

AMERICAN HORTICULTURIST

NEWS EDITION—JULY 1983

Exhibition Celebrates Georgia's Landscape and Gardening History



In celebration of the 250th anniversary of the founding of Georgia, America's 13th colony, the Atlanta Historical Society has developed a major educational exhibition entitled "Land of Our Own." The exhibition, which opened March 1 and will continue until October 23, 1983, represents three years of research, and makes available for the first time a comprehensive overview of Georgia's landscape and gardening history from the founding of the colony in 1733 to the present.

The exhibition is divided into seven chronological periods: Before the English; The Colony 1733-1776; the Ante-bellum State 1776-1861; The War in Georgia; Post-bellum Georgia to the turn of the century; Modern landscapes—early 20th century to post World War II; and Contemporary landscapes.

Throughout, the history of Georgia's agriculture, horticulture, town

planning and landscape design has been selectively examined and documented through the use of original paintings, rare books, period maps, photographs, manuscripts, tools, seed catalogs, garden furniture and statuary.

Of special interest to horticulturists are the water color and pencil drawings from the 1736 journal of Philip Georg Frederick von Reck on loan from the Royal Library in Copenhagen. They are believed to be among the first depictions of the flora and fauna of the new colony. Also represented are William Bartram's original water color painting of *Franklinia alatamaha*, first discovered growing along Georgia's Altamaha River, and Bartram's 1788 handwritten journal of his travels through Georgia and Florida, both on loan from the British Museum of Natural History in London.

The main part of the exhibition is located in the galleries and atrium of the Atlanta Historical Society, but on-site gardens and other resources serve as important supporting elements.

All those interested in horticulture are invited to visit this major exhibition, funded in part by the National Endowment for the Humanities. Tours of the exhibition, which is free and open to the public, are conducted by knowledgeable docents.

For more information, write or call the Atlanta Historical Society, 3101 Andrews Drive, NW, Atlanta, GA 30305 (404) 261-1837.



TOP: *Anderson Apple*, painting by Jarvis Van Buren. ABOVE: Fruitland Nurseries Catalogue.

Please Note:

Philadelphia gardeners may register for our Annual Meeting on a daily basis (see program on page 13). Look for a special mailing in July or call or write the Education Department at River Farm.

River Farm Notes

Have you ever seen an unspoiled woodland setting? Beautiful woodland areas, unavailable to so many urban dwellers, have a lure all their own. Majestic trees and the special plants carpeting the forest floor create a setting that is a joy to behold. To help our visitors share in the joys of such a setting we will be transforming six acres of unused River Farm forest into a Woodland Walk that will unfold with botanical surprises at every turn.

Our project location, a carpeted ravine on the northern end of River Farm, demonstrates precisely what happens when a lawned woodland is neglected. Once religiously mowed, the area now sports a tangled mass of honeysuckle, poison ivy, nettles and flourishing representatives of virtually every undesirable species of plant known to man.

A small section of this forest has been tamed into use as a demonstra-

tion plot for the American Rhododendron Society. Though initially intended for use as a holding bed, it continues to display its superb specimens in limbo—away from the path of River Farm visitors. Wildflowers, donated by the Virginia Wildflower Preservation Society and AHS members, also save the woodland area from total chaos, but now we must begin the enormous task of creating the perfect environment for these plants, and for the others we hope to include in our Woodland Walk.

Over the next several years, AHS's summer interns will spend part of their three-month stay with us working on the woodland project. They will get rid of the masses of poison ivy and Virginia creeper using Round Up® combined with a spreader-sticker, or another general herbicide. Weeding alone would leave too many roots waiting in the soil to reinfest the plantings. To give

the area additional light, they will help fell diseased or undesirable trees. They will mix soil to provide the proper consistency and chemistry for each plant type, and, finally, to provide visitors close access to every planting, they will develop a system of twisting and curving trails.

I have high hopes for the Woodland Walk as an educational tool. It will demonstrate the full range of horticultural ideas available for this kind of setting, as well as provide quiet moments of unusual beauty for our visitors. I am glad, too, that our AHS interns—sponsored by the generosity of Society members—will develop this project as part of their first practical horticultural work. Please share in the excitement of this project by sending along your ideas and suggestions for planting approaches and additional plant sources. Help us make this a very special garden indeed. —Steve Davis

AMERICAN HORTICULTURIST

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National Arboretum Plans New Display

Next summer, if all goes well, the National Arboretum will celebrate the opening of its newest and perhaps most unusual garden display—The National Home Vegetable and Flower Garden. This new display will feature a series of small theme gardens that will be changed on a yearly basis. A series of budget gardens demonstrating the garden a homeowner could plant for \$50, \$100, \$200 and \$400 will be planted alongside gardens featuring specific types of plants, such as those grown in ancient times and ones with medicinal properties. Ur-

ban gardeners will be treated to displays of plants suitable for small spaces and plants that can be grown in containers or under other difficult situations such as in deep shade or hot sun.

The National Home Vegetable and Flower Garden is being sponsored and funded by contributions from individuals and corporations in the gardening industry. For more information, or to make a donation, write the United States National Arboretum, National Home Vegetable and Flower Garden, 24th and R Streets, NE, Washington, DC 20002.

Bronx Zoo Residents Enrich Gardens

Residents of New York's famed Bronx Zoo are donating their used straw bedding, manure and leaves to help the Bronx FRONTIER Development Corporation, a non-profit community service agency dedicated to improving life in the South Bronx. Rather than turning up noses at what some might view as a dubious donation, FRONTIER is composting the material and marketing it as an organic soil conditioner called ZooDoo. ZooDoo comes with complete directions and can be used

as a soil conditioner, in potting mixes, in gardens and on lawns. It is odorless, will not burn plants, and all of the manure in ZooDoo has been composted for a minimum of six months.

ZooDoo will be available for sale at the Bronx Zoo, the New York Botanical Garden and selected nurseries in the greater New York area. Profits from the sale of ZooDoo will benefit FRONTIER'S community gardening programs and other projects in the South Bronx.

AHS Board Election

Members of the American Horticultural Society are hereby notified that the Annual Meeting of the Society will take place at the Franklin Plaza Hotel, Philadelphia, PA, on Saturday, September 17 at 10:15 a.m.

At this meeting nine directors are to be elected for three-year terms. All members in good standing are eligible to vote. If you cannot be present, please sign and return the attached proxy.

Mr. Richard C. Angino

A senior partner in the Harrisburg, Pennsylvania law firm of Angino & Rovner, Mr. Angino is a member of the American Rhododendron Society, the American Association of Nurserymen and the Pennsylvania Horticultural Society.

Dr. Gerald S. Barad, M.D. (Incumbent)

A founder of the New York Cactus and Succulent Society, Dr. Barad has had a life-long interest in these plants. He maintains his large collection in a 3,000-square-foot greenhouse in Flemington, New Jersey. Dr. Barad is a member of the International Organization for Succulent Plant Study.

Mr. J. Lyle Bayless, Jr. (Incumbent)

Since his retirement from Pan American Airways, Mr. Bayless has devoted much of his time to developing Live Oak Gardens in Jefferson Island, Louisiana. He is a member of the American Association of Botanical Gardens and Arboreta, the Royal Horticultural Society, the American Camellia Society and the Louisiana Society for Horticultural Research.

Mr. Everett Conklin (Incumbent)

A nationally-known interior landscape contractor and flower show producer, Mr. Conklin is a resident of Montvale, New Jersey. He currently serves as *American Horticulturist's* Pronunciation Guide advisor. He has received over 150 awards from florist and nurserymen's groups across the country.

Mr. Jackson R. Eddy (Incumbent)

Mr. Eddy is President of Keeline-Wilcox nurseries, a wholesale producer of specimen trees and kentia palms. He is also a member of the Society of American Florists, the American Association of Nurserymen and is active in the Los Angeles and Pasadena Beautiful projects.

Mr. Richard J. Hutton (Incumbent)

President of The Conard-Pyle Company, producers of StarTM Roses, Mr. Hutton is a resident of West Grove, Pennsylvania. He is active in All-America Rose Selections, the Nursery Marketing Council and the National Association of Plant Patent Owners.

Mrs. John M. Maury

An active member of the Garden Club of America and the Garden Club of Virginia, Mrs. Maury has served as Vice President of

both organizations. She also has been Secretary and Second Vice President of the American Horticultural Society.

Dr. Julia Rappaport (Incumbent)

A resident of Santa Ana, California, Dr. Rappaport holds a doctorate in education from the University of Southern California. She has developed programs on gardening and botany for elementary school students and is a member of the Herb Society of Southern California.

Mrs. Harry J. Van de Kamp (Incumbent)

An active supporter of Descanso Garden in Los Angeles County, California, Mrs. Van de Kamp was responsible for raising over one million dollars for the garden's new education and exhibition building. Mrs. Van de Kamp is also a member of Los Angeles Beautiful Parks and Open Space Committee.

Upcoming AHS Events

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

September 9-29

AHS Exploration of South Africa

September 14-18

AHS Annual Meeting in Philadelphia, Pennsylvania

September 18-25

Post Conference Tour of the Eastern Seaboard

October 3-14

AHS Autumn Tour of New England

November 1-24

AHS Autumn in the Orient Tour of Japan, Taiwan and Hong Kong

Proxy

Notice of Election in conjunction with the 38th Annual Meeting of the American Horticultural Society

(Cut Proxy on dotted line and return to Secretary, AHS, P.O. Box 0105, Mount Vernon, VA 22121)

Proxy to Vote at Annual Meeting

Attention:
Secretary, American Horticultural Society

I will not be able to attend the Annual Meeting of the American Horticultural Society on September 17, 1983. Please assign my proxy to AHS Secretary Mrs. Edward C. Sweeney or

to cast my ballot in the annual election of the Society as follows: (vote for nine)

- ☐ Mr. Richard C. Angino
- ☐ Dr. Gerald S. Barad, M.D.
- ☐ Mr. J. Lyle Bayless, Jr.
- ☐ Mr. Everett Conklin
- ☐ Mr. Jackson R. Eddy
- ☐ Mr. Richard J. Hutton
- ☐ Mrs. John M. Maury
- ☐ Dr. Julia Rappaport
- ☐ Mrs. Harry J. Van de Kamp

Write-in Candidate

Write-in Candidate

and to cast my ballot in other matters that may properly be brought before the Annual Meeting with the same effect as though I were personally present.

Date

Signature

HORTICULTURAL EXPLORATIONS



Fall Orient November 1-24

Where but in Japan can you find a country that offers the fascination of an Eastern culture combined with modern comforts, food, hospitality, horticultural skills and beauty? Japan's other attributes include cleanliness, courtesy and craftsmanship.

Enjoy all this and more on the American Horticultural Society's Fall Orient Exploration. The autumn months are climatically the finest period of the year to visit this area.

Our visits to private homes in Japan are the unique part of this itinerary. National Culture Day, Japanese weddings, a visit to a silk museum and wood block print studio also show us their amazing culture.

The magnificent garden temples of Kyoto, a village of bonsai nurseries, a ride on the "bullet train," a view of Mt. Fuji, a drive on the 48 hairpin curves up to beautiful Nikko—all these are part of the marvelous country of Japan.

We will travel on to the Republic of China to experience the tradition of Old China, including the National Palace Museum's art treasures. The last few days are in the hub of the Far East—Hong Kong. This exploration will be conducted by a U.S. escort with the assistance of local guides and interpreters.

Other horticultural explorations available in 1983 are: Fall England (Oct. 3-14), Fall Germany (Sept. 6-20), Fall New England (Sept. 26-Oct. 10), and South Africa (Sept. 9-30).

For any of these programs, please write for your free brochure to Carolyn A. Hottle, American Horticultural Society, P.O. Box 0105, Mt. Vernon, VA 22121. Or telephone 1-703-768-5700.

PLANTS WANTED

Judging from the response to our new "Plants Wanted" column, it's clear many of you are looking for rare and unusual species and cultivars to add to your collections. If you are growing or have access to any of the plants in this month's column, please help your fellow members locate their "Plants Wanted" by writing directly to the addresses listed below.

●*Fagus sylvatica* 'Ausorgei', a purple beech with very thinly dissected leaves. ●*Betula ermanii*, Russian rock birch, has pinky-white peeling bark and orange-brown branches.

●*Betula albo-sinensis* var. *septentrionalis*, southern white Chinese birch, has coppery bark and grayish leaves. Pennie Cohn, 7215 West 100th Place, Overland Park, KS 66212.

●*Betula alleghaniensis*, sometimes listed as *B. lutea*, yellow or gray birch, native to the eastern United States. ●*Dirca palustris*, leatherwood, also commonly called wicopy, ropebark and moosewood, a native shrub. Clinton H. Hobbs, 952 Ravenna Road, Kent, OH 44240.

●*Neviusia alabamensis*, snow wreath, a summer flowering, alternate-leaved shrub. Stamens cause feathery texture of the petalless flowers. Roy C. Brewer, 2791 Ft. Scott Drive, Arlington, VA 22202.

●*Glaucidium palmatum* and its cultivar 'Album', a low-growing perennial member of the buttercup family native to Japan. The species has pale mauve or pink flowers; the cultivar 'Album' has white flowers. Mrs. John W. S. Platt, 4550 S. W. Humphrey Boulevard, Portland, OR 97221.

●*Shortia uniflora*, Nippon-bells, pink-flowered, Japanese version of America's Oconee-bells. ●*Glaucidium palmatum*, see description above. ●*Jeffersonia dubia*, Japanese twinleaf, lavender-flowered relative of America's *J. diphylla*, twinleaf. Gordon Emerson, 1850 Route 45, Rock Creek, OH 44084.

●*Viburnum X burkwoodii* 'Chenault', sometimes listed as *V. X chenaultii*, a medium-sized shrub with fragrant white flowers. Wade S. Mahlke, 8578 Emerald Lake Drive, East, Pinson, AL 35126.

●*Chamaecyparis lawsoniana* 'Blom', 'Grayswood Pillar' and 'Whitzeliana', three cultivars of Lawson false cypress. 'Blom', an upright, narrow plant with blue-green foliage arranged in vertical planes; 'Grayswood Pillar', an extremely fastigate, blue-green-leaved cultivar; 'Whitzeliana', also columnar but with dark-green foliage. David C. Pepper, 2041 Washington Avenue, Knoxville, TN 37917.

●*Ixia viridiflora*, blue-green flowered African corn lily. ●*Ixia patens*, corn lily bearing spikes of flowers with pale-red perianths and green throats.

●*Arisaema sikokianum*, Japanese Jack-in-the-pulpit featured on the cover of *American Horticulturist*, April 1982. Mr. John E. Bussey IV, 838 West End Avenue, New York, NY 10025.

●*Clematoclethra integrifolia*, *C. lasioclada*, *C. strigillosa*, all vines native to China. ●*Sinomenium acutum*, another vine native to China. V.O. Varkau, George Williams College, 555 Thirty-First Street, Downers Grove, IL 60515.

Please send your "Plants Wanted" lists, including genus, species, common name and a brief description to "Plants Wanted," *American Horticulturist*, in care of the Society. Please type or print neatly. We will publish them on a space available basis after checking for retail sources through our catalogue file.



**BUY ANY OF THESE TITLES FOR 30% LESS THAN THE
RETAIL PRICE!***

- RHODODENDRONS & AZALEAS**, Mervyn Kessell. A complete handbook which introduces the huge range of rhododendrons & azaleas to gardeners, describing which plants are suitable for various purposes, detailed planting advice, propagation, pest control & more. 71 full-color photos. 192pp. 6 x 8 1/2. Hardcover \$17.50 retail, \$13.50 to AHS members.



- SCIENTIFIC GREENHOUSE GARDENING, P. K. Willmott.** At last! A book which explains the principles of professional greenhouse management in plain language for the home gardener. Uses the newest materials & methods to explain heating & ventilation, soil & composts, watering & irrigation, propagation and much more! 44 photos—14 in full color. 220pp. 7 x 9 1/2". Hardcover \$17.95 retail, \$13.80 to AHS members.

- HANDBOOK FOR FLOWER ARRANGERS,**
Phyllis Page. A practical book with arrangements
for every season of the year: driftwood, miniatures,
Christmas, Japanese arrangements and even styles of
another age! 123 photos in full color! 170pp. 5 x 7 1/2
Hardcover \$9.95 retail, \$8.25 to AHS members

- IKEBANA: Spirit and Technique, Shusui Komoda & Horst Pointner.** A comprehensive, self-contained guide course of practical lessons, technical advice and nearly 500 photos & drawings that illustrate the wide variety of possible arrangements to create in the elegant art of Japanese flower arranging. 32 pages of full-color photos. "Excellent guide." *American Horticulturist* 224pp. 8 x 8. Hardcover \$16.95 retail, \$13.10 to AHS members.

* **NEW**

Wild Bees—Domestic Pollinators of the Future?

Wild bees, meaning all of the species except the commonly known honey bee, may be the domestic crop pollinators of the future. Scientists at the U.S.D.A. Agricultural Research Service are conducting a world-wide search for these species because, surprisingly, many are much better pollinators than honey bees. Honey bees visit flowers to gather nectar and only gather pollen inadvertently, but the so-called wild bees visit flowers specifically to collect pollen and pollinate flowers as they carry it home for food for themselves and their offspring. Also, these species make efficient pollinators because both males and females collect pollen. They are also able to withstand much harsher environmental conditions than honey bees.

The scientists will have plenty of species to choose from. In the United States there are 3,500 species of bees, only one of which makes honey, and in the entire world there are about 20,000 known species, only four of which make honey. According to ARS entomologist Frank D. Parker, who works in Logan, Utah, "We currently estimate that only eight per cent of our native bee species are known biologically. This means we've yet to discover what most of our native bees are doing and what perhaps vital roles they have in the continuance of our flowering plant community."

To thoroughly study a species scientists must raise one generation in a closed greenhouse to learn its basic life cycle, then study the species while the bees are confined to large cages to ensure that they are the only pollinators in a given area and finally evaluate the species under open field conditions.

These extensive studies do pay off. One native species, the blue orchard bee (*Osmia lignaria*), has proved to be an excellent, easy to manage orchard pollinator that is much more efficient than the honey bee. The blue orchard bee will happily accept man-made nests made of paper straws and can be manipulated to emerge from nesting cells when an orchard is at peak bloom. With both sexes visiting flowers, the blue orchard bee makes it possible to obtain maximum pollination even



A biotechnician checks blue orchard bee cocoons that have been extracted from nest traps and encapsulated for release. He must make sure the bees have begun to emerge before they are released to pollinate an apple orchard.



The misshapen apple on the left, whose shape and small size result from incomplete seed development, demonstrates one of the effects of inadequate pollination. The plumper, round apple on the right has developed a full complement of seeds. Agricultural Research Service USDA

during a short flowering season.

Another promising pollinator is the sunflower leafcutter bee, *Eumegachile pugnata*. Studies indicate that each time a member of this species visits a sunflower head, which contains from 1,000 to 2,000 individual flowers that must be pollinated to produce seed, it pollinates an average of 97 flowers. Honey

bees only pollinate an average of 15 flowers per visit.

Honey bees will certainly continue to be raised for their honey, but since one-third of the human diet is dependent on insect pollinators, the search for efficient wild bees will continue.

—Agricultural Research,
January-February 1983

GARDENER'S DATELINE

MARCH 1-OCTOBER 23

Atlanta Historical Society Exhibition
Celebrating Georgia's 150th Birthday
Information: See page 1 of this newsletter

APRIL 28-OCTOBER 9

International Horticultural Exhibition
Munich, Germany

JULY 6-10

Bonsai Clubs International 19th
Annual Convention
Ramada Court of Flags Resort Hotel, 5715
Major Boulevard, Orlando, Florida
Information: I.B.C. '83, Mr. Robert Hutchin-
son, 7900 Mindello Drive, South Miami,
FL 33143

JULY 7-10

North American Lily Society Annual
International Show
Southfield Sheraton Hotel, Detroit, Michigan
Information: The North American Lily Soci-
ety, Inc., Dr. Robert C. Gilman, Editor,
517 South Elm Street, Owatonna, MN
55060

JULY 9-10

Third Annual Lotus Blossom Festival
Lilypons Water Gardens, Lilypons, Maryland
Hours: 11 a.m. to 5 p.m.
Information: Lilypons Water Gardens, Lily-
pons, MD 21717, (301) 874-5133

JULY 14-27

International Protea Association Second
International Protea Conference
Technical Seminar: Maui, Hawaii, July 14-18
Marketing Seminar: Seattle, Washington, July
19-23
Protea Field Tour: Southern California, July
23-27
Information: International Protea Association,
PO Box 269, Kula, HI 96790

AUGUST 21-24

International Society of Arboriculture 1983
Conference
Sheraton-West Hotel, Indianapolis, Indiana
Information: International Society of Arbori-
culture, PO-Box 71, 5 Lincoln Square, Ur-
bana, IL 61801

SEPTEMBER 9-29

AHS Tour of South Africa
Information: See page 3 of this newsletter

SEPTEMBER 10

Red Rose Rent Day
The Conard-Pyle Company, Star Roses, U.S.
Route 1 and PA Route 796, Jennersville,
Pennsylvania
Time: 10 a.m.
Information: The Conard-Pyle Company,
West Grove, PA 19390, (215) 869-2426

SEPTEMBER 14-18

American Horticultural Society Annual
Meeting
Philadelphia, Pennsylvania
Information: See page 13 of this newsletter

SEPTEMBER 18-25

AHS Post Conference Tour of the Eastern
Seaboard
Information: See the brochure inserted in this
newsletter

SEPTEMBER 21-24

American Association of Botanical Gardens
and Arboreta Annual Meeting
San Diego, California
Information: AABGA, PO Box 206, Swarth-
more, PA 19081, (215) 328-9145

SEPTEMBER 23-25

Horticultural Society of New York Fall
Harvest Festival
New York, New York
Information: Horticultural Society of New
York, 128 West 58th Street, New York,
NY 10019, (212) 757-0915

SEPTEMBER 24-25

Pennsylvania Horticultural Society Harvest
Show
Horticultural Hall, Fairmount Park, Philadel-
phia, Pennsylvania
Information: Pennsylvania Horticultural Soci-
ety, 325 Walnut Street, Philadelphia, PA
19106, (215) 625-8250

OCTOBER 3-14

AHS Autumn Tour of New England
Information: See page 3 of this newsletter

OCTOBER 5-8

International Festival of Flowers
The Cathedral Church of St. John The Di-
vine, 1047 Amsterdam Avenue at 112th
Street, New York, New York
Information: International Design Sympo-
sium, PO Box 263, Westwood, MA 02090

OCTOBER 15-23

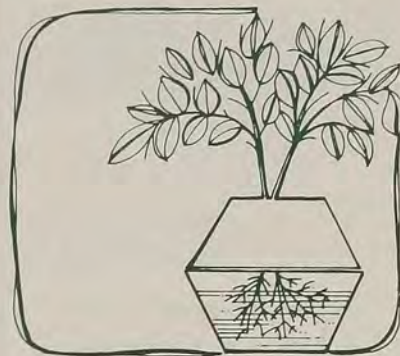
Fall Flower Show
Planting Fields Arboretum, Oyster Bay, New
York
Admission: \$3 per person
Information: Planting Fields Arboretum, PA
58, Oyster Bay, NY 11771, (516)
922-9201

OCTOBER 27-29

Fourth Annual Restoring Southern Gardens
and Landscapes Conference
Old Salem, Winston-Salem, North Carolina
Information: JoAnn Grote, R.S.G.L., Regis-
trar, Old Salem, Drawer F, Salem Station,
Winston-Salem, NC 27108, (919)
723-3688

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Spinach Substitutes for Hot Weather

Looking for a hot weather spinach substitute? *Texas Gardener*, May/June 1983, suggests a tropical vine commonly known as climbing, Ceylon, Malabar or Indian spinach that actually performs best in hot weather. *Basella alba*, probably most commonly listed as Malabar spinach, has bright-green leaves and stems; the cultivar 'Rubra', most commonly listed as *B. rubra* or Ceylon spinach, has brilliant magenta petioles and stems. These plants have a somewhat slippery texture but taste very much like regular

spinach. The leaves can be cooked or eaten raw.

Climbing spinach is easy to grow and can be started from seed or cuttings. A rich soil to which organic matter has been added, a complete balanced fertilizer and a trellis are all they require. Since the plants don't have tendrils, the stems will need to be tied to the trellis unless the vine can rest against a fence or wall.

Basella alba and its cultivar 'Rubra' are available from Gleckler's Seedsmen, Metamora, OH 43540.

More Hot Weather Spinach Substitutes

A look through the Society's mail-order catalogue file suggests three other hot weather spinach substitutes.

Atriplex hortensis, commonly called mountain spinach, French spinach or orach, will withstand heat, drought and lime-rich soil. It has been grown since ancient times and can be eaten with pasta, in soups or cooked as a side dish.

Tetragona expansa, commonly called New Zealand spinach, is a vine that produces glossy, succulent leaves that taste very much like spinach. The tips of the vines can also be eaten.

Amaranthus sp., commonly sold as Chinese spinach or hin choy, is another heat tolerant plant whose young, tender leaves can be steamed



for mild flavored greens.

Seed for these spinach substitutes are available from The Urban Farmer, 22000 Halburion Road, Beachwood, OH 44122 and Nichols Garden Nursery, 1190 North Pacific Highway, Albany, OR 97321. Both catalogues are free.

Pesticides Can Be Toxic to Plants

Pesticides can help plants grow, but they can also poison them. Pesticide phytotoxicity, phyto meaning plant and toxic meaning poisonous, can cause five major types of plant damage: 1) Burn. Leaf tips, margins or the entire leaf may be turned brown, or the growing tip of the plant may be killed. 2) Chlorosis. Yellowing or bleached appearance at leaf tips, margins, in spots or over the entire leaf. 3) Abnormal growth. Unusually fast growth, distorted growth or incorrect number of plant parts in flowers or fruit. 4) Stunted growth. Growth of entire plant may be

stunted or just certain plant parts such as roots or fruit. 5) Leaf distortion. Abnormal crimped, curled or cupped leaves.

New growth is most likely to show pesticide damage, but pesticides can affect any part of the plant. Soil drenches can injure roots, cause general decline or damage foliage but will generally damage old rather than new growth.

Follow the following suggestions to help reduce or eliminate pesticide phytotoxicity.

- Don't spray plants that are already under stress. Don't spray in

hot, sunny weather. At temperatures of over 90° F, or when plants are dry or wilted they are more likely to be injured by pesticides. Pesticide phytotoxicity also can occur during cool weather when plants are growing slowly.

- Avoid spraying in humid weather or late in the day when the spray will stay on the plant for a long period of time.
- Several different pesticides mixed and sprayed in one application are more likely to cause damage than when sprayed separately.
- Some formulations of pesticides are safer than others. Wettable powders generally are safer than emulsifiable concentrates, and almost all aerosol sprays will damage plants if the nozzle is held closer than 18 to 20 inches from the plant.
- Read the label and follow the dosage rate and application instructions recommended.
- Be careful when treating plants that are not listed on the pesticide label. Make a test application and wait at least a week to see if any damage occurs.
- Keep sprayers, nozzles and hoses clean.

—Patricia P. Cobb, Tech Notes,
April 1983

Pesticide Home Study Course

The Colorado State University Division of Continuing Education has developed a home study correspondence course entitled "Pesticides: Why and How They Are Used." The course is designed to acquaint students with the laws governing pesticide use, labeling, safety, formulations, equipment calibration calculations, decontamination and disposal, environmental considerations and application guidelines, and includes a complete glossary of terms. The course is designed for commercial and private pesticide applicators, consultants and other individuals preparing for state licensing or certification to use restricted use pesticides.

For more information write Colorado State University, Division of Continuing Education, C102 Rockwell Hall, Fort Collins, CO 80523.

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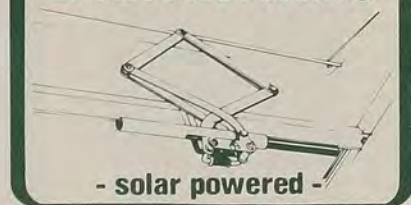
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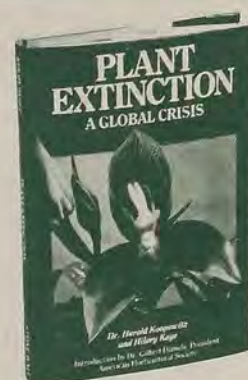
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*The 38th Annual Meeting of the
American Horticultural Society
in cooperation with the
Pennsylvania Horticultural Society
September 14-18, 1983*

Program

WEDNESDAY, SEPTEMBER 14

9:00 a.m.-5:00 p.m.—Registration will be in the Mezzanine of the new Franklin Plaza Hotel, off Interstate 76 at 17th and Vine, just south of the Vine Street Expressway.

If you arrive early enough, you will have a rare opportunity to see the international exhibition, "Flowers of Three Centuries," from the Broughton Collection of the Fitzwilliam Museum in Cambridge, England. Featured in a display of 100 drawings and water colors are such artists as Ehret, Bolton, Merian and Rédouté. The exhibit, which represents the work of over 40 artists of the 17th, 18th and 19th centuries, is at the Academy of Natural Sciences Museum on Logan Circle near our hotel, from 10:00 a.m.-4:00 p.m. daily. Admission is \$2.75 per person.

As the opening event of our Annual Meeting, there will be a cocktail reception at the Pennsylvania Horticultural Society, 325 Walnut Street, south of Independence National Historical Park from 6:00 p.m.-7:30 p.m. Earlier, you may want to stroll around the historic Old City, including Society Hill, with a self-guiding map available at PHS. Special trolleys will shuttle you to and from that area between 4:30 and 7:30 p.m.

Wednesday Evening—You are free to sample some of Philadelphia's famous cooking on your own. A recommended list of restaurants will be supplied. Also watch the bulletin board for last minute notices.



Chrysanthemum display, Longwood Gardens

THURSDAY, SEPTEMBER 15

7:30 a.m.-8:30 a.m.—Committee breakfasts.

8:30 a.m.-12:00 p.m.—Final registration.

8:45 a.m.-11:30 a.m.—Educational Session. Open to the public. Elizabeth McLean, Philadelphia's foremost garden historian, will give us an overview of the historical importance of Philadelphia in the development of gardening in this country. With slides and help from a team of volunteers, the staff of the Pennsylvania Horticultural Society will provide a humorous introduction to this thriving 157-year-old institution.

11:30 a.m.—Lunch at the hotel is included in the registration fee.

12:45 p.m.—Brandywine Valley Tour. Registrants will choose one of three private gardens to view. Be sure to note first and second choice on your registration or we will choose for you. Allocation will be made on a first-come, first-serve basis. All three gardens have a wide variety of plants and supremely attractive water features, including falling water.

1) One garden is a *landscape architect's home* with studio garden for herbaceous plants, raised bed vegetable plot and a terraced hillside as well as water features.

2) Another garden, also hilly, emphasizes *woodland wildflowers*, a heather garden, a sizeable *rock garden*, a cutting and vegetable garden, as well as some formal areas.

3) The third garden features *perennial borders*, a rock garden, *greenhouses*, and an apple orchard with trees trained to resemble open umbrellas. This one can be windy.

3:30 p.m.-9:15 p.m.—Tour of Longwood Gardens followed by cocktails in their great conservatory and dinner in the elegant ballroom.

FRIDAY, SEPTEMBER 16

7:30 a.m.-8:30 a.m.—Optional no-host breakfasts on Education and the AHS Horticultural Explorations with films of the places to be visited in 1983. Reservations required.

9:00 a.m.-5:00 p.m.—All Day Tour of Chestnut Hill and North.* Lunch at the Morris Arboretum. The gardens to be visited include those of: Ernesta and Frederic Ballard in Chestnut Hill, with a rock garden and large collection of bonsai and potted al-

pinus. Nearby is the lovely garden of Mr. & Mrs. William G. Foulke. Other gardens include Meadowbrook, a series of formal gardens designed by J. Liddon Pennock, Jr. for year-round interest. The greenhouse at Meadowbrook is a unique structure specifically designed for the commercial display of ornamental plants. At Andalusia, on the Delaware River, the landscape has been maintained in the traditional English park style to complement the 19th-century Greek Revival mansion. Boxwood gardens inhabit former greenhouse walls. A dwarf evergreen collection and perennial beds are other features of this lovely site.

*For those who would like to explore Philadelphia's historic sites and fine shops, an optional half-day tour of Chestnut Hill gardens only will be available with lunch at the Morris Arboretum, returning to Philadelphia at 1:45 p.m.

Friday Evening—Free to explore Philadelphia on your own. We may have some options to be announced later.

SATURDAY, SEPTEMBER 17

9:00 a.m.—Plenary and Educational Session. Panel discussion on "Suit Yourself, It's Your Garden" with George Patton of George E. Patton, Inc., who will address "Places for Rest;"



Pennsylvania Horticultural Society Garden



Longwood Gardens Conservatory and fountain display

Rodney Robinson of Wallace, Roberts & Todd, who will discuss "Places to Play;" and Ed Lindemann, Horticulturist, Pennsylvania Horticultural Society and designer of the Philadelphia Flower Show, who will speak about "Places to Entertain." Dr. Richard W. Lighty, Coordinator of the Longwood Program of the University of Delaware, will serve as moderator. There will be an opportunity for open discussion.

12:00 p.m.-Lunch at the Merion Cricket Club, Haverford.

1:30 p.m.-Tour of Main Line gardens. One, in Wayne, is truly a gardener's garden, with choice plant specimens

and container-grown plants, a horticulturist's greenhouse and work area as well as woods, sweeping lawns and contoured beds. The other garden, "Chanticleer," is actually two adjacent properties—the first a French-style formal garden, the second the rolling sweep of hills and naturalistic woodland of an especially well-groomed Philadelphia suburban garden.

6:00 p.m.-10:00 p.m.—Cash Bar Cocktails and President's and Awards Banquet.

SUNDAY, SEPTEMBER 18

1:00 p.m.—Check-out time.

POST CONFERENCE TOUR OF THE EASTERN SEABOARD

September 18-25

This week-long tour will include visits to such well-known gardens as Princeton Nurseries, Rutgers Research Arboretum and Display Garden, Duke and Buck Gardens in New Jersey, Old Westbury Gardens and Planting Fields Arboretum on Long Island. The Cloisters in New York, the horticultural highlights of New York City and the Hudson Valley, along with many private gardens along this route are also on the itinerary. The tour will culminate in a visit to PHS' well-known Harvest Show on September 24.

Registration Information

IMPORTANT:

All events described in the American Horticultural Society's Annual Meeting program are included in the registration fee. This fee covers all motor coach transportation, entrance fees, the cocktail reception at PHS, the Longwood dinner, the AHS Awards and President's Banquet and three luncheons.

MAIL CHECK AND REGISTRATION FORM TO: Education Department, AHS, Box 0105, Mt. Vernon, VA 22121.

CANCELLATIONS:

Full refund if written cancellation is received before September 2, less \$40 per person for booking expense. No refunds will be made after September 2.

Upon receipt of your deposit, we will send you a hotel accommodations card that you may complete and mail directly to the Franklin Plaza Hotel. Hotel group rates have been established at \$64 single and \$76 double until August 12.

Eastern Airlines will be our official airline for the 38th Annual Meeting. 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 Philadelphia.

Registration Form

\$225.00 for AHS Member \$ _____

\$440.00 for couple \$ _____

I enclose a check for * \$ _____

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

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

Address _____

City, State, Zip _____

THURSDAY, September 15th GARDEN TOUR

1st Choice: _____

2nd Choice: _____

3rd Choice: _____

(Please list 1, 2, or 3 as listed on description for September 15th.)

FRIDAY, September 16th

- ☐ Full day tour of Chestnut Hill and North
☐ Half-day tour of Chestnut Hill

*DISCOUNT PRICE FOR EARLY BIRDS:

Registration discount if received by August 12, 1983.

\$215.00 single

\$420.00 couple

Turfgrass Manual Published

Turfgrass specialists, landscape managers, pest control operators and home owners with a special interest in lawns will be interested in the Pennsylvania Turfgrass Council's new manual, *Turfgrass Insect and Mite Manual—With an Index of Registered Materials*. The 63-page manual, which features 44 color plates, covers the pest and beneficial insects commonly found in lawns in the northeastern United States and

includes insect identification keys and an index of currently registered pesticides. The pest insects are grouped according to their attack symptoms, and each insect's life cycle is described with a particular emphasis on the specific characteristics of the damage it causes. The manual also presents information on the use of cultural, biological and chemical controls.

To order a copy of the *Turfgrass*

Insect and Mite Manual write Pennsylvania Turfgrass Council, 412 Blanchard Street, Bellefonte, PA 16823. The cost of the manual is \$14.00, \$11.50 for educational institutions, including postage and handling.

New Journal Published

Plant breeders, genetic engineers, plant scientists and conservationists will want to subscribe to *Diversity*, a new bimonthly news journal designed to serve the National Plant Germplasm System (NPGS). The NPGS, founded in response to the nearly disastrous southern corn leaf blight epidemic of 1970, is charged with ensuring genetic diversity through the systematic preservation and enhancement of plant germplasm. *Diversity* will provide professionals, both in the public and private sector, with a forum for airing views, sharing research, addressing critical issues and exchanging ideas and information with colleagues.

For more information, or to obtain a subscription, write or call *Diversity*, Laboratory for Information Science in Agriculture, 419 Canyon, Suite 320, Fort Collins, CO, (303) 224-9400. For individuals and non-profit organizations a one-year subscription (six issues) costs \$35; in Canada and Mexico the price is \$45; for other foreign subscribers the cost is \$55.

Fire Ant Control Named

The new juvenile hormone for fire ants, developed by the U.S.D.A. and initially called MV-678 (see *American Horticulturist* News, November 1982), has been given the name Pro-Drone by the Stauffer Chemical Company, who will market the compound. Pro-Drone controls these insects by disrupting the development and metamorphosis of imma-

ture fire ants. The readily-biodegradable material, which takes from several weeks to six months to eliminate a colony of fire ants, has been given conditional registration. Stauffer Chemical Company plans to distribute Pro-Drone for county- or state-wide application, probably through area extension services, for most effective coverage and control.

Rembrandt Tulips Harbor Virus

Gardeners who love masses of solid color tulips and beautiful hybrid lilies in their gardens should avoid planting Rembrandt tulips this fall. Unfortunately, the beautiful, streaked color patterns of these tulips are caused by tulip breaking virus, which infects the bulbs. According to Dr. Roger Lawson, a plant pathologist at the U.S.D.A., the virus is very efficiently transferred

throughout the garden to other tulips and to lilies by the common aphid found in gardens—the green peach aphid. Tulip breaking virus will cause streaking in tulip cultivars that were once solid color.

According to Dr. Lawson, parrot tulips, which also exhibit attractive streaking patterns, are a genetically caused type, and therefore the characteristic is not transferable.

AMERICAN HORTICULTURIST

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