was the first person to grow North American terrestrial orchids from seed in a growth medium in which all the ingredients are known and defined. Other individuals have germinated *Cypripedium* and other terrestrials in fully defined media, and although Ascher's method may be an improvement, he was not the first to accomplish this feat.

Readers who would like copies of two scientific papers on the subject can send their request along with a self-addressed, stamped, business-sized envelope to Assistants to the Editor, in care of the Society.

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'Bradford' Pears Need Corrective Pruning

'Bradford' pear, the remarkably disease and insect free tree that has become a common sight along streets and in yards across the country, can develop serious structural problems if not properly pruned. Semi-mature trees have a dense, tight, closely branched habit, and, according to Joseph Jannarone, Superintendent of

Forestry, Parsippany-Troy Hills, New Jersey, as the "main trunk grows and expands it literally pushes apart and severs entire tree branches at their intersection with the trunk." Corrective pruning solves the problem. Prune trees in the autumn after the leaves fall or in the winter. Remove multiple leaders,

prune back lateral branches and generally open up the center of the tree. Watch for suckers or water-sprouts throughout the summer and remove them.

—*The Shade Tree, January, 1983*

Join Us in Philadelphia

Continued from page 1

clude the Rockefeller Estate and Sleepy Hollow in Tarrytown. We will also see the horticultural highlights of New York City. Make plans to reserve September 18-24 for this special tour.

So that's the preview. Watch for a descriptive brochure in June, and

take advantage of early bird discounts by getting your reservations and check in well ahead of the deadlines. If you really want to reduce costs at these big meetings, give us a good turn-out and early reservations. To help cut down on mailing costs, you will receive only *one* brochure notice (a second notice will appear in the July newsletter), so even if you are about to leave town on vacation, get that reservation and hotel room booked by August, please.

AHS Awards

The AHS committee chaired by board member Mrs. B. P. Bole, Jr., which is responsible for making horticultural awards at major garden shows, recently gave citations to displays at the Boston and Philadelphia flower shows. The Pennsylvania Horticultural Society received a citation for its display, "City Green," at the Philadelphia Flower Show. In Boston, Allen Haskell received a citation for his display, "Shade Garden of Hostas."

Space Shuttle Carries Test Seed

Space shuttle *Challenger* carried vegetable and flower seed on its maiden voyage. Scientists at the Geo. W. Park Seed Company, who provided the seed, used it to study the effects of space travel on germination, dormancy, vigor and genetic mutation. The ultimate goal of the project is to develop new seed packaging and storage methods for outer space. 'Janie Yellow' marigold, 'Afternoon Delight' portulaca, 'Hotline' salvia, 'Bush Baby' watermelon and herb seeds such as basil and sesame made the trip.

—*Greenhouse Grower, February, 1983*

Free Nitrogen in Grass Clippings

According to the Connecticut Agricultural Experiment Station in New Haven, more than 50 percent of the nitrogen you apply to a lawn in the form of fertilizer can return to the soil if you don't rake and remove grass clippings. Results indicate that the clippings contribute very little to

thatch build up in a lawn. Both Cornell and Michigan State Universities have reached essentially the same conclusion. Raking is only desirable if the grass has gotten unusually tall between mowings.

—*National Landscape Association Tech Notes, December, 1982*