

AMERICAN HORTICULTURIST

NEWS—MAY 1981



Dr. Cathey to Take New Post

The Society is pleased to announce that Dr. Henry M. Cathey, former president of the American Horticultural Society, has recently been appointed as Executive Director of the U.S. National Arboretum. Dr. Cathey was a visiting professor of floriculture at The Ohio State University last fall and is presently on tour as a lecturer. He is scheduled to begin work at the Arboretum in June.

Boston Congress Scheduled September 24-28, 1981

Come September, nothing sounds more appealing than spending a part of autumn in New England, and that's what we have planned for members of the Society who join us for the 1981 Congress in Boston and the post-Congress tour of Massachusetts, Connecticut and Rhode Island.

Our Boston meeting will begin on the 24th with a cocktail reception at Horticultural Hall as guests of the Massachusetts Horticultural Society.

On Friday morning a series of educational lectures have been scheduled. Among the speakers invited for this series will be George Pride, retired assistant director of the Arnold Arboretum; Thalassa Cruso, well-known gardener and television personality; and George Jung, an expert on roses. After a box lunch, we will board buses for a trip to Arnold Arboretum and the lovely Honeywell estate. That night all participants in the Congress are invited to a lobster/clambake.

On Saturday the entire day will be devoted to seeing gardens and horticultural exhibits firsthand. The owners of four private gardens on the North Shore have kindly agreed to allow us to explore their gardens, and the Es-



sex Agricultural Institute has invited us to be their guests for the afternoon. Lunch on Saturday will be at the Peabody Museum of Salem. Saturday evening is free so that participants may rest from a full day's activities and explore Boston at their own leisurely pace.

For guests who are early risers, we have planned a series of roundtable discussions at breakfast on Sunday morning. Participants can choose among several garden topics they would like to explore during this breakfast meeting when they register. Our plenary session and more educational lectures follow until noon. Among the speakers will be Kenn Stevens, who will demonstrate flower arranging, and Dr. Gordon DeWolfe, whose byline frequently appears in *Horticulture*. On Sunday afternoon we will once again take to the road, this time to see Cohasset Gardens and Plimouth Plantation. That evening, after a no host cocktail reception, our Congress will come to a close with the President's Banquet and Awards Ceremony. At this time the coveted Liberty Hyde Bailey Medal will be presented. Carlton Lees, a well-known garden writer and landscape designer, will be the featured speaker.

Please put these dates on your calendar now and plan to join us for the 35th Annual Congress. Registration material will be mailed to you during May, and a follow-up registration packet will appear in the July issue of *American Horticulturist* news. Brochures are also available for the two week exploration of New England scheduled to follow the Congress (for more details, see "Dates to Remember" in this issue).

1981 Seed Program Exceeds Response of Many Past Years

As of the third week in March, more than 8,000 members have responded to our 1981 seed program, a considerable increase over the past several years. We are quite pleased with our 1981 effort, and thanks to your many suggestions and offers of help, we can now have a clear picture of what must be done to make next year's program the best ever.

Many of you have told us of your wish to see more woody plants, shade-tolerant species, test cultivars and greenhouse plants represented in future programs. We will do our very best to heed your suggestions. In coming months we will be getting in touch with botanic gardens, arboreta, plant societies throughout the world and international seed companies. Continue to keep us advised, as this is the only way we can truly serve you.

Our 1981 program would not have been possible without the efforts of one of our staff members who certainly deserves our public thanks. This individual volunteered hours and hours of her own time to fill seed orders. Thank you, Jane Glass, for your devotion. Without you, we would have had no 1981 seed program at all!

Denver Symposium Cancelled

We regret to announce that the Society's Denver "Spring Symposium," scheduled for July 14-18, 1981, has been cancelled. The high cost of accommodations and associated events, coupled with the excessive cost of air transportation made the event exorbitantly expensive. As a result a decision to cancel was made by the staff.

However, the post symposium tour, "Exploration of Colorado," **will be held.** See the March *American Horticulturist* news for details and registration forms or contact Dorthy Sowerby at the Society for additional information.

AMERICAN HORTICULTURIST

VOLUME 60 NUMBER 5

PUBLICATIONS DIRECTOR

Judy Powell

EDITOR

Barbara W. Ellis

ART DIRECTOR

Rebecca K. McClimans

EDITORIAL ASSISTANT

Jane Steffey

TAXONOMIST

Dr. Frederick G. Meyer

Address all Society correspondence to:
American Horticultural Society
Mount Vernon, Virginia 22121

Address all editorial correspondence to:
The Editor, American Horticulturist
American Horticultural Society
Mount Vernon, Virginia 22121

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River Farm Notes



My River Farm Notes column in the March issue of *American Horticulturist* news was devoted to the rose gardens of River Farm. In May let us dwell on another of our gardens, the Ideas Garden. This garden is composed of a number of mini gardens, each emphasizing a particular type of plant material or a specific garden setting. Our intention here has been to locate in a single area a group of plants that will show our many visitors both the very best of the traditional and newer cultivars, and provide ideas for incorporating these and other plants into their own landscapes. We have received a great deal of help in this endeavor. The local chapters of several of our nation's plant societies, organizations, nurseries, seed producers, hybridizers and a host of individuals came together to help us transform our brainchild into its present form.

First came the American Dahlia Society. Their band of hard-working experts helped us develop a section of our garden into an official dahlia test and display garden. We have four beds of test plants and two beds of standard cultivars, and together they provide us with unbelievable color from early summer to the first late-fall frosts. We are particularly pleased to have a test garden here because it gives our visitors the opportunity to see plants not yet on the market and to learn just what has to transpire before a cultivar is deemed marketable.

All-America Selections Inc. was next to come to our aid. We have

been lucky enough to receive seed of past and present AAS winners, those plants that are selected as the very best introductions in a given year. Here, as with the dahlias, testing is performed throughout the USA, and only superior plants receive the distinction of becoming All-America Selections medal winners. This year we will have three beds planted with AAS winners in the flower division, including the yet-unannounced winners for 1982. We will also have a family-sized vegetable garden, but this year one with a new wrinkle.

As we are all aware, the computer is finding its way into all aspects of life, but how many of us would expect to find it serving a purpose in the vegetable garden? This year our vegetable garden will be designed by a computer, compliments of the Northrup King Company's "Smarter Garden Plan." A computer program originally designed by AHS Board Member Dr. John A. Wott for use in the state of Indiana has been adapted for use throughout the United States by Northrup King, a major seed producer. With this program a vegetable garden can be designed to a family's exact needs. We plan to keep track of produce from our computer garden and will report our results in a season's-end issue of *American Horticulturist* news. For more information on Northrup King's computer service, which is available to homeowners for a small fee, write to Northrup King Company, 1500 Jackson Street N.E., Minneapolis, MN 55413. Also look for an article on computer gardening in an upcoming issue of *American Horticulturist*.

The Society for Siberian Irises, especially Dr. Carrier McEwen, is to be thanked for its efforts to develop an official Siberian Iris display garden on the grounds. Our bed of these plants boasts an absolutely superb collection.

Mrs. Mary Peddie of Rutland, Kentucky, an herb and dye plant specialist, will be providing us with a planting design for an herb display garden. This will not be an elaborate, formal planting but a teaching collection of culinary herbs and dye plants. We will have one bed devoted to thymes, one to a side-by-side display of other culinary herbs and one to dye plants. Everything

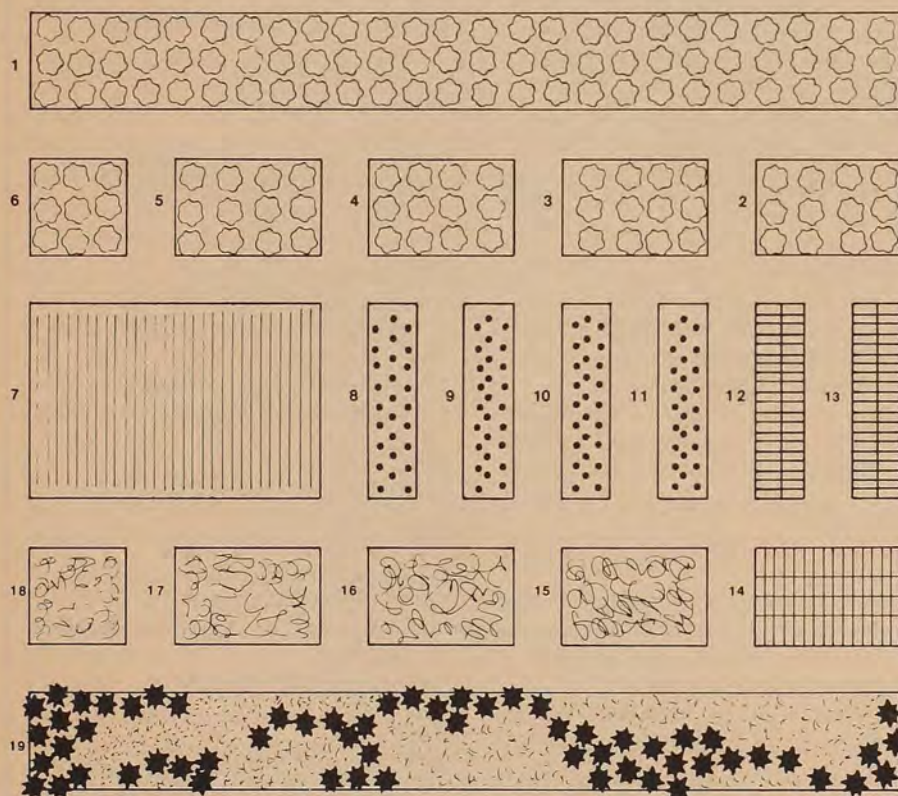
will be labeled, and the assemblage of textures and odors should give our visitors a truly delightful experience.

Three of the "summer" beds already mentioned will first dazzle us with spring bloom. The bed that will contain the thymes is presently planted with a selected collection of tulips, and two of the beds that will contain the AAS flower selections are now filled with a fantastic collection of daffodils that represents 100 new cultivars given to us by the American Daffodil Society for our official daffodil display garden. Once these plantings are in bloom there will be no mistaking that spring has come.

An additional bed to be constructed this spring will complete our Ideas Garden. It will be planted with a fabulous collection of daylilies provided by the American Daylily Society and combined with an exciting collection of everlasting and dried flowers donated by the George W. Park Seed Company, Inc. Together these plantings will provide a unique display for our visitors.

This completes our tour of the River Farm Ideas Garden. We hope you have enjoyed it, and we hope you will be able to visit us this year and see these plantings for yourself.
—Steve Davis

IDEAS GARDEN BEDS

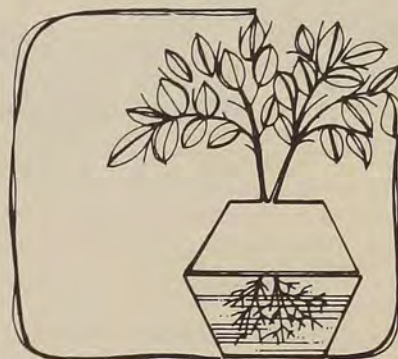


1. American Dahlia Society Test Garden
2. American Dahlia Society Test Garden
3. American Dahlia Society Test Garden
4. American Dahlia Society Test Garden
5. Traditional Dahlias
6. Traditional Dahlias
7. All-America Selection Vegetable Garden
8. American Iris Society Tall-Bearded Iris Display Garden
9. American Iris Society Tall-Bearded Iris Display Garden
10. American Iris Society Tall-Bearded Iris Display Garden
11. Society for Siberian Irises Display Garden

12. Culinary Herb Garden
13. Dye-Plant Garden
13. Dye-Plant Garden
14. Thyme Collection
15. All-America Selections Flower Garden
16. All-America Selections Flower Garden and American Daffodil Society Display Garden
17. All-America Selections Flower Garden and American Daffodil Society Display Garden
18. Flower Garden
19. American Daylily Society Display Garden and Dried-Flower Garden

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CALENDAR

APRIL 30-MAY 3

American Rhododendron Society Annual Convention
Sheraton-Palace Hotel
San Francisco, California

MAY 1-3

Mid American Orchid Congress and Smoky Mountain Orchid Society Show
United American Bank
Knoxville, Tennessee

MAY 3-10

American Association of Botanical Gardens and Arboreta Annual Meeting
Strybing Arboretum
San Francisco, California
Information: Mr. Hadley Osborn,
Executive Director, Filoli, Canada Road,
Woodside, CA 94062

MAY 9-10

Geranium and Pelargonium Show and Sale
Southwest Branch of the International Geranium Society
Community Building, Plummer Park
7377 Santa Monica Boulevard
Hollywood, California 90046
Hours: Saturday noon to 5:00 p.m.,
Sunday 10:00 a.m. to 4:00 p.m.
Information: (213) 222-6809 or (213) 469-8665

MAY 13

American Boxwood Society Annual Meeting
Blandy Experimental Farm
Boyce, Virginia

MAY 13-16

American Iris Society 1981 Convention
Marriott Hotel, Interstate 70 at Lambert International Airport
St. Louis, Missouri
Information: Mr. S.H. Butt, AIS
Convention Registrar, 1904 Arrowhead Lane, Godfrey, IL 62035
(618) 466-1842

MAY 14-15

2nd Annual Menninger Flowering Tree Conference
Quality Inn
Cypress Gardens
Winterhaven, Florida
Information: Cheryl Fox, Menninger Flowering Tree Conference, P.O. Box 16796, Temple Terrace, FL 33687
(813) 985-8511

MAY 17, RAIN DATE MAY 24

Spring Open House
American Horticultural Society
River Farm
Mt. Vernon, Virginia
Information: Phone or write Dorothy Sowerby at the Society



MAY 17-23

African Violet Society of America, Inc.
Annual Convention and Show
Sheraton Palace Hotel
San Francisco, California
Information: Convention information,
African Violet Society of America, Inc.,
P.O. Box 1326, Knoxville, TN 37901

MAY 22-24

American Rock Garden Society Annual Meeting
Howard Johnson's Motor Lodge
Routes 22 and 48, Monroeville-Pittsburgh
Exit of the Pennsylvania Turnpike
Monroeville, Pennsylvania
Information: Joanne Schindler, 1015 Varner Road, Pittsburgh, PA 15227

MAY 30

Marigold Day
Lawrence Township Municipal Building
Lawrenceville, New Jersey
Information: Mrs. C. Jane Boning, 199 Spring Beauty Drive, Lawrenceville, NJ 08648, (609) 896-1090

JUNE 5-6

Historic Landscape Architecture and Gardening Conference
Regional Conference of Historical Agencies
Cornell University
Ithaca, New York
Information: RCHA, 314 E. Seneca Street, Manlius, NY 13104, (315) 682-7088

JUNE 6

Plant Sale "The Green Scene"
Fullerton Arboretum
California State University, Fullerton Campus
Fullerton, California
Information: (714) 773-3579

JUNE 6-7

Delaware Flower Show
Delaware Federation of Garden Clubs
Hagley Soda House
Greenville, Wilmington, Delaware
Hours: Saturday 10:00 a.m. to 9:00 p.m.
Sunday 12:00 noon to 5:00 p.m.
Information: Wilmington Garden Center, 503 Market St. Mall, Wilmington, DE 19801 (302) 658-1913

JUNE 12-14

American Peony Society National Convention
Kingwood Center
900 West Park Avenue
Mansfield, Ohio
Information: Greta M. Kessenich, Secretary, 250 Interlachen Road, Hopkins, MN 55343

JUNE 17-20

American Rose Society 1981 Spring National Convention and Rose Show
Denver, Colorado
Information: The American Rose Society, P.O. Box 30,000, Shreveport, LA 71130

JUNE 19-21

National Fuchsia Society Annual Show
Los Cerritos Mall
605 Freeway & South Street
Cerritos (Los Angeles Area), California
Hours: Friday and Saturday 10:00 a.m. to 6:00 p.m. and Sunday 12:00 noon to 5:00 p.m.
Information: (213) 277-6078

JUNE 25-28

34th International Lily Show and North American Lily Society Annual Meeting
New Holiday Inn
Wilsonville, Oregon (near Portland)
Information: Mr. James B. McCoy, 1311 24th Avenue, P.O. Box 1606, Longview, WA 98632

JUNE 25-28

Pacific Northwest Lily Society 1981 International Lily Show
Wilsonville Holiday Inn, Suburban Portland
25452 S.W. Boones Ferry Road, Wilsonville, Oregon
Hours: 10:00 a.m.-6:00 p.m. daily
Information: Ed McRae, 36752 S.E. Bluff Road, Boring, OR 97009

JULY 8-12

American Gloxinia and Gesneriad Society,
Inc. 25th Annual Convention
Roosevelt Hotel,
New York, New York

Information: American Gloxinia and
Gesneriad Society, Inc., 8 Kane
Industrial Drive, Hudson, MA 01749

JULY 9-12

1981 International Bonsai Convention
Colony Square Hotel
Atlanta, Georgia

Information: IBS '81 Atlanta, c/o Betty
Meinert, 720 Starlight Lane, Atlanta,
GA 30342

JULY 18-19

18th Fern and Exotic Plant Show
Los Angeles International Fern Society
Los Angeles State and County Arboretum
Arcadia, California

Hours: 9:00 a.m. to 5:00 p.m.
Information: LAIFS, 14895 Garden Hill
Drive, La Mirada, CA 90638,
(213) 941-5384

JULY 19

American Gourd Society Annual Meeting
Fairgrounds

Mt. Gilead, Ohio

Information: American Gourd Society,
P.O. Box 274, Mt. Gilead, OH 43338

If your horticultural club or association is
planning an event that may be of interest
to our national audience, please send us
information concerning the nature of the
meeting, the dates, times and location at
least three months prior to the time the
meeting will take place. We will be happy
to include it in our *Calendar* unless space
limitations prevent us from doing so.

Dates to Remember

Our **Spring Open House**, scheduled for Sunday, May 17 (rain date Sunday, May 24) from 12:00 to 4:00 p.m., promises to be a big success. Plans include tours of the gardens, exhibits by area artists and craftsmen, plant society displays and a seed and seedling sale to benefit the Landscape Fund. Come and enjoy the roses, tulips, clematis and early-blooming peonies that decorate River Farm in the spring.

Members will have the opportunity to visit some of Europe's finest gardens on an **Exploration to Scotland** scheduled from May 26-June 9 and a tour of **Switzerland and Northern Italy** from May 21 to June 4.

On our July **Exploration of Colorado**, scheduled from the 14th to the 27th of that month, participants will have the chance to enjoy a Rocky Mountain Alpine Spring. Read more about this exciting trip in the March insert in *American Horticulturist* news.

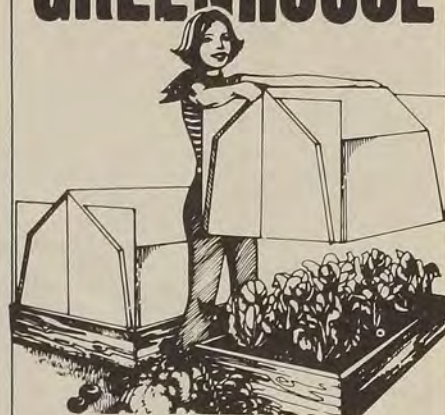
The Society's activities for fall begin with our **36th Annual Congress** in Boston (see page one of this issue). Members wishing to explore New England at leisure will want to remain in Boston to join the **Post Congress Tour of New England** scheduled from September 28 to October 7. Visits to some of the area's finest public and private gardens are planned.

Also this fall, members will have the opportunity to participate in an **Autumn Tour of Yorkshire and East Anglia** from September 10 through 24. The June issue of *American Horticulturist* will include an article on what England has to offer during this season of the year. The Royal Horticultural Society's Autumn Show is just one of the attractions in store.

Other tours this autumn include visits to gardens both near and far. From September 24-October 8 another tour of **Switzerland and Northern Italy** is planned. Those wishing to go even further afield may travel to Auckland, New Zealand and tour the gardens and geysers of this island nation on an **Exploration of New Zealand** scheduled for October 21-November 8. The Society's autumn tour of Japan, Taiwan and Hong Kong in the past has been so popular that members will again be given the opportunity to **Explore the Orient** from November 1-24. (For an account of this itinerary, read "Notes from the Orient" by Leonore Baronio in *American Horticulturist*, October/November 1979.) Finally, those wishing to stay a bit closer to home will want to join in the **Exploration of Florida** scheduled for October 19-November 2. Cypress Gardens, Corkscrew Swamp Sanctuary and Fairchild Botanical Garden are just three of the areas to be visited. Tours of private gardens and some of the largest foliage plant nurseries in the United States are also scheduled.

For more information, brochures and reservation cards for any of the above activities, write to Dorothy Sowerby in care of the Society.

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Ground Cherries—Sow and Harvest in One Season



Photo by Author

The golden berry of the garden, ground cherry (*Physalis pubescens*), grows from seed to full harvest in one season, providing ingredients for pies, jams, jellies or snacks right from the bush. The yellowish-orange berry of this easy-to-grow annual is so sweet and juicy that it rivals other garden fruit for mellow flavor. A few plants tucked away in a spare corner of the yard will yield an abundance of good eating equal to that of perennial berry plantings.

Husk tomato or strawberry tomato are other common names for the ground cherry. These names further describe the look and taste of this wild fruit that grows naturally over a large area of the United States. The little tomato-shaped fruit is enclosed in a papery husk, which, when mature, falls to the ground to ripen. It tastes like a combination of both cherry and strawberry, with a hint of apple or apricot. Ground cherry is not a commercial crop, so the only way to enjoy its fresh tutti-frutti flavor is to grow plants in your home garden or search out wildings.

The botanical name, as well as common names, group the ground cherry and tomato together in the Solanaceae family because of similarities in flower and fruit. Ground cherry belongs to the same genus as the Chinese lantern plant (*Physalis alkekengi*). Except for color, the five-sided brown husks of ground cherry look like the brilliant-orange Chinese lanterns, but the plants have different growing habits. Chinese lantern is a perennial that spreads by fleshy underground stems. Two husk fruits,

which grow only in tropical and subtropical climates, are marketed as gourmet items: tomatilla (*P. ixocarpa*) for Mexico's salsa verde and cape gooseberry or poha (*P. peruviana*) for Hawaii's prized preserves.

Wherever tomatoes grow well, ground cherries will produce a good crop. Wild plants thrive in the fertile soils of meadows and fields and in gravelly soils along roadsides. Seed specialists have selected varieties with extra large berries and these improved types are sold by many seed companies.

Ground cherry is a warm-season crop; sow seeds after danger of frost is past. Plant them in shallow rows with one-quarter inch soil cover. After plants are an inch or so tall, thin the seedlings to a spacing of two or three feet apart. Plants grow only 12 to 18 inches tall, but they reach out several feet. Shallow hoeing controls early weeds, and the sprawling growth chokes out later weeds.

Harvest is slow because the berries are scattered under rambling plants. (High labor cost for picking is probably the reason ground cherries are not a commercial crop.) After berries fall to the ground, collect the husks and spread them in shallow layers on screened trays until surface moisture dries. Stored loose in baskets in a cool and dry place, the berries increase in sweetness as they ripen. Husks preserve freshness for a month or more. The flavor and color keep even longer when you package and freeze the unhusked berries.

Ground cherries are delicious eaten

right from the husk. Whole berries served with sugar and cream are excellent for breakfast or lunch, and crushed over ice cream, the golden berries are an elegant dinnertime dessert. The cooked fruit is unmatched for pies, jams and jellies.

Ground cherry is a carefree fruit crop. There is no need to site a permanent planting, for the patch shifts easily when garden plans change. Happily, it lasts in the garden because stray berries, which lie fallow over the winter, sprout when soil temperatures warm up. The fibrous root system is shallow, and seedlings transplant readily for a new patch each spring.

Each spring, rake the garden clean of old plants so there are no hold over chores of staking, pruning or mulching. You will not have to spray or dust either because insects and disease do not bother these sturdy plants. A package of ground cherry seed, plus a spare plot of ground, are small outlays for a large harvest of this garden-fresh fruit.

Ground Cherry Pie

- 3 cups crushed ground cherries
- 2 tablespoons lemon juice
- 1 cup sugar
- $\frac{1}{4}$ cup tapioca
- $\frac{1}{4}$ teaspoon salt
- $\frac{1}{4}$ teaspoon nutmeg

Prepare pastry for two-crust, nine-inch pie. Put fruit in shell and sprinkle with lemon juice. Combine dry ingredients and sift over fruit. Cover with top crust and bake at 400°F for about 45 minutes.

Ground Cherry Jam

- 4 cups crushed ground cherries
- $\frac{1}{4}$ cup lemon juice
- 1 package pectin
- 6 cups sugar

Measure ground cherries and lemon juice into large kettle and stir in pectin. Bring to boil, stirring constantly. Add sugar, continue stirring and bring to full rolling boil. Boil for 4 minutes. Remove from heat, skim, ladle into jars and seal.

Ground Cherry Jelly

- 3½ cups fruit juice*
- $\frac{1}{4}$ cup lemon juice
- 1 package pectin
- 4½ cups sugar

*To prepare juice: Simmer about 6

cups crushed ground cherries with 1½ cups water for 10 minutes; strain through cloth. Measure juices into large kettle and stir in pectin. Bring to boil, stirring constantly. Add sugar, continue stirring and bring to full rolling boil. Boil for 2 minutes. Remove from heat, skim, ladle into jars and seal.

Ground cherry seeds may be purchased from Gurney Seed & Nursery Co., Yankton, SD 57079 (request their new 1981 introduction, 'Pineapple Cherry'); or from Thompson & Morgan, P.O. Box 100, Farmingdale, NJ 07727 (ask for 'Golden Berry').

—Jane Sansregret

Plant Label Catalogue Still Available

The *Aluminum Plant Label Catalogue*, 1980, published by the Society, is still available from the Plant Science Data Center. The catalogue lists the over 2,400 labels produced by PSDC in the last two years and includes cost information, ordering information and order forms. It is divided into six major categories, each with a characteristic illustration for plants, roses, bonsai, greenhouses, nature trails and identification tags. A complete scientific plant name and common plant name index is in the catalogue for easy reference. Because these labels are from the comprehensive library of aluminum plant labels, the cost is very reasonable: prices are comparable to that of the non-permanent labels. These standard aluminum alloy labels have a lifetime of 15-30 years and are impervious to corrosives, pollution and graffiti.

PSDC also makes customized labels in any size up to 12" x 18" with silver, black or gold backgrounds and in three thicknesses: .063, .032 and .020 inches. Labels are available in various styles; some with illustrations, text and borders.

The *Aluminum Plant Label Catalogue*, 1980 is available for \$3.00 plus \$1.00 for postage and handling. The price of the catalogue will be deducted from orders of \$50.00 or more. Send in your requests with the appropriate remittance to the Plant Science Data Center of the American Horticultural Society, Mount Vernon, VA 22121.



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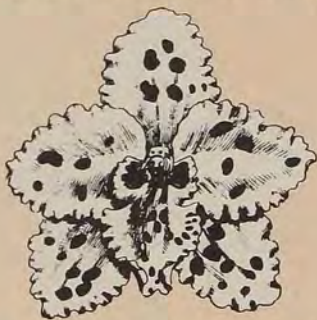
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Publications to Write For

Orchids Under Lights

The Indoor Light Gardening Society of America, Inc. has published a handy reference booklet entitled *Orchid Culture Under Lights*. The guide



is an ideal introduction for the beginner and also could serve as a reference booklet for the more advanced grower. The 19-page booklet is illustrated with black and white photographs and clear line drawings. Richard Peterson, its author, is also Executive Director-Editor of the American Orchid Society. He includes a discussion of appropriate species for light culture and tips on how to grow them, as well as lists of orchid suppliers and books for further study.

To obtain a copy of *Orchid Culture Under Lights*, send \$1.50 to Miss Ila Hallowell, Publications Sales ILCSA, 297 Second Street, Albany, NY 12206.

Handbook on Roses

The 1981 *Handbook for Selecting Roses* is now available from the American Rose Society. This year's book lists over 1,000 different roses that are available from nurseries throughout the country. The handbook shows the color classification and type of plant (hybrid tea, miniature, etc.) for each listing, and each plant has been given a numerical rating indicating its performance in the garden.

To order, send either 35¢ and a legal size, self-addressed envelope with 30¢ postage affixed or \$1.00 to cover postage and handling to The American Rose Society, P.O. Box 30,000, Shreveport, LA 71130. Orders received without postage and 35¢ or the \$1.00 charge will not be honored.

Daffodils to Show and Grow

The American Daffodil Society and the Royal Horticultural Society have joined together to publish the second edition of *Daffodils to Show and*

Grow. This edition is an abridged list of daffodil names that includes over 5,000 registered cultivars. Over 11,000 cultivars grown in gardens, for commercial use and exhibition are currently registered, and this listing is maintained on a computer bank in Des Moines, Iowa. Each cultivar listed in *Daffodils to Show and Grow* is classified according to the shape, size and type of cup, color, season of bloom and average height. Each entry also includes the name of the breeder, parentage of the cross and other information about the cultivar.

The listing is \$4.00. Send your check to Ticknor Tyner, American Daffodil Society, Tyner, NC 27980.

Restoration and Management Notes

Free copies of the first issue of *Restoration and Management Notes*, a new publication from the University of Wisconsin-Madison Arboretum, will be available to interested persons on request.

The publication, to be made up mostly of short notices dealing with the techniques and principles of restoring and managing communities of native plants and animals, is intended to encourage communication between researchers, landowners and others involved in the active conservation of natural and semi-natural areas. The first issue is scheduled for publication in April.

Those interested in receiving a complimentary copy should write or call W.R. Jordan, III, The University of Wisconsin-Madison Arboretum, 1207 Seminole Highway, Madison, WI 53711. (608) 263-7888.

Erratum

In the January issue of *American Horticulturist* news an error appeared under the heading, "Cold Hardiness of Forsythia Varies." The buds of *Forsythia ovata* survived temperatures of -29°C and not -2°C as stated in the article.

Several readers have expressed an interest in *F. mandschurica*, one of the hardier species mentioned in the article. According to the authors of the original paper that appeared in *Hort Science* in October 1979, this is a plant that has been all but ignored since its original discovery. It is not listed in *Hortus Third* and is not generally available. It is to be hoped that

breeders will pay more attention to this species in their efforts to develop hardy forsythias.

In Praise of Kudzu

Residents of the southern portion of the United States, perhaps all too familiar with the prolific, leguminous vine called kudzu, may not be aware that the plant has an almost unbelievable number of uses. Originally brought to the U.S. from Japan around the turn of the century, kudzu was widely promoted for erosion control and restoring southern agricultural land whose fertility had been depleted by cotton and tobacco. It has also been widely used as livestock pasturage, fodder and hay. The species most commonly found in this country is *Pueraria lobata*.

In Japan the roots of this plant, which may grow to a length of seven feet or more and can weigh 440 pounds, are harvested and processed into a powder that is thought to be the country's oldest and finest cooking starch and jelling agent. Kudzu powder is an excellent substitute for arrowroot or cornstarch, which is used as a colloidal thickener in sauces or soups. It can be used as a crispy coating for deep-fried foods and will also serve as a jelling agent like agar or gelatin. Japan produces 750,000 pounds of kudzu powder each year.

The root is not the only useful part. Weavers extract supple, water-proof fibers from young vines that are prized for their almost translucent luster and the ease with which they take natural dyes. These fibers weave into beautiful, highly durable cloth called kappu. Cellulose fiber from large, crushed vines can be made into an excellent traditional paper. Other products made from the young vines are sturdy wicker baskets, grasscloth and kudzu twine.

An interesting, informative book, *The Book of Kudzu* (Autumn Press, 1318 Beacon St., Brookline, MA 02146, \$5.95 postpaid), provides a glimpse of the number of uses for this now infamous plant. In addition to a brief history of the plant and its uses, the book includes a number of recipes for kudzu powder, information on medicinal uses, specific directions for making kudzu powder and a chapter on weaving with kudzu.

The Philadelphia Flower Show — Personal Impressions

If I had to choose just one word to describe this year's Philadelphia Spring Flower Show it would be—*Wonderful!* There were so many things to see that it is difficult to decide what highlights could best begin and end a description of the show. During my visit I had enough trouble just deciding which way to look first.

A Victorian bandshell surrounded by plantings of foxglove, hollyhocks and daisies, a water garden complete with water lilies, and an overgrown hillside covered with summer flowers are only three of the displays that helped cast a lovely summery mood over the entire exhibition. The Philadelphia Zoo provided a small traveling circus complete with life-size topiary bears and monkeys. A patio garden planted with vegetables and flowering annuals was a highlight among the many educational exhibits.

The competitive exhibition classes were no less interesting. Some of the larger specimens that stand out in my mind include an enormous *Clivia* with yellow flowers that stood nearly four feet tall, a similar sized jade plant and a beautiful specimen of *Asparagus meyeri*. One of the topiary

classes was won by a life-size tiger covered in stripes made of baby tears. The stripes were created by alternating *Soleirolia soleirolii* with a gold-leafed cultivar of the plant. Pots of diminutive rock garden plants, forced winter aconites, snowdrops and miniature daffodils were equally fascinating. Exhibitors in the Trade Booth area had hundreds of plants for sale, and after careful consideration I purchased several new plants to grow in my windowsills at home.

In short, it was all lovely, and I wish I could go see it all over again. The Pennsylvania Horticultural Society is to be congratulated. They not only presented a spring show that would inspire gardeners to get started with the season's activities, but they also attended to all of the details that make a show of this size a success. The maintenance committee managed to contain 6,000 gallons of water for the water lily garden and the canal without a flood; screens and boughs of smilax hid the service areas and ceilings from view; and a dedicated watering crew kept the plants looking fresh and beautiful. I look forward to next year!

—Barbara Ellis



Barbara Ellis

CLOCKWISE FROM TOP LEFT; A wreath formed of growing succulents of many different colors was an interesting entry in one of the many competitive classes at the show; To enter the main exhibition area at the Philadelphia Spring Show, visitors crossed this rustic wooden bridge over a water lily garden designed by Lilypons; This eye-catching topiary tiger with stripes made of gold and green baby tears attracted a great deal of attention.

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Growing Warm Season Vegetables in Cold Climates



Experiments conducted at the University of Alaska Agricultural Experiment Station may help gardeners in the cooler regions of the country or those whose gardens are in somewhat exposed locations improve their success with such warm season crops as tomatoes, peppers, squash and sweet corn.

Alaskans have been using clear plastic mulches for producing squash and sweet corn for a number of years, reports agricultural engineer Lee Allen in the January, 1981 issue of *Agroborealis*. The clear plastic mulch increases soil temperature enough to allow these plants to perform well even in Alaska's cool climate.

Popular cultivars of tomatoes, cucumbers, squash and peppers need additional protection, and Mr. Allen found that providing transplants with a simple plastic-covered cage as a protecting structure "improved the survival and establishment of transplants and has resulted in faster growth throughout the season and better production."

The cages were constructed of 6 x 6-inch, six- and nine-gauge wire reinforcing mesh. To stabilize the cages in the ground, the bottom ring of wire was cut off, leaving the wire ends to push into the soil. In very windy areas Allen suggests that additional wires be used to fasten the cages more securely. Wires can be attached to the sides of the cage and then fastened to stakes that are driven into the ground. The 24-inch-tall cages were covered with rectangular sheets of plastic attached by rolling the ends of the sheets around a stick that was then fastened to the cage with string. In this way the plas-

tic could be pulled taut so that it would not flap and tear in the wind.

Performance comparisons were made with tomatoes, cucumbers and peppers. The tomato results, reported here, are representative of the responses exhibited by the other two crops. "The variety [cultivar] grown always proved to be an important factor," says Allen, "but no single variety was best in every year. Since the kind of weather to be experienced in any particular summer cannot be predicted in advance, a grower might do well to use both large- and small-fruited [tomato] varieties and provide as much micro-climate improvement as possible. By using plastic-covered cages, many Alaskan gardeners will be able to grow fruits and vegetables outside that would otherwise require full greenhouse protection."

In 1979 a system of double caging was tested to afford the plants additional protection and increased growing room. The plants in this group were initially grown in 11-inch diameter cages placed inside 26-inch diameter cages. When the transplants outgrew the smaller cage its layer of plastic was removed; the cage was left in place to provide support for the plant and fruit. The outer cage remained in place throughout the season.

Observations on several of the cultivars tested may help cool weather gardeners select plants to grow in their own gardens. The large-fruited 'Early Girl', although only tested during the 1979 season, proved to be much more cold tolerant than the other two plants included in the large-fruited group. "'Early Girl' produced nearly as many fruit as 'Early Tanana', and since the fruit were larger the yields were similar," reports Mr. Allen. This "might be a good large-fruited variety for home gardeners to use on a trial basis." In addition, Allen noted that, "'Subartic 25' and 'Manitoba' both had larger fruit and good yields compared to 'Early Tanana'." All three cultivars are recommended for gardens in cool areas of the country.

Seed for the tomato cultivars mentioned in this article, as well as other cold-tolerant hybrids, is available from Stokes Seeds Inc., 737 Main Street, Box 548, Buffalo, NY 14240 and Gurney's Seed and Nursery Co., Yankton, SD 57079.

Tomato Trial Results

		Average yield, pounds per plant	
1978	Unprotected	Protected (Single Caged)	
Large-Fruited Cultivars			
'Delicious'	0.1		0.9
'Fantastic'			
Small-Fruited Cultivars			
'Early Tanana'			
'Manitoba'	0.9		3.1
'Subartic 25'			
		Average yield, pounds per plant	
1979	Unprotected	Protected	
		Single Caged	Double Caged
Large-Fruited Culitvars			
'Delicious'			
'Fantastic'	0.5	0.6	1.3
'Early Girl'			
Small-Fruited Cultivars			
'Early Tanana'	0.9	2.0	2.7

Meristem Propagation of Hostas

Researchers hope meristem propagation will make many often scarce *Hosta* cultivars more readily available to gardeners in the future. Until recently, crown division was the only way to propagate cultivars, resulting in rather lengthy periods of introduction for any newly developed plant.

Several scientists across the country have experimented with tissue culturing different species of *Hosta* using meristematic tissue taken from different parts of the plant. In one of the first experiments conducted on a member of this genus, buds or "eyes" were taken from the underground rhizome of *Hosta decorata*. Although this method proved successful, taking the tip off the growing point of the rhizome of a scarce, new cultivar of this species reduced the plant's growth potential, and, since

the tissue was taken from under the soil, contamination of the ex-plants was also a problem.

Horticulturist Martin M. Meyer, Jr., at the University of Illinois, has successfully propagated three cultivars of *H. sieboldiana*, 'Helen Doreo', 'Frances Williams' and 'Frances Williams Gold Sport', by using florets that have reached a specific stage of development as the meristematic tissue source. His technique was successful "if the flower scapes were allowed to develop until the florets were separated," and had reached a length of between 1/2 and 1 centimeter. Tissue taken from larger florets on more mature scapes was not as successful.

Other scientists have successfully propagated species of *Hosta* with tissue taken from shoot tips, florets and slices of the scape. These experiments should lead to techniques that will allow hybridizers to distribute

new *Hosta* cultivars on a wider scale.
—*HortScience*, December 1980

1980's Most Popular Hemerocallis

The American Hemerocallis Society announced the results of their 1980 Popularity Poll in the winter issue of *The Hemerocallis Journal*, and three cultivars received over 150 votes each. Cultivar 'Ed Murray' came out on top with 202 votes, followed by 'Ruffled Apricot' with 184 votes and 'Sabie' with 172 votes. Twelve other cultivars received over 100 votes. They are: 'Green Flutter' (146 votes), 'Bertie Ferris' (145), 'My Belle' (145), 'Mary Todd' (135), 'Moment of Truth' (122), 'Sari' (119), 'Harry Barras' (116), 'Evening Belle' (112), 'Hope Diamond' (107), 'Little Grapette' (103), 'Winning Ways' (101) and 'Hanzel Monette' (100). Over 100 different cultivars received more than 25 votes each.

Guinness Rated Vegetables

Gardeners interested in growing the biggest or the best vegetables will want to try some of the tips passed on by Jane Grace in the January/February 1981 issue of *Gardens For All, News*. Grace is a recognized authority on the "Biggest and Best" in vegetable gardens and is responsible for deciding what gigantic specimens are entitled to be listed in the *Guinness Book of World Records*.

In this article, Grace mentioned

several tips that have worked for other gardeners. They are:

- Choose a variety known to produce gigantic vegetables.
- Raise your soil's humus content to four or five percent with organic matter.
- Water consistently.
- Apply fertilizers in balanced, properly-timed amounts.
- Hand-pollinate giant or unusual vegetable blossoms for early fruit set.

- Prune plant to one or two vegetables to channel all of the plant's energy.

- Surround a North-South garden with grounded copper wire to stimulate growth with "electroculture."

- Experiment for the fun of it with techniques purported to grow giant vegetables, like intravenous feeding of milk, beer or plant food with a wool wick, planting by the moon, etc.

How big is big? Imagine a cantaloupe weighing in at 41 pounds, 2 ounces, a cabbage measuring 259 inches in circumference or a 52-pound, 11 1/2-inch cauliflower. Two Arkansas gardeners produced a 200-pound watermelon!

Fifty percent of Grace's record holders come from the United States. English gardeners, who have produced most of the prize-winning Brassicas, hold 25 percent of the records. The remainder come from Canada, Africa, Australia, Scotland and Hungary.

Grace, who collects and sells unusual seeds, offers prizes to new record breakers: \$250.00 for a new winner and \$100.00 for runners-up who have broken the old record. To obtain seed from plants that have produced record breaking plants, write Grace's Gardens, 10 Bay Street, #300, Westport, CT 06880.



Fuel-Saving Methods for Greenhouses

Greenhouse operators and engineers around the world have developed many ideas, gadgets and methods for lowering greenhouse heat losses by up to 50 percent in order to reduce heating costs. Other approaches to the problem, already in operation in Minnesota, include using waste wood and heat produced as a byproduct of industry for fuel.

Currently, three commercial greenhouse operations in Minnesota are providing at least a portion of their heating requirements by burning waste wood such as wood chips and sawdust.

If waste wood can be obtained from paper mills, woodworking plants and the like, for the cost of hauling, local greenhouses can be heated for approximately 40 cents per square foot per year. By comparison, oil costs about \$1.50 per square foot and natural gas is roughly \$1.00 per square foot (summer 1980). Efficient boilers are essential and costly, but fuel savings can pay for the whole heating plant within three years. Similar wood-burning operations may be found in numerous other states. Obviously, there is not enough waste wood available to heat all of the country's greenhouses.

Waste heat water is another alternative. Power companies develop huge quantities of heat while generating electricity. While modern generating plants are most efficient when they release condenser water to the cooling towers at 85°F, older plants are frequently designed to release condenser water at temperatures of 50° and 55°F. It is not yet known if the lower temperature water could adequately heat commercial greenhouses in northern states.

The University of Minnesota Agricultural Experiment Station, the U. S. Environmental Protection Agency (EPA) and the Northern States Power Company (NSP) cooperated in an experimental project to determine the feasibility of efficiently heating greenhouses with 85°F waste heat water from the NSP generating plant at Becker, Minnesota. The method proved quite practical during some of the coldest winters on record. Outside air temperature reached a low of -43°F at Becker at 8:00 a.m. on January 9, 1977, while the greenhouse

air temperature averaged 58°F. Roses, tomatoes, chrysanthemums and geraniums growing inside were unaware of the frosty outdoor climate.

In another example of heating with waste heat, Control Data, a computer manufacturer, is successfully heating an 11,000-square-foot greenhouse complex with their 85°F waste heat water. This water would normally be routed to cooling towers. Their structure, like those in Becker, Minnesota, is glazed with double-layered acrylic material to reduce heat loss.

How many greenhouses can be heated in this manner? The Becker plant with two coal-fired units and a

total rated output of 1360 MW is capable of heating 1,000 acres of greenhouses at an annual current cost of less than 50 cents per square foot. Oil refineries, nuclear power plants and other commercial installations are equally satisfactory heat sources.

The potential is tremendous. If all existing commercial American greenhouses were heated with condenser waste heat, Americans could save an estimated 1,000,000 gallons of oil or equivalent daily during the winter. We would be wise to efficiently use such precious waste materials from now on.—R.E. Widmer

Greenhouse for Bronx Zoo Uses New Material

The World of Birds exhibit at New York City's Bronx Zoo boasts not only over 100 species of birds but also an attractive botanical display consisting of more than 50 kinds of tropical plants.

The Zoo has a sizable investment in these plants, an equity built up over the years by a plant growth and maintenance program housed, until last spring, in a small area within the exhibit building. Recently, with the help of a substantial donation, a new

18 × 41 foot greenhouse was built adjacent to the exhibit building. The new structure not only solved serious space problems; careful planning also allowed Curator Dr. Don Bruning to expand the program at a minimum cost.

The program is aimed at producing replacement plants as needed at the lowest possible cost. "A major concern in planning the greenhouse was the cost of heating it," says Dr. Bruning. "Our winters are severe, and



Acrylic's high strength and light weight permit installing the double-skinned sheets with supports on four-foot centers, which is not possible with single glass. Thus, installation cost is reduced as fewer structural supports are required.

we realize that a glazing material with much better heat-insulation value than glass was required. We also wanted a material with higher impact resistance because of the possibility of accidental breakage. Finally, the material had to be reasonably priced."

The contractors, Lord & Burnham, Irvington, N.Y., recommended Exolite double-skinned acrylic sheet. Manufactured by CY/RO Industries, Clifton, N.J., it is a glazing material that has attracted a lot of interest by growers who are building new greenhouses.

Due to its unique construction, Exolite has an insulation factor, or U value, of .55. Rigid acrylic supports spaced about every half inch separate two flat sheets of acrylic, also a half-inch apart, trapping a layer of air in between. According to research done at Penn State University, when comparing heat loss from a glass house to that of an Exolite house, a savings of 40 percent can be realized.

Exolite transmits 83 percent of light in comparison with glass, which transmits 89 to 90 percent, but the total amount of light reaching the plants is about the same. The roof bars in the Exolite house are spaced every four feet instead of every two feet; fewer heat pipes are needed due to the insulation factor; and a lot of diffused light bounces off the vertical internal support bars of the Exolite into the greenhouse.

The strength of the Exolite panels is rated at well over 10 pounds per square foot, so Exolite can resist damage due to hail, wind, vandals and snowload. Therefore, annual maintenance costs are lower than glass. Equally important, Penn State studies indicate the material has a life expectancy of 20 years.

For all these reasons, Exolite has also found use in passive solar applications, such as attached greenhouses or solariums for homes and offices.

"We expect that our new greenhouse will permit expansion of our plant growth program so that we can provide plants for other exhibits at the zoo," says Dr. Bruning. "All in all, we feel that the unique greenhouse will provide the most benefits at the minimum operating cost."

For more information on Exolite write CY/RO Industries, 697 Route 46, Clifton, NJ 07015.

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New Plants Listed as Threatened or Endangered

The U.S. Fish and Wildlife Service has added three new plant species to the list of Endangered and Threatened Species and proposed two other species for consideration.

Callirhoe scabriuscula, the Texas poppy-mallow, has been listed by the Service as an Endangered species (F.R. 1/13/81). For more information on this plant see *American Horticulturist* news, November 1980. Gypsum wild buckwheat, *Eriogonum gypsophilum* and Todsens pennyroyal, *Hedeoma todsenii* also were listed as Threatened and Endangered species, respectively (F.R. 1/19/81).

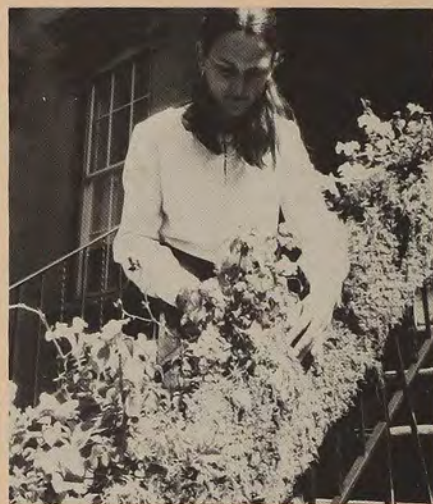
Astragalus montii, the Heliotrope milk-vetch, has been proposed for listing as an Endangered species with Critical Habitat. Only a single population of this plant is known to exist in the alpine Big Flat meadow area of Heliotrope Mountain. *A. montii* is a small perennial member of the pea family, Fabaceae, that was first discovered and described in 1976. This is a characteristically slow-growing plant that is intolerant of habitat disturbance. Its proposed Critical Habitat is relatively remote and is already managed by the U.S. Forest Service.

Panicum carteri hosaka, Carter's panicgrass, a species thought until recently to be extinct, has been proposed for Endangered status with Critical Habitat. The species only exists on Mokolii Island, Hawaii. The

major threats to this species are trampling, vandalism, fire and possible habitat alteration due to recent coconut plantings in the area in which it grows.—*Endangered Species Technical Bulletin*, February 1981

Coming in the June Issue of American Horticulturist

If, by May, you already know that your winter plans for the summer garden will never materialize, then you will appreciate Martha Prince's special contribution to the June Issue—"Confessions of a Lazy Gardener." Other good armchair reading this month will include Fred McGourty's delightfully witty and informative article on container gardening; a discussion of flowers that carry the name lily—in name only—by Mrs. Ralph Cannon; and a peek at the Robison York State Herb Garden. Lorraine Marshall Burgess also shares her ideas for designing a "color-coded" garden in shades of lavender, and Valerie Samson will write about the Society's Autumn Tour of England. In addition, there are our regular features—Strange Relatives, President's Page, Gardener's Marketplace and Books—and a new, "how-to"



Linda Yang

Author Patti Hagan arranges plants in the moss canoe she designed for the stoop of her Brooklyn home.

article this month on building moss canoes. Look for these stories and more coming up in the June issue.

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