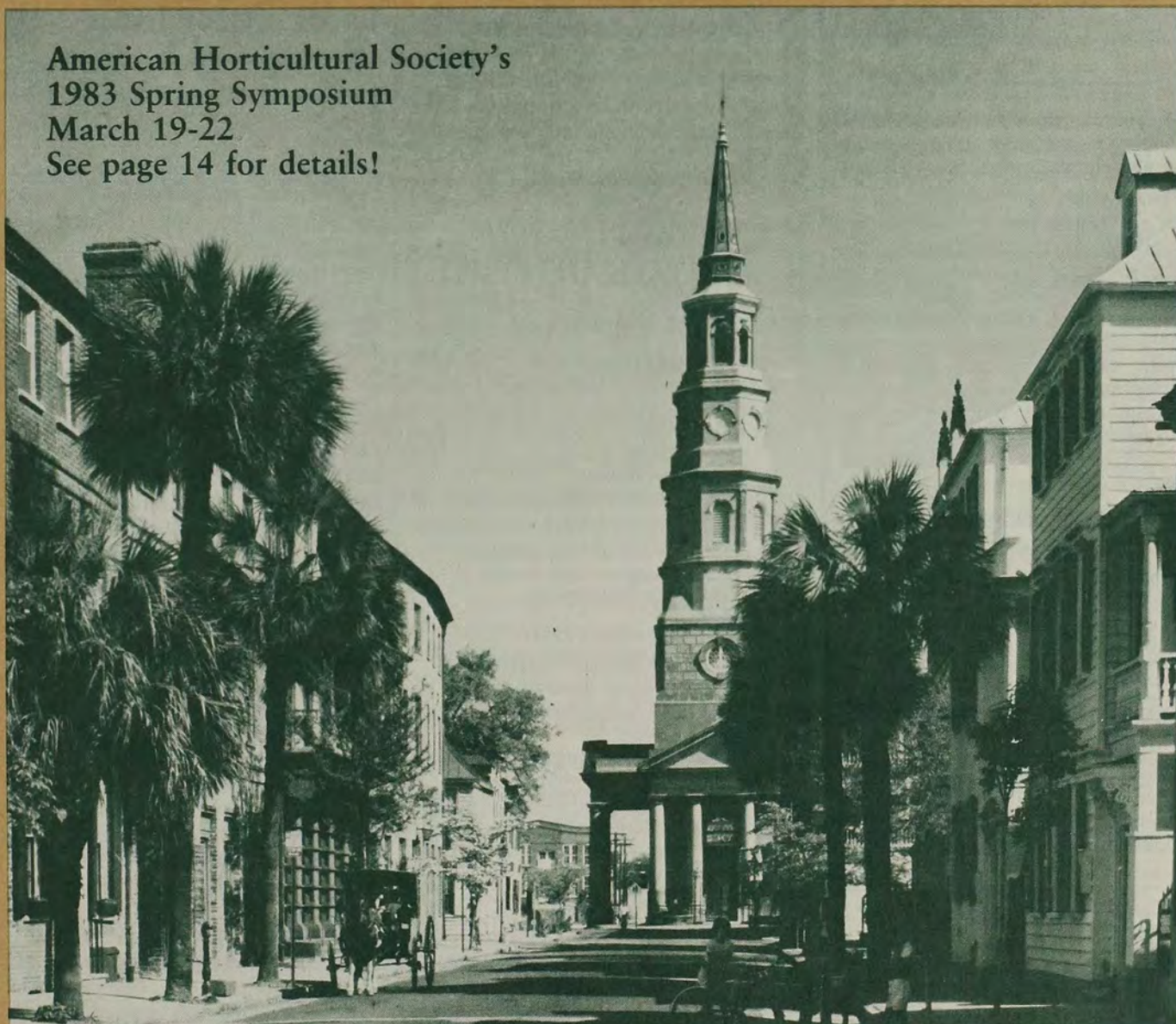


AMERICAN HORTICULTURIST

NEWS EDITION - JANUARY 1983

Charleston

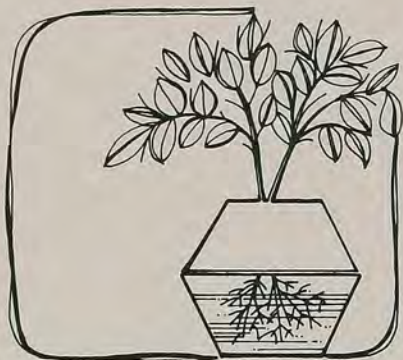
American Horticultural Society's
1983 Spring Symposium
March 19-22
See page 14 for details!



Participants in the Society's fifth annual Spring Symposium will have the opportunity to tour the historic streets and beautiful gardens of Charleston, South Carolina. Here, palm trees, and fine residences dating from 1759 to 1807, line historic Church Street.

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River Farm Notes

These notes are being transcribed in mid November, as our River Farm succumbs to the first frosty temperatures of yet another winter. The air is crisp and cold, and I find it much easier to think about things close at hand, such as our upcoming seed program, than the far-off daffodils of spring.

Our 1983 Seed Program Catalogue will be in your hands before the end of this month, and I am confident you will be very pleased with this year's offerings.

We have more selections for you than ever before, and our new seed room and a newly-assembled crew of wonderful volunteers will greatly enhance our ability to fill your orders quickly and efficiently.

When our Seed Program Catalogue reaches you in the next several weeks, be sure to take the time to read through the selections. We have something for everyone: annuals, pe-

rennials, trees, shrubs, vegetables and, this year, house plants. Even if you do not have the space, time or the desire to “grow from seed,” perhaps a friend or a relative does, so don't let this once-yearly opportunity slip by you. This service is designed to be both educational and enjoyable. We hope you will participate. What better way to spend the remaining months of winter than to grow and care for plants that will provide happiness in a new growing season?

—Steve Davis

New Journal to be Published

The Journal of Environmental Horticulture is a new quarterly designed to interest both scientists and nurserymen. According to Dr. Thomas A. Fretz, who will edit the new publication, each scientific paper will be accompanied by a non-technical summary indicating how the information presented will be of value to nurserymen. “This brief summary should be, if possible, in the form of a recommendation based on the work presented, with implications of the research and possible areas of future investigation,” says Fretz. The Journal will publish original research and review articles related to environmental horticulture, including nursery crops production, economics and marketing, plant disease and insect control, taxonomy, breeding and genetics, tissue culture, growth regulators, transplant technology and care and maintenance of plants in the landscape.

Authors wishing to submit manuscripts should write Dr. Fretz, head of the Department of Horticulture at Virginia Polytechnic Institute and State University and a new AHS board member, at the following address: HRI Journal Editor, Department of Horticulture, 115 Hutcheson Hall, VPI & SU, Blacksburg, VA 24061, (703) 961-5451. For a one-year subscription to the Journal send \$25.00 and your name and address to Horticultural Research Institute, 230 Southern Building, Washington, DC 20005.

AMERICAN HORTICULTURIST

VOLUME 62 NUMBER 1

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Member of Society of National Association Publications

AHS Birthday Party A Success



Top Left: Society President Edward N. Dane receives the cake cutting knife from Thomas W. Richards at the Society's celebration at River Farm. Above: He enjoys a conversation with former Board Member Mrs. John M. Maury, and left, with staff member Steve Davis.

Photographs by Jean Christensen

On Friday, October 15, the American Horticultural Society had a birthday party. Several hundred friends of the Society came to celebrate the Society's 60 years of contributions to horticulture. River Farm was transformed into a mini-botanical garden, thanks to the donation of plants from many horticultural organizations, plant societies and individuals. Music relating only to flowers, played by strolling musicians, filled the air as guests enjoyed cocktails, delicious refreshments and

birthday cake. The 4 1/2-foot-long cake replicated the hand-needle-pointed window seat cushions in River Farm's ballroom and incorporated the logos of over 40 plant societies. If the thank you notes and calls that followed the party are any indication, a good time was had by all. Thanks and congratulations are due the Friends of River Farm and Birthday Committee Chairman Mrs. Wilfred Smith and her fellow members for planning a very successful event.

New Seed Saver Studied

Scientists at the U.S.D.A. Seed Research Laboratory, Beltsville, Maryland, have found that coating seeds with polyethylene glycol antifreeze for cars may improve the performance of old or damaged seeds.

As seeds age, or if they are damaged, the membranes within and around the cells of the plant embryos deteriorate. When planted, seeds with weakened membranes take up water too quickly and the enzymes, nucleotides, amino acids and other cell constituents flow out of the cells or mix together. These bloated seeds either get off to a poor start or fail to germinate altogether.

By coating seed with polyethylene glycol scientists can slow the intake of water, and they theorize this gives damaged or old seed time to repair cell membranes. Seeds that were artificially aged to simulate a few years

in storage germinated and grew as well as fresh seed when treated with polyethylene glycol. This technique, which is still being tested, could aid soybeans, lima beans, peas and other crops whose seeds are susceptible to overimbibing water as they age.

Erratum

As many of you may have noticed, the illustration of *Paphiopedilum* on the cover of the November newsletter was slightly misleading. The cover article concerned growing North American terrestrial orchids, including *Cypripedium*, from seed. Although both species are commonly called lady-slipper orchids, *Paphiopedilum* is a genus of about 60 species native to tropical Asia.

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Member's Advice on Germinating Seed

The different methods used to germinate seeds vary in their effectiveness depending on the local climate and the microclimate of the area where the seeds are actually sown. I have found, for instance, that using any sort of plastic "greenhouse" for germinating seed in my area—less than a quarter mile from the ocean in Santa Monica, California, where fog is a daily occurrence for a good part of the year—is a terrible idea. Most seeds I tried using this method simply failed to germinate because of the luxurious crop of mold that quickly sprouted on even supposedly sterilized medium. In Santa Monica my most successful germinating trials came when I merely broadcast the seed in an open sunny bed in the garden and watered the bed daily at about noon until the seedlings showed their first true leaves.

I now live a few miles inland in Los Angeles, an area where tender ferns such as *Asplenium* and *Adiantum* and fuchsias require shade and at least one and sometimes two waterings per day. Here, a plastic greenhouse works well if I leave the end of the bag open so air can circulate. If the bag is sealed, and especially if it is subject to much temperature variation, mold will be a problem.

Over all, however, the method that works best for me is one that was recommended by a local nurseryman. Take a standard empty nursery flat, line the bottom with a section of the daily newspaper, and fill the flat about three-quarters full with any sort of standard potting soil. Sow the seed, properly scarified if necessary, in the already-watered medium. Lay any sort of plastic loosely over the top of the flat until the first seeds have begun to germinate, and then discard it. I have found it necessary to water the seed flats only once a week, and then lightly, even though the relative humidity has dropped below 10 percent when the winds blow off the desert. It appears that the newspaper serves as a water reservoir, much as a brick would (see the March, 1982 issue of *American Horticulturist* news), and is certainly easier to obtain and use than a brick. Newspaper also keeps water from dripping

out the bottom of the flat, thereby rendering practically unnecessary a battery of old pie tins, cookie sheets or plastic plates to catch water drip.

As an experiment, I sowed several species of ornamental grasses in a flat this year, and an embarrassingly high percentage germinated and are doing quite well—way too many for me to use, in fact. Due to rainy weather, and then scorchingly hot desert winds, followed by more rainy weather again, not to mention the fact that I have to extirpate

quite a large area of Bermuda grass before I can plant out the seedlings, I have left them in the flat. It is sitting out in the open on the east and gets up to three hours of full sun per day in the morning. The seedlings continue to grow vigorously with only weekly watering, even though it is now about three weeks past the point where they should have been potted up into a large container. Maybe one of these days. . . .

—Michael O'Brien
Santa Monica, California

Upcoming AHS Events

The following Society sponsored tours and other events have been scheduled for this winter and spring. For information about any of these events write the Society's Department of Education.

January 24-February 5, 1983

Floral Festival Cruise from Ft. Lauderdale, Florida to Acapulco

February 24, March 3, 10, 17 and 31

Winter Lecture Series at River Farm

March 19-22

Spring Symposium, Charleston, South Carolina

April 1-24

"China Discovery" tour of the warm provinces of Yunnan, Sichuan (Szechwan) and the Southwest. The prolific rhododendrons and azaleas are a feature as are the Buddhist cave sculptures at Dazu and sacred Mt. Emei, the site of much botanical research.

April 14-28

Spring tour of California's private and public gardens, parks and nurseries from San Francisco to San Diego. The itinerary includes visits to Strybing Arboretum, Hearst Castle, Descanso Gardens, a winery and the Getty Museum.

April 28-May 18

Tour of Japan in the spring featuring a visit to Kyushu, Japan's southern island famous for its rhododendrons and azaleas. Also scheduled are visits to public and private gardens in Kyoto and Tokyo and lovely Hakone National Park.

April 30-May 7

"Spring in Bermuda" tour of this island's public and private gardens.

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.

AHS Staffer Wins Writing Award

Jane Steffey, the Society's horticultural advisor and the author of *American Horticulturist's* popular "Strange Relatives" column, received a communications award from the Garden Writers Associa-

tion of America at their annual meeting in Philadelphia. The Class I award, given for a column in a magazine, was made for her December, 1981 article, "Strange Relatives: The Cashew Family."

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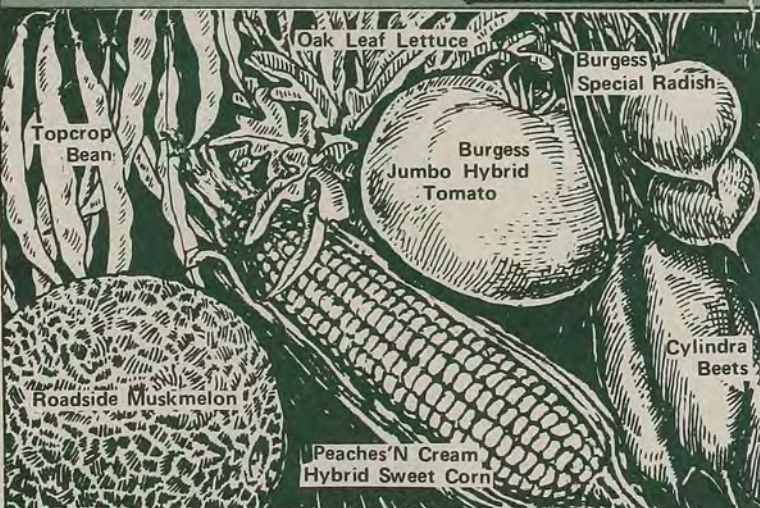


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HORTICULTURAL EXPLORATIONS



Shinjuku Gardens, Tokyo, Japan

The American Horticultural Society proudly presents its Spring Explorations. They are specially designed and exclusive. We visit both private and public gardens. In addition, local escorts give us highlights of history, scenery and culture. These programs are suitable for all levels of horticultural interest.

BERMUDA (April 30—May 7)

This period is the perfect time to visit Bermuda, regarded as the favorite vacation island in the Western Hemisphere. We have a well-known local horticulturist to inform us of the local flora. Visit the Botanical Gardens, the Arboretum, the Zoological Garden, Paget Marsh Nature Reserve. Visit to private gardens as well as Garden Club of Bermuda's Open Houses and Gardens. Free time also.

SPRING JAPAN (April 28—May 18)

A brand new itinerary to see some of the "off-the-beaten track" areas of Japan. See Kirishima National Park with its wild azaleas, the major nursery center of Kurume, private gardens, nursery auctions and spectacular scenery. Then on to Kyoto's famous temple gardens and cultural centers, beautiful Nikko, and bonsai village near Tokyo. A horticultural, scenic and cultural bonanza of Japan.

Other horticultural explorations available in 1983 are: Southwest China (April 1—24), California (April 14—28), Spring and Fall England (May 12—26 or Sept 7—21), Germany and IGA '83 (May 26—June 9 or Sept 21—Oct 5), Canadian Rockies (July 16—30), South Africa (Sept 9—30), Fall New England (Oct 3—17), Fall Orient (Nov. 1—24).

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

CALENDAR

January 15-21

Associated Landscape Contractors of America
21st Annual Convention
Miami, Florida
Information: ACLA, 1750 Old Meadow
Road, McLean, VA 22102

January 19-23

Calgary Home and Garden Show
Roundup Building,
Calgary Stampede Grounds
Calgary, Alberta, Canada
Hours: Monday through Friday 5:00 p.m. to
10:30 p.m.; Saturday 11:00 a.m. to 10:30
p.m.; Sunday 11:00 a.m. to 8:00 p.m.
Information: Southex Exhibitions, Ste 200,
1201-5th St S.W., Calgary, Alberta, Can-
ada T2R 1L1, (403) 269-3161

February 10-12

American Camellia Society Annual Meeting
Dunfey Dallas Hotel
Dallas, Texas
Information: Lucille Harkey, Treasurer, 7059
Cornelia Lane, Dallas, TX 75214

February 17-19

Semiquincentenary Historic Horticultural
Seminar
Celebrating Georgia's 250th Birthday
DeSoto Hilton Hotel
Savannah, Georgia
Information: Mrs. D. O. Thomas, Registra-
tion Chairman, 321 Abercorn Street,
Apartment 202, Savannah, GA 31401

February 24, March 3, 10, 17 and 31

Winter Lecture Series at River Farm
Information: Call or write Dorothy Sowerby
at the Society's Department of Education

February 24-27

Ark-La-Tex Home and Garden Show
Shreveport Exposition Hall
Shreveport, Louisiana
Information: Ark-La-Tex Home and Garden
Show, c/o Page Enterprises, Inc., Route 3,
Box 12, Gravois Mills, MO 65037,
(314) 372-2277

February 25-March 6

Vancouver Home and Garden Show
Pacific National Exhibition Grounds
Vancouver, British Columbia, Canada
Hours and information: See Calgary Home
and Garden Show, January 19-23

February 26-March 6

Central Ohio Home and Garden Show
Multipurpose Building
Ohio State Fairgrounds, Columbus, Ohio
Hours: Monday through Friday 4:00 p.m. to
10:00 p.m.; Saturday 1:00 p.m. to 10:00
p.m.; Sunday 1:00 p.m. to 7:00 p.m.
Information: Hart Productions, Inc.,
1172 West Galbraith Road, Cincinnati,
OH 45231

February 26

Dinner lecture at Longwood Gardens, "Horti-
cultural Gems of North America"
Speaker: Dr. J. C. Raulston
Kennett Square, Pennsylvania
Fee: \$22.00, pre-registration only
Time: 7:00 p.m.
Information: Continuing Education, Long-
wood Gardens, Kennett Square, PA 19348,
(215) 388-6741

February 26-March 6

Southern Living Show
Charlotte Merchandise Mart
2500 E. Independence Boulevard
Charlotte, North Carolina
Hours: Monday through Saturday 10:00 a.m.
to 9:30 p.m., Sunday 10:00 a.m. to
6:00 p.m. Admission fee: Adults \$3.50.

March 4-13

Cleveland Home and Flower Show
Public Hall and Convention Center
Cleveland, Ohio
Hours: Opening Friday 4:00 p.m. to 11:00
p.m.; Monday through Thursday 11:00
a.m. to 10:00 p.m.; Friday and Saturday
11:00 a.m. to 11:00 p.m.; Sunday 11:00
a.m. to 8:00 p.m.
Admission fee: \$3.50
Information: Edward J. Baugh, Managing Di-
rector, 636 St. Clair Avenue, N.E., Cleve-
land, OH 44114, (216) 621-3145

March 5-13

Cincinnati Home and Garden Show
Cincinnati Convention-Exposition Center
Cincinnati, Ohio
Information: Hart Productions, Inc.,
1172 West Galbraith Road, Cincinnati,
OH 45231

March 6-13

Philadelphia Flower Show
Philadelphia Civic Center
Philadelphia, Pennsylvania
Hours: Monday through Saturday 10:00 a.m.
to 9:30 p.m.; Sunday 10:00 a.m. to 6:00
p.m.
Admission fee: Adults \$5.50, children under
12 \$2.75.
Information: Pennsylvania Horticultural Soci-
ety, 325 Walnut Street, Philadelphia, PA
19106, (215) 625-8250

March 12-20

New England Spring Garden and Flower
Show
Massachusetts Horticultural Society
Bayside Exposition Center
200 Mount Vernon Street
Boston, Massachusetts
Information: Betty Levine, Flower Show Sec-
retary, Horticultural Hall, 300 Massachu-
setts Avenue, Boston, MA 02115, (617)
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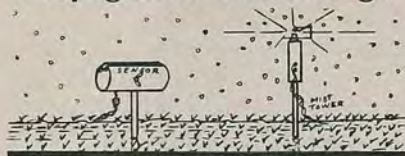
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8. It is rugged, durable, trouble free, safe, dependable, solid state and has little wear or upkeep. The first kits sold 11 years ago are operating today.

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Nitrogen-fixing in Plants May Be Caused by DNA Exchange

Bacteria within the root nodules of nitrogen-fixing plants such as alfalfa and other legumes may play a more unique role than scientists had expected. Until now Rhizobium bacteria and the roots of these plants were thought to be working partners—one needing the other. Research by U.S.D.A. plant physiologist Dr. Carroll P. Vance suggests, however, that Rhizobium bacteria and plant root nodules may exchange genetic information, thus regulating how certain plants fix nitrogen. Scientists are trying to find out if this occurs and how it works.

"Our research suggests," said Dr. Vance, "that Rhizobium bacteria are required for only limited periods

during nodule initiation, and that the bacteria may have no direct influence on subsequent structural changes and growth of the nodule." Dr. Vance theorizes that if the bacteria are needed only initially to form the nodule, then the bacteria may be injecting its own DNA into the alfalfa root cells. If further research determines DNA is actually exchanged, this enhances the possibility of genetically engineering nodule formation and nitrogen fixation in other crop species. According to Dr. Vance such DNA transfer also might allow genetic engineering of a more productive nitrogen-fixing association between Rhizobium bacteria and the host plant.

New Plants Listed as Endangered



Isotria medeoloides, small whorled pogonia.

The U. S. Fish and Wildlife Service has added three new plants to its list of Endangered and Threatened Species and has proposed that two Hawaiian species be added to the list.

The small whorled pogonia, *Isotria medeoloides*, designated an Endangered species (F.R. 9/10/82), is the second orchid to be added to the list. No critical habitat was established for the plant, which is threatened by collection and loss of habitat, because of the fear that disclosing the locations of the remaining plants would make them more vulnerable to collection. According to the Endangered Species

Technical Bulletin, September, 1982, "this fear is not unfounded—today, there are nearly as many, if not more, dried specimens of the species in herbaria than are known to exist in the wild." Current estimates indicate there are about 500 individual plants located in 10 different states in the eastern United States and in one county of Ontario, Canada. Approximately 70 percent of the known plants are in Maine.

Euphorbia skottsbergii var. *kalaeloana*, the 'Ewa Plains 'akoko, was designated an Endangered species (F.R. 8/24/82). This small shrub, a native Hawaiian plant found only

near Barbers Point on the island of Oahu, is threatened by an invasion of exotic plants that are more aggressive than Hawaii's native species.

Phacelia formosula, commonly called the North Park phacelia, was listed as Endangered (F.R. 9/1/82). *P. formosula* is threatened by off-road motorcycle use of the area, possible oil, gas or coal exploration and cattle trampling. Population counts of this species vary from year to year, but there are about 2,500 plants located in two major populations in Jackson County, Colorado.

Studies of the original population of *P. formosula*, first discovered in 1918 and under study since 1969, indicate the plant's reproductive success is very poor. In addition, the species is probably a biennial, and once the plant has produced its violet flowers and set seed it dies. Thus, an entire population could potentially be wiped out by a year or two of poor seed crops, or seasons when conditions were not adequate for proper germination.

For more information on all three of these species, see the March, 1981 issue of *American Horticulturist* news.

Finally, two native Hawaiian species, the cuneate bidens, *Bidens cuneata* and the Diamond Head schiedea, *Schiedea adamantis*, were proposed for listing as Endangered plants. Each of these species is known from a single small population on the rim of Diamond Head Crater on the island of Oahu. The total population of *B. cuneata*, an herb, is about 10 individuals, and there are approximately 78 individual plants of *S. adamantis*, which is a small shrub. Both of these species are threatened by habitat deterioration caused by nearby hiking trails, encroachment by aggressive exotic plant species and by fire because of the very dry conditions of the area during part of the year. According to the *Endangered Species Technical Bulletin*, both species "are of great scientific interest because they are members of families which have undergone much evolutionary diversification in Hawaii, and they belong to genera that would make excellent models for the study of evolution and adaptive radiation" in an island flora.

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WILLIAMSBURG GARDEN SYMPOSIUM

April 17-20, 1983

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The Program

Unless otherwise indicated, all events will take place in the Williamsburg Conference Center adjoining the Williamsburg Lodge.

Sunday, April 17

2:00 to 5:00 p.m.—Registration and free time to visit Colonial Williamsburg's gardens, exhibition buildings, craft shops, Bassett Hall, Carter's Grove plantation and Abby Aldrich Rockefeller Folk Art Center.

5:30 to 6:30 p.m.—Reception.

6:30 to 8:30 p.m.—Free time for dinner.

8:30 p.m.—August De Hertogh, "A View of Keukenhof, and Landscape Uses of Spring-Flowering Bulbs."

Monday, April 18

9:30 a.m.—Jane Pepper, "New Fields to Cultivate."

10:30 a.m.—Coffee.

11:00 a.m.—Cynthia Long, "The Natural History of a Tidewater Woodland."

12:00 p.m.—Free time for lunch.

2:00 p.m. to 4:00 p.m.—Tours of Bassett Hall woods and demonstration of Colonial Williamsburg skills.

4:30 p.m.—Informal tea. Free time for dinner.

8:30 p.m.—Sunny O'Neil, "White House Flowers; Yesterday and Today."

Tuesday, April 19

5:45 a.m.—The Early Risers' Bird Walk.

9:30 a.m.—James van Sweden and Wolfgang Oehme, "Gardens for All Seasons."

10:30 a.m.—Coffee.

11:00 a.m.—Buses leave for Norfolk Botanical Gardens for luncheon and tour of Gardens.

4:00 p.m.—Buses return to Williamsburg.

5:00 p.m.—Free time for dinner.

8:30 p.m.—Special Program: "Music at the Capitol" (included in registration).

Wednesday, April 20

9:30 a.m.—Merritt Huntington, "Orchids Are for Everyone."

10:30 a.m.—Coffee.

11:00 a.m.—John Elsley, "A Palette of Perennials."

12:00 p.m.—Free time for touring (same as Sunday).

4:00 p.m.—Tea.

7:30 p.m.—The Symposium Gardeners' Banquet (separate ticket required).

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- August De Hertogh, Head, Department of Horticultural Science, North Carolina State University, Raleigh.
- Merritt Huntington, Past President, The American Orchid Society.
- Cynthia Long, Senior Interpreter, Colonial Williamsburg Foundation.
- Richard D. Mahone, Director of Horticultural Projects, Colonial Williamsburg Foundation.
- Donald H. Parker, FASLA, Director of Landscape Architecture, Colonial Williamsburg Foundation.
- Sunny O'Neil, Consultant, Teacher and Writer, Bethesda, Maryland.
- James van Sweden and Wolfgang Oehme, Landscape Architects, Washington, D. C.

How to Register

Garden Symposium registration must be made in advance and accompanied by a check for \$120 per person. This fee covers lectures, tours of Colonial Williamsburg's gardens and exhibition buildings, craft shops, Carter's Grove plantation and Bassett Hall, teas, clinics, workshops, reception, concert and the tour of the Norfolk Botanical Gardens. It does not include the Gardeners' Banquet and other meals or lodgings. Send checks, payable to the Colonial Williamsburg Foundation, and registration form to Mrs. Trudy S. Moyles, Registrar, P.O. Drawer C, Williamsburg, Virginia 23187.

Hotel rates include lodging only. Please give two choices for accommodations, since it is not always possible to reserve your first choice. All accommodations are attractive and every effort is made to give registrants their first choice. A deposit is not necessary to reserve a room. Registration form on page 15.

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Charleston

Spring Symposium Program

Saturday, March 19

10:00 a.m. to 5:00 p.m.—*Registration*, Queen Street Gallery, Mills House Hotel, Meeting and Queen Streets.
6:00 p.m. to 7:30 p.m.—*Cocktail Reception* at the Gibbes Art Gallery on Meeting Street, just down the block from the hotel.

Optional—*Tradd Street Candelight Tour* from 7:00 p.m. to 10:00 p.m. Spend the evening touring one of Charleston's oldest surviving neighborhoods.

Saturday Evening free to explore Charleston. Dinner on your own.

Sunday, March 20

8:00 a.m. to 11:00 a.m.—*Registration*, Queen Street Gallery, Mills House Hotel.

8:45 to 11:00 a.m.—*Education/Lecture Session*. The speakers will be Frances R. Edmunds and Dr. Richard D. Porcher.

8:45 to 9:00 a.m.—*Welcome to Charleston* by Edward N. Dane, the Society's new President.

9:00 to 10:00 a.m.—*Frances R. Edmunds*, Executive Director of the Historic Charleston Foundation, "Charleston's Historic Heritage."

10:00 to 11:00 a.m.—*Dr. Richard Porcher*, Biologist, The Citadel Military College of South Carolina, "Plants of the Carolina Coastal Plain."

11:30 a.m. to 12:30 p.m.—*Lunch* at the Mills House Hotel.

12:45 to 8:30 p.m.—*Tour of three famous plantations* along the historic Ashley River: Magnolia Plantation, Drayton Hall and Middleton House and Gardens. The day will be topped off by a festive oyster roast at Middleton Place.

● **Magnolia Plantation:** These gardens, which are nearly 300 years old, are famous for their uniquely informal design and their spring displays of azaleas and camellias. For more information see Pamela Harper's article in the February, 1982 issue of *American Horticulturist*.

● **Drayton Hall:** Built between 1738 and 1742, Drayton Hall is the finest surviving example of Georgian Palladian architecture in the South. Designated a National Historic Landmark, the Hall is flanked by traces of the 18th- and 19th-century gardens.

● **Middleton Place:** Beautifully landscaped Middleton Place is famous for its river vistas, formal terracing, allées and ornamental lakes. Its spring flower display features camellias planted in the 18th century and azaleas planted in the 19th century. The 65-acre plantation dates from about 1755.

6:30 p.m.—*Oyster Roast* at Middleton Place.



Middleton Place on the historic Ashley River

Monday, March 21

8:00 to 9:30 a.m.—*Breakfast Round Table Discussions* at the Mills House Hotel. A host or hostess from the Charleston area will be at each table to answer questions and promote discussion.

9:30 to 10:30 a.m.—*John Henry Dick*, Ornithologist, Writer, Painter and Wildlife Photographer, "Wildlife in the Carolina Lowlands."

10:30 a.m. to 6:30 p.m.—Afternoon free to explore Charleston. Lunch on your own.

Optional—*Legare Street Tour* from 1:00 to 4:00 p.m. Spend the afternoon touring this historic and scenic avenue with its fine mansions and beautiful gardens.

6:30 to 7:30 p.m.—*No Host Cocktail Reception* at the Carolina Yacht Club.

7:30 to 9:30 p.m.—*Spring Garden Symposium Banquet* at the Carolina Yacht Club. The featured speaker will be Dr. William M. Klein, Director of the Morris Arboretum, University of Pennsylvania, "From Private Estates to Public Gardens."

Tuesday, March 22

Departures for home or the Post Symposium Tour of the Cooper River Valley. Visits to several of the area's fine private homes and gardens are planned.

Registration Form

American Horticultural Society 1983 Spring Symposium

IMPORTANT: All events described in the American Horticultural Society's Symposium program, except the optional tours, are included in the registration fee. This fee covers all motor coach transportation, all entrance and guide fees, the cocktail reception at Gibbes Art Gallery, The Oyster Roast at Middleton Place and the Banquet at the Carolina Yacht Club.

\$205 for AHS member \$ _____

\$405 per couple \$ _____

I enclose a check for* \$ _____

OPTIONAL TOURS

Saturday, March 19: 7:00 p.m. to 10:00 p.m. Tradd Street Candlelight Tour, \$15.00 per person.

Monday, March 21: 1:00 to 4:00 p.m. Legare Street Tour, \$15.00 per person.

My check for \$ _____ is enclosed for the optional tours.

* Registration discount if received by February 16, 1983
DISCOUNT PRICE FOR THE EARLY BIRD: \$190 Single—\$360 Couple

CANCELLATIONS: Full refund if written cancellation is received before March 9 less \$35 per person for booking expense. No refunds will be made after March 9.

MAIL CHECK AND REGISTRATION FORM TO:

Dorothy Sowerby, AHS, Department of Education, Box 0105, Mt. Vernon, VA 22121.

It would be helpful if you would send the full amount due with this registration form. However, if you wish, you may pay only \$125 per person now, with the balance due upon your arrival at the Meeting.

Upon receipt of your deposit, we will send you a hotel accommodations card you may complete and mail directly to the Mills House Hotel. Hotel rates have been established at \$69.00 single and \$79.00 double. Suites are also available.

(Below, list your name as you wish it to appear on your name badge.)

Full Name(s) Mr., Mrs., Ms. _____

Address _____

City, State, Zip _____

Eastern Airlines will be our official airline for the Charleston Symposium. Upon registering, you will be provided with a special toll-free Eastern number you may call to make your plane reservations. Eastern will guarantee you the best available rates when you call. If Eastern does not service your area, they will make reservations for you at the best available rates with another airline that does fly from your home to Charleston, SC.

37th Annual Williamsburg Garden Symposium

PLEASE REGISTER ME FOR THE 1983 SESSION, to be held Sunday, April 17 through Thursday, April 21.

☐ My check covering the \$120 registration fee for each person is enclosed. (Please make registration checks payable to Colonial Williamsburg Foundation.)

☐ This is my first visit to a Williamsburg Garden Symposium.

☐ Williamsburg Inn \$98.
☐ Williamsburg Lodge \$78.
 ☐ South Wing \$78.
 ☐ West Wing \$88.
☐ The Motor House \$59.

My second choice is _____

Date of arrival _____

Date of departure _____

Signed _____

NAME _____

STREET _____

CITY _____

ZIP CODE _____

AREA CODE _____ PHONE NUMBER _____

I will share a room with:

NAME _____

STREET _____

CITY _____

ZIP CODE _____

AREA CODE _____ PHONE NUMBER _____

Please tell us how you would like your name badge(s) prepared: (Example: Mrs. John J. Adams or Mrs. Mary Adams)

RESERVATIONS ARE NOT TRANSFERABLE: Hotel rates include lodging only and are subject to Virginia sales tax. Deposit check is not necessary for accommodations. Colonial Williamsburg cannot guarantee a requested room location within its hotels, but will make every effort to comply with the hotel choice.

MAIL CHECK AND REGISTRATION FORM TO: The Williamsburg Garden Symposium/Mrs. Trudy S. Moyles, Registrar/P.O. Drawer C/Williamsburg, Virginia 23187.

AMERICAN HORTICULTURIST

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

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Books for Dryland Gardeners

Gardeners in areas with little rainfall and individuals with an interest in the native plants of California will want to purchase one or more of the Saratoga Horticultural Foundation's excellent publications.

Selected California Native Plants in Color is an excellent guide containing descriptions and color photographs of over 100 native plants. A 70-page companion book, *Selected California Native Plants With Commercial Sources*, would be valuable with or without the color guide. In addition to providing sources for a long list of native plants, the sources guide contains an extensive listing of native species accompanied by information on habitat, planting recommendations and propagation information. The list of nursery firms includes addresses, phone numbers, hours of operation and indicates whether each firm sells retail, wholesale or mail-order and if they have a catalogue.

The Foundation's newest publication, *Success List of Water Conserving Plants*, is an easy-to-use reference created for gardeners and landscapers who want to plan new landscapes with low water requirements or adapt existing designs to increase drought tolerance. The 73-page book lists 183 plants that have proven to be: water conserving, attractive garden plants, generally available, disease and pest resistant, easy to maintain and compatible

with sprinkler water. The plants are grouped into seven chapters: shrubs; ground covers; vines; palms and palm-like plants; herbaceous annuals, perennials and bulbs; and water conserving grasses and lawn substitutes.

The prices for these publications, including postage and handling, are as follows: *Selected California Native Plants in Color*, \$7.75; *Selected California Native Plants With Com-*

mercial Sources, \$4.65. These two books can be purchased as a set for \$11.00; *Success List of Water Conserving Plants*, \$4.65. A four-page booklet, "Guide to Planting and Establishing Water Conserving Plants," will be sent with each book order. Send orders to the Saratoga Horticultural Foundation, Inc., 20605 Verde Vista Lane, PO Box 308, Saratoga, CA 95070, (408) 867-3214.

Mulch Speeds Tree Growth

In areas with little rainfall, newly planted trees may benefit from a sheet of rubber mulch. In tests conducted at the U.S.D.A.'s Central Great Plains Research Station, Akron, Colorado, deciduous trees including ash, Chinese elm, hackberry and honey locust grew more than twice as fast with the rubber mulch as they did without. Shrubs such as plum, sand cherry and cotoneaster grew nine percent faster, and conifers, including Colorado blue spruce, Rocky Mountain juniper and ponderosa pine, showed a six percent growth advantage with the mulch. Very thick (1/4-inch) sheets of rubberized mulch, much like truck tarpaulin, were used in these experiments so that it would not have to be replaced on a yearly basis.

According to Rome H. Mickelson, who conducted the tests over a two-year period, the mulch reduced run-

off and evaporation as well as controlled competing weeds. The seedlings in the tests averaged from 10 to 20 inches in height.

Mickelson also studied the effect of supplying both the mulched and unmulched plants with water via a drip irrigation system. The growth rate of trees that had been grown with mulch for two years was not significantly influenced by the addition of up to seven gallons of water per week, while trees grown without mulch increased their growth rate 40 percent when compared to non-irrigated trees.

Mickelson plans to move the drip irrigation system about two to three feet from the tree trunks to try to encourage lateral root growth. This should also increase the tree's water stress tolerance, an important consideration when the mulch is removed after four to six years of growth.