

# American Horticulturist

A Publication of the American Horticultural Society  
\$1.50

Volume 70, Number 3 • March 1991  
News Edition



© ALLEN FOKACH

Alice Recknagel Ireys

## Kudos! Kudos!

A high point of the year for the American Horticultural Society is paying tribute to individuals and organizations who have shown exceptional dedication as amateurs or professionals. Our 1991 awards will be presented April 20, during our Annual Meeting in Birmingham, Alabama.

### The Liberty Hyde Bailey Award

From her base in Brooklyn, New York, **Alice Recknagel Ireys** has been a pioneer in the world of landscape architecture. In her 56-year career Ireys has completed designs for housing projects, botanical gardens, parks departments, colleges and schools, churches, private homes and estates, libraries, and museums. Her most recent projects have included two demonstration gardens at the New York Botanical Garden in the Bronx, a perennial garden at Planting Fields Arboretum in Oyster Bay, New York, and tree planting plans for the University of Charleston in West Virginia.

For this long-term and wide-ranging commitment, Ireys will be presented AHS's Liberty Hyde Bailey Award, the highest honor the Society can bestow on an individual. Recipients must show significant achievement in at least three areas: teaching, research, writing, plant exploration, administration, art, business, and leadership. The 1991 Awards Committee cited Ireys's leadership as a landscape architect, her teaching and writing, and her application of the art of landscape design.

Ireys attended Packer Collegiate Institute in Brooklyn, and the Cambridge School of Architecture and Landscape Architecture, now part of Harvard University. Her career began in 1935 when she was

## In This Issue

Award Winners . . . . .	1	Gardeners' Q&A . . . . .	15	Gardeners' Dateline . . . . .	20
Ethnobotany . . . . .	8	AHS Bulletin Board . . . . .	16	Classifieds . . . . .	22
Regional Notes . . . . .	12	Members' Forum . . . . .	17	Rutgers Zone Map . . . . .	24
Making a Difference . . . . .	14	Gardeners' Bookshelf . . . . .	18		

# American Horticultural Society

The American Horticultural Society seeks to promote and recognize excellence in horticulture across America.

## OFFICERS 1990-1991

**Mr. George C. Ball Jr.**, West Chicago, IL  
President  
**Mrs. Helen Fulcher Walutes**, Mount Vernon, VA  
First Vice President  
**Mr. Richard C. Angino**, Harrisburg, PA  
Second Vice President  
**Mr. Elvin McDonald**, Brooklyn, NY  
Secretary  
**Mr. Gerald T. Halpin**, Alexandria, VA  
Treasurer  
**Mrs. Carolyn Marsh Lindsay**, Rochester, NY  
Immediate Past President

## BOARD OF DIRECTORS

**Mrs. Suzanne Bales**, Oyster Bay, NY  
**Dr. William E. Barrick**, Pine Mountain, GA  
**Dr. Sherran Blair**, Columbus, OH  
**Mrs. Mary Katherine Blount**,  
Montgomery, AL  
**Mrs. Sarah Boasberg**, Washington, DC  
**Dr. Henry Marc Cathey**, Washington, DC  
**Mr. Russell B. Clark**, Boston, MA  
**Mrs. Ann Lyon Crammond**, Atlanta, GA  
**Mrs. Beverley White Dunn**,  
Birmingham, AL  
**Mr. K. Albert Ebinger**, Boxford, MA  
**Mrs. Julia Hobart**, Troy, OH  
**Dr. Joseph E. Howland**, Reno, NV  
**Mr. David M. Lilly**, Saint Paul, MN  
**Mr. Everitt Miller**, Kennett Square, PA  
**Mrs. Flavia Redelmeier**,  
Richmond Hill, ON, Canada  
**Mrs. Jane N. Scarff**, New Carlisle, OH  
**Mr. Andre Viette**, Fishersville, VA  
**Mrs. Jean Verity Woodhull**, Dayton, OH

## EXECUTIVE DIRECTOR

**Mr. Frank L. Robinson**

## AMERICAN HORTICULTURIST

EDITOR: **Kathleen Fisher**

ASSISTANT EDITORS:

**Thomas M. Barrett**, **Mary Beth Wiesner**

EDITORIAL ASSISTANT: **Martha Palermo**

MEMBERSHIP DIRECTOR:

**Kathleen B. Amberger**

ADVERTISING: **American Horticultural**

**Society Advertising Department**, 2700

Prosperity Avenue, Fairfax, VA 22031. Phone (703) 204-4636.

Address all editorial correspondence to: **The Editor**, *American Horticulturist*, American Horticultural Society, 7931 East Boulevard Drive, Alexandria, VA 22308. AMERICAN HORTICULTURIST, ISSN 0096-4417, is published by the American Horticultural Society, 7931 East Boulevard Drive, Alexandria, VA 22308, (703) 768-5700, and is issued six times a year as a magazine and six times a year as a News Edition. The American Horticultural Society is a nonprofit organization devoted to excellence in horticulture. Botanical nomenclature in AMERICAN HORTICULTURIST is based on HORTUS THIRD. National membership dues are \$35; two years are \$60. Foreign dues are \$45. \$12 of dues are designated for AMERICAN HORTICULTURIST. Copyright © 1991 by the American Horticultural Society. Second-class postage paid at Alexandria, Virginia, and at additional mailing offices. Postmaster: Please send Form 3579 to AMERICAN HORTICULTURIST, 7931 East Boulevard Drive, Alexandria, VA 22308.



**Don Lovness**

hired as an assistant to Ridgefield, New Jersey, landscape architect Marjorie Sewall Cautley to prepare planting plans for the Hillside housing project in Bronx, New York. The next year she joined the New York office of Charles N. Lowrie as head draftsman, and designed and drafted landscape plans for the Red Hook housing project, the Brooklyn Boulevard Gardens, and the World's Fair in Queens. When Lowrie died in 1939 Ireys took over his practice, completing plans for existing projects and supervising landscape work.

Not content just to design landscapes, Ireys was also a landscape gardening instructor at Connecticut College for Women in New London between 1942 and 1945. She has lectured at the Williamsburg Garden Symposium, Longwood Gardens, Old Westbury Gardens, and at many garden clubs and federated groups on the East Coast. Ireys has written articles for the *New York Sun*, *New York Times*, *Horticulture*, and *Plants and Gardens*, and has produced tree sketches for *Architectural Graphic Standards*. Her books include *How To Plan and Plant Your Own Property*, *Small Gardens for City and Country*, and, published in



**Thomas H. Dodd Jr.**

1991, *Garden Designs* for the Burpee American Gardening Series.

## The G. B. Gunlogson Award

**Don Lovness's** "pioneering research into the life of the soil" has earned him this year's G. B. Gunlogson Award, which recognizes the creative use of new technology to make home gardening more productive and enjoyable and to benefit people/plant relationships.

Lovness spent 20 years with the 3M Company conducting new product research before joining the Ringer Corporation as a senior scientist. He helped Judd Ringer organize the company in 1961 and became a member of the board of directors in 1965. Ringer specializes in research, development, and sales of natural gardening products.

Lovness developed Ringer's proprietary fertilizer technology and holds nearly a dozen patents relating to soil biotechnology.

## The Catherine H. Sweeney Award

The Sweeney award, which recognizes extraordinary and dedicated efforts in the field of horticulture, this year goes to **Thomas H. Dodd Jr.** for his work "in collecting, growing, and popularizing native shrubs of the South."

Dodd is owner of Tom Dodd Nurseries, Inc., in Semmes, Alabama. Between 1940 and 1987 he made numerous field trips to the Southeastern and Southwestern states in search of unusual native flora that could be adapted to commercial production. Dodd has also traveled to Mexico, Canada, Japan, England, Holland, Germany, France, and Italy in search of plants. Now he is involved in a seed exchange program with a Japanese botanist who is interested in bog plants and native azaleas.

Dodd is responsible for a number of ivy, azalea, and camellia introductions, including *Ilex crenata* 'Buxifolia', 'William Jackson', and 'Hoogendorn'; *I. cornuta* 'Lottie Moon'; *I. opaca* 'William Hawkins'; *I. cornuta x latifolia* 'Mary Nell'; azaleas 'Kate Arendall', 'Amy', 'Jennifer', 'Betsy', and 'Rebekah'; and *Camellia sasanqua* 'Bonanza', winner of the Ralph S. Peer Memorial Sasanqua Trophy of the American Camellia Society in 1965. Interspecific hybrids of native azaleas are his current interest.

Dodd received the 1969 AHS Commercial Award for his development of an outstanding nursery. Since then he has received the award for Outstanding Forestry Achievement for advancement of forestry in Alabama; a medal of honor from the Garden Club of America; and the North American Native Plantsman first annual award of excellence.



Beverley White Dunn

### The Frances Jones Poetker Award

**Beverley White Dunn** will receive the Frances Jones Poetker Award, given to a person who has made significant contributions to the appreciation of creative floral designs. Dunn, a member of the AHS Board of Directors, has conducted flower arranging seminars at Colonial Williamsburg and for the benefit of the Birmingham Botanical Gardens. She is a former president of the Little Garden Club and a flower show chairman of Zone VII of the Garden Club of America. She attended Randolph-Macon Woman's College in Lynchburg, Virginia, and the University of Alabama. Dunn is a member of the visitors board of Darlington Preparatory School, and the boards of Holy Innocents Ministry (for abused children), Brownell Travel Agency, and the Dunn Construction Company.

### Commercial Award (Individual)

**O. L. Weeks** of Chino, California, who has given America many of its most popular roses, will receive this year's Commercial Award (Individual). Weeks began hybridizing new rose cultivars in 1955, and many of them have become All-America Rose Selections, including 'Royal Highness', 'Mister Lincoln', 'Angel Face', 'Arizona Gypsy', 'Paradise', 'Perfume Delight', and 'Bing Crosby'.

For nearly 50 years Weeks and his wife operated a wholesale rose nursery; at the time of his retirement in 1985 the nursery occupied about 300 acres. "As a youngster I worked in the rose department of a major nursery and I guess that is where I caught the disease, which ultimately consumed me and I never recovered," Weeks wrote in his acceptance letter. "If only all diseases were as delightful to have."



O. L. Weeks

Since selling his business, Weeks continues to hybridize roses. "I have been accused of being a man with a passion, and one of the few who were able to follow and develop that passion into a lifetime of activity," Weeks wrote. "Mrs. Weeks often says that she was never better than No. 2...she was always upstaged by a girl whose name is 'rose.' Apparently she adjusted well enough to being No. 2 as we celebrated our 50th wedding anniversary in 1988."

### Commercial Award (Institution)

"**Landscape Services** has played a stellar role in the 'greening of Birmingham,'" the Awards Committee observed when announcing their selection for the



Marjorie S. Arundel



C. Beaty Hanna

Commercial Award (Institution). In 1956 Marquis M. Hunt and C. Beaty Hanna joined forces to become Landscape Services, Inc. Hanna became president of the company in 1972 when Hunt retired.

Landscape Services has developed commercial, civic, and residential projects throughout Alabama, Georgia, Tennessee, Florida, and Mississippi. A recent endeavor was the Southern Progress corporate headquarters, designed to complement the forest of hardwoods and pines that surround it. (Annual Meeting participants will see Landscape Services's work during a reception at Southern Progress.)

Other projects of the firm include the Auburn University Arboretum, a treetop bird walk at Oak Mountain State Park, and many projects at the Birmingham Botanical Gardens, including the rhododendron garden and the area showcasing the Yukimi lanterns, two stone lanterns presented to the city by Birmingham's sister city, Hitachi, Japan. Hanna's design for the area received local honors and high praise from the visiting Japanese delegation.

### Horticultural Communication Award

**Marjorie S. Arundel** of Warrenton, Virginia, is passionate about preserving wild-collected bulbs, and encouraging other American gardeners to follow her example. AHS will honor her with its 1991 Horticultural Communication Award, given for effective communication using media and research to expand horticultural awareness.

Three years ago Arundel became a part of the Alert Team on Endangered Wild Bulbs. The team is composed of members of the Garden Club of

**Continued on page 4**



Pamela Harper



Frances Dean Blount



John H. Whitworth Jr.

### Continued from page 3

America, the World Wildlife Federation, and the Natural Resources Defense Council. "Wild bulbs are the parents of some of our most beautiful spring flowers, such as daffodils and tulips," Arundel told *National Geographic* in an article published last July. "The hybridized flowers, produced chiefly in the Netherlands, lose some of their genetic strength. If we lose their parents in the wild, we could eventually lose the flowers altogether." Arundel has done much to publicize the efforts of the committee and spread the word that gardeners should avoid purchasing bulbs collected in the wild.

She is also advisor to the Garden Club of America's (GCA) conservation committee and has been a member of GCA's national affairs and legislation committee since 1982. As a member of that committee she served four years as toxics chair for pesticide reform, sending letters and telegrams to congressional committees and testifying in congressional hearings.

### Horticultural Writing Award

"My life revolves around plants," says **Pamela Harper**, owner of the Harper Horticultural Slide Library in Seaford, Virginia, and winner of the writing award. The committee selected Harper for her "beautiful images in photos and words." She has written more than 25 articles for *American Horticulturist* and hundreds of her slides have illustrated these and other articles.

Harper has also written for many other horticultural publications including *Flower & Garden*, *Flora*, *Garden Design*, *Horticulture*, *Organic Gardening*, and *Pacific Horticulture*.

Harper's gardening experiences began in 1955. "With my husband, I

embarked on the making of a garden on an acre of waterlogged clay and flint in England. By 1967 it contained hundreds of different plants, including 200 kinds of hardy heather. I was then editor for the Heather Society and owner of a specialist heather nursery." Her husband's work brought them to the United States in 1968. In 1972 she published her first book, *The Story of a Garden*, which related her English gardening experiences. In 1985 she wrote *Perennials—How to Select, Grow and Enjoy* with Frederick McGourty and her third book, *Designing with Perennials*, will be published this spring.

The Harper Horticultural Slide Library consists of 150,000 slides of plants and gardens photographed by Harper. Her slides have been published in over 100 books and magazines.

### Local Horticulture Award

**Frances Dean Blount's** many outstanding contributions to horticultural projects in the Birmingham area have given meaning to the expression "Think Globally, Act Locally," said the Awards Committee. Blount will receive the Local Horticulture Award, given to an individual or organization who has contributed to the improvement or excellence of horticulture in the host city for the Society's Annual Meeting.

Blount is past president of the Red Mountain Garden Club and was national director of the Garden Club of America for two years. She has received two Garden Club of America awards—the medal of merit award from the Red Mountain club and the Zone VIII award. Blount has served as president of the Birmingham Botanical Gardens and as president of the Women's Auxiliary of the Birmingham

Botanical Society. As chair of the capital fund drive for the Birmingham Botanical Society, Blount raised \$5 million for the city's botanical gardens. These funds were used to construct a new building and create or renovate 13 gardens.

Currently, Blount is Alabama director of Stratford Hall in Stratford, Virginia, and a member of the board of trustees of the Southern Research Institute, a Birmingham-based facility focusing on science and technology research.

### Meritorious Service Award

"What a good surprise!" past AHS Board Member **John H. Whitworth Jr.** wrote in his letter accepting the Meritorious Service Award. "And what timing: four days before your letter about the award arrived I received one of those 'good luck' chain letters. Maybe they really work?"

The Meritorious Service Award honors a member or friend of the Society who has given outstanding and exemplary service in support of the Society's goals, services, and activities. Whitworth, a partner in the Wall Street law firm, Dewey Ballantine, was a member of the Board for six years. During that time he frequently provided valuable pro bono legal services to the Society.

Whitworth grew up in Mississippi and attended college and law school at the University of Mississippi. "After that I lived in Germany (with the U.S. Army), India (on a traveling fellowship), and Brussels and Paris (for my law firm). I visited and photographed gardens wherever I went." He has practiced in the Dewey Ballantine firm for 30 years.



**Bibby Moore**

In addition to his position on the AHS Board, Whitworth served for two years as a member of the Secretary of Agriculture's advisory committee to the U.S. National Arboretum.

### Horticultural Therapy Award

Since 1980, **Bibby Moore** has developed horticultural education programs in cooperation with community colleges, local schools, and state agencies serving special populations. Her "inspiring and pioneering work in using horticulture as applied therapy" led to her winning the Horticultural Therapy Award.

Director of the horticultural therapy program at the North Carolina Botanical Garden in Chapel Hill, she received master's degrees in environmental management from Duke University and in social work from the University of Hawaii. She has been a horticulture instructor for nursing homes, prisons, and technical colleges and developed horticultural therapy programs for the North Carolina Department of Corrections. She served as horticulture project director in a program serving developmentally disabled residents of group homes, which was jointly funded by the North Carolina Council on Developmental Disabilities and the Mary Reynolds Babcock Foundation, and directed "Seniors' Gardening for Health," a research study funded by the University of North Carolina School of Medicine Program on Aging. In 1989 Moore trained 75 teachers to participate in the National Gardening Association's Life Lab and Gro Lab programs.

She has received the Rhea McCandliss Service Award from the American Horticultural Therapy Association and

the University of North Carolina Press Publication Award for her booklet, *Growing with Gardening*.

### Professional Award

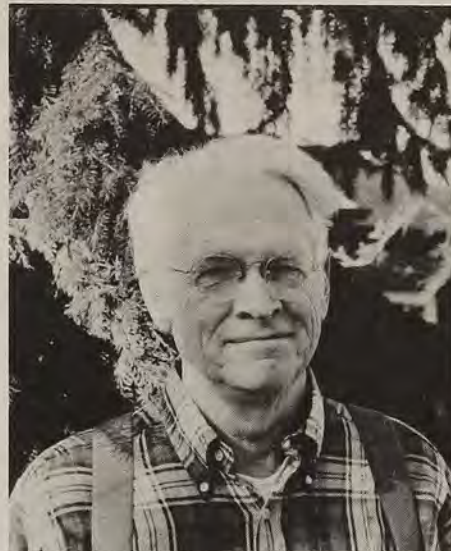
"For interpreting the science of gardening so that everyone can understand," **Howard S. Irwin** will receive the Professional Award, given to the director of an arboretum or botanical garden. Irwin is deputy commissioner of the Department of Parks and Recreation of North Hempstead, New York, and the director of Clark Botanic Garden in Albertson, New York.

"My decade of experience as a professional horticulturist-director at Clark Botanic Garden was preceded not by years of horticultural training and apprenticeship, though I certainly could have benefited from some of each, but by a 30-year career in plant research, university teaching, and institutional management," writes Irwin. "By coming to Clark Botanic Garden, I actually made my hobby my work, and where possible I tried to bring other skills to this new challenge. Overall, it has been a most satisfying experience."

Irwin began his career as a Fulbright Instructor in biology at Queens College in Georgetown, Guyana. From there he went to the New York Botanical Garden in Bronx, New York, as curator and coordinator of tropical exploration, becoming president of that garden in 1973. In 1980 he was named vice chancellor of Long Island University and adjunct professor of environmental science at the C. W. Post Center. Irwin has been a landscape consultant to municipalities, private corporations, and individual landowners on Long Island



**Rosalind Creasy**



**Howard S. Irwin**

and a visiting professor of field botany at the Universidade de Brasilia in Brazil.

### Teaching Award

**Rosalind Creasy** is being recognized in particular "for teaching us that vegetables are beautiful." She will receive the Teaching Award, which goes to an individual whose ability to share his or her knowledge of horticulture with others has contributed to a better public understanding of the plant world and its impact on people.

Since 1973 Creasy has been a landscape designer and consultant emphasizing edible landscaping. She shares her passions for gardening and cooking by writing, lecturing nationwide, appearing on television and radio shows, and working as a consultant to restaurants and seed companies.

Creasy has published four books: *The Complete Book of Edible Landscaping*; *Earthly Delights*, chosen by the Garden Writer's Association of America (GWAA) as the best garden book in 1985; *The Gardener's Handbook of Edible Plants*; and *Cooking from the Garden*, which won a 1989 award of excellence from GWAA. She is working on a children's garden book to be published this year.

Creasy has been a teacher and lecturer at the New Alchemy Institute in Woods Hole, Massachusetts; the Maritime Permaculture Institute in Seattle, Washington; Foothill College in Los Altos, California; the University of California-Santa Cruz and -Berkeley extension services; the California Academy of Sciences; Canada College; and the Palo Alto Adult Education Program. She lectures on "foodscaping," Xeriscaping, and the culinary properties of roses.

**Continued on page 6**

# 45th Williamsburg Garden Symposium



## April 7-10, 1991

Colonial Williamsburg and the American Horticultural Society invite you to spend four spring days in Williamsburg attending the 45th Garden Symposium. Come and talk flowers amid the special colors and bouquets of dogwood, redbud, tulips, and other favorites of the season.

The theme of the symposium, "Garden Earth," will remind us of the very fragile environment that we all share. As gardeners we have special opportunities—and obligations—to make certain we utilize the soundest methods for protecting plant species, conserving water, and beautifying the earth by planting our own gardens while supporting high quality public landscaping in our many communities.

### Speakers in order of appearance are:

*The Honorable Charles Hess*, U.S. assistant secretary of agriculture: "Enhancing Garden Earth Through Science and Education."

*Neil Diboll*, plant ecologist and nurseryman, Westfield, Wisconsin: "Prairies and Meadows: The Ecological Gardens of Yesterday and Tomorrow."

*Patricia Gibbs*, Colonial Williamsburg historian, and *Vanessa Patrick*, Colonial Williamsburg architectural historian: "The Plantation Gardens of Masters and Slaves at Carter's Grove."

*Joan Hockaday*, journalist and lecturer, San Francisco, California: "Garden-making by the Sea: The Gardens of San Francisco from Gold Rush to Thomas Church."

*Jane Campbell Symmes*, Cedar Lane Farm, Madison, Georgia: "Using Native Plants in Your Garden."

*Roger B. Swain*, science editor of *Horticulture* magazine and a host of PBS's "The Victory Garden": "Bugs, Birds, and Beasties: Getting a New Grip on Wildlife in the Garden."

*Kenn Stephens*, president, International Design Symposium, Ltd., Westwood, Massachusetts: "Flower Parade: The Color and Style of Flower Arranging Artistry in the Americas."

*Wesley A. Greene*, landscape supervisor, Colonial Williamsburg: "Fronds and Neighbors: Native Ferns for the Home Landscape."

*Douglas F. Welsh*, president, National Xeriscape Council: "Xeriscaping: Water Conservation Through Creative Landscaping."

*Warren Schultz*, editor-in-chief, *National Gardening* magazine: "Glasnost in the Garden: An American Visit to Soviet Gardens." (Closing luncheon)

Plan to come to Williamsburg on April 7. Feast your eyes on a cornucopia of horticultural delights and take home a satchel of new ideas. For a registration folder, please mail coupon below to Symposium Registrar, Box C, Williamsburg, VA 23187, or call (804) 220-7255.

### 45th Williamsburg Garden Symposium

Please send me a registration folder for the 45th Williamsburg Garden Symposium.

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_

State/Zip \_\_\_\_\_

**MAIL TO:** Symposium Registrar, Box C, Williamsburg, VA 23187.

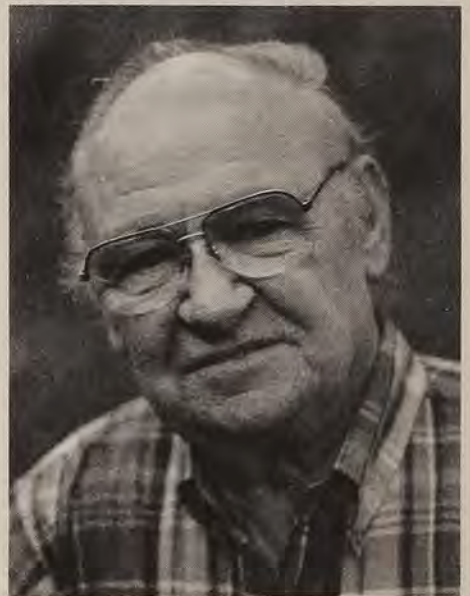
Continued from page 5

### Landscape Design Award

This year's recipient of the Landscape Design Award is **Robert E. Marvin**, owner of a firm specializing in landscape architecture and site planning in Walterboro, South Carolina.

Marvin's love of the land began when he was growing up in the South Carolina low country. There he developed a love of nature and "a passion to design a world in which man can live in complete harmony with nature."

After undergraduate work at Clemson University and graduate work at the University of Georgia, Marvin began his landscape design career with this philosophy: "The dominant reason for the existence of Robert E. Marvin and Associates shall be to create and design an environment in which each individual



**Robert E. Marvin**

can grow and develop to be a full human being as God intended him to be."

He has been honored with alumni awards from both Clemson and the University of Georgia and received honors from the American Association of Nurserymen for his work on the Cecil B. Day Butterfly Center and the John A. Sibley Horticultural Center at Callaway Gardens, in Pine Mountain, Georgia; the Governor's Mansion of South Carolina in Columbia; and Monarch at Sea Pines and Harbour Town at Sea Pines Plantation in Hilton Head Island, South Carolina. He has also received awards from the American Society of Landscape Architects, the American Resort and Residential Development Association, the Illuminating Engineering Society of America, and the Associated Landscape Contractors of America.



**AMERICAN  
HORTICULTURAL  
SOCIETY  
46TH ANNUAL  
MEETING**

**APRIL 17-20, 1991**

Don't miss some of the nation's best-kept horticultural secrets! Our 1991 Annual Meeting in Birmingham, Alabama, will be centered at the Birmingham Botanical Gardens, with lectures and classes taking place in the gardens themselves, led by the many talented gardeners, designers, and horticulturists from Birmingham and across the state.

**EXPLORE**

One of the finest native plant collections in the country

A magnificent formal rose garden

Flower arranging in the Birmingham style

The Sipsey Wilderness Preserve

The spectacular new Southern Progress building, where the native flora of its woodland site are preserved within 10 feet of this massive structure

**ALL IN THE UNIQUE  
BEAUTY AND CHARM  
OF THE SOUTHEAST  
IN THE SPRING**

This Annual Meeting will have a "hands-on" focus—an opportunity for you to work directly, in small groups, with fellow members of AHS and some of the great gardeners in the United States, with many options to allow you to pursue your own unique interests in gardening.

**PRIVATE AND PUBLIC GARDEN TOURS  
WILL BE INCLUDED**

And as always, a highlight will be honoring our annual award winners—another opportunity for you to meet and share your experiences with the horticultural leaders in America.

Our Birmingham meeting is a rare opportunity that will challenge and stimulate you—whether you are a fledgling amateur or a professional horticulturist. We look forward to your joining us and sharing a wonderful few days in Birmingham. See you there!

**BIRMINGHAM**

# Ethnobotany: How People Use Plants

**You won't find plants in most history museums. But they were as crucial to early Americans as any tools.**

By Liz Dolinar

**W**e have become so accustomed to modern conveniences that it is hard for us to imagine having to live off the land—not just for food, but for clothing, medicines, and tools. Yet Native Americans, African slaves, and European settlers did just that for decades. The system of distributing goods and services that we take for granted today was nonexistent. Communication was slow, making it impossible to summon doctors quickly. Without refrigeration, food spoiled rapidly unless some way of preserving it could be found. Dark rooms had to be illuminated, and fabrics had to be dyed and cleaned.

The Union blockade of the South during the War Between the States forced residents to look to native and exotic plants for their needs. In 1863, the Confederate surgeon general commissioned Francis Peyre Porcher, a Charleston physician, to gather information on the medicinal use of plants for army surgeons. Dr. Porcher's book, *Resources of the Southern Fields and Forests*, lists hundreds of plants and their uses. Subsequent works have added to our knowledge.

While all settled regions had their own resources and plant lore, South Carolina's low country is a particularly rich area for ethnobotany, the study of the uses of plants by people.

## Food Production

In addition to cultivating crops, low country residents hunted, fished, and raised animals for food. All these activities incorporated plants in some way. Native Americans, for example, used the hollow stems of American cow parsnip (*Heracleum sphondylium* subsp. *montanum*) to imitate the sound of male deer and to draw does into range. Small game birds could be ensnared

using birdlime, a sticky substance applied to branches and twigs. Porcher recommended using the "middle bark" of American holly (*Ilex opaca*) to make birdlime, although the berries of mistletoe (*Phoradendron serotinum*) growing on oaks could also be used.

Fish could be caught easily with fish poisons. The seeds of red buckeye (*Aesculus pavia*) were macerated, mixed with flour, and thrown upon the water. Momentarily stunned by the potion, the fish could be gathered easily and then revived in fresh water. The bark of chinaberry (*Melia azedarach*) and seed of woolly mullein (*Verbascum thapsus*) could be used as well. Alternatively, fish could be caught in the traditional way using nets made of the long, flexible fibers in the phloem, or food-conducting tissue, of



**Woolly mullein helped low country residents catch fish, feed livestock, repel mice, light their homes, and ease cold symptoms.**

amyroot (*Apocynum cannabinum*) or milkweed (*Asclepias syriaca*).

Domesticated animals were fed and medicated with the plants at hand. Toadflax or corn spurry (*Spergula arensis*) was believed to increase egg production in chickens; the bark of red oak (*Quercus rubra*) was put into their water to expel worms. Another veterinary pest, fleas, could be repelled by scattering leaves of wax myrtle (*Myrica cerifera*) on the floor of chicken houses and barns. Silage normally fed to farm animals could be supplied with local plants. Catalpa seeds (*Catalpa bignonioides*) or powdered woolly mullein root, mixed with malt, was used to fatten poultry. Cattle received nourishment from the leaves of American hop hornbeam (*Ostrya virginiana*). And any animal fed the leaves or fruit of

pawpaw (*Asimina triloba*) was thought to develop tender meat.

Pawpaws were also believed to tenderize meat placed over their leaves immediately after slaughter. Wax myrtle leaves were placed over and under beef during slaughter to keep flies away. If the meat was to be kept for only a few days, it could be preserved with rubbed-in cornmeal. Sage (*Salvia officinalis*) also was "said to have great power in resisting the putrefaction of animal substances." Meats were either cured, or cured and then smoked. Cures were salt-based, but salt could be scarce and expensive, and cooks economized by mixing one-third hickory ash (*Carya* spp.) with two-thirds salt to cure and flavor pork.

Smoking meats provided extra flavor and created a hard crust that gave extra protection from flies and molds. But it could take up to six weeks. Meats could be preserved rapidly with longleaf pine (*Pinus palustris*). However the meat was preserved, pyroigneous acid and creosote, both products of that tree, were added for preservation and flavoring, and the meat then hung in thongs made of yucca fibers (*Yucca filamentosa*).

Agronomic and horticultural crops had to be protected too. Bundles of dried woolly mullein were placed in stored grain to repel mice. Peach trees were protected from insects by chinaberry trees interplanted in the orchard. If aphids attacked the peach trees, the insects could be destroyed by fumigating with the smoke of tobacco (*Nicotiana tabacum*), syringing with tobacco water, and washing the trees with strong lime water. Apples affected by the "plant louse" also could be treated with tobacco water, then brushed with turpentine. Tobacco—historically one of the most commonly used pesticides—and chinaberry are considered even today among the best of the thousands of plants having pest control properties.

Drinking water was not an established custom, and recipes abounded for alcoholic drinks. Serviceberry (*Amelanchier canadensis*) made a "good drink" when 18 pounds of berries were dried, placed in 26½ gallons of water, and fermented four to five days. Elderberries (*Sambucus canadensis*) could be distilled into a brandy that was 70 percent alcohol. Even carrots could be used for spirits. Many plants were used to make beer. Fermenting fresh honey locust pods (*Gleditsia triacanthos*)





Okra served as a coffee substitute and paper source.

yielded beer, as did persimmon fruit, which had to be both fermented and distilled. A pint of corn, boiled until soft, then mixed with a pint of molasses and a gallon of water, produced excellent beer in 24 hours. The same corn could be used repeatedly, and this way "making a gallon of beer will not cost over six cents, and it is better and more wholesome than cider," wrote Porcher. Coffee and inexpensive coffee substitutes were popular as well. During the war, toasted and ground cottonseeds stood in for coffee (cottonseed contains the toxins dihydroxyphenol and gossypol, but they are insoluble in water). Parched okra seeds (*Abelmoschus esculentus*) also were used, as were rice, dandelions, potatoes, and wheat.

Lest we forget dessert, white mulberry juice (*Morus alba*) was used to color candies, and when chocolate was not available, an excellent substitute could be ground out of the lowly peanut.

## Domestic Life

Tree leaves, bark, and roots were used as dyes, but could be used successfully only at certain times of the year. Bark was taken in spring or summer; leaves, in fall; and roots, in winter.

Drab coloring was produced from sassafras root (*Sassafras albidum*) or, for wool, from yellow root (*Xanthorrhiza simplicissima*). Native Americans extracted a scarlet dye from dogwood roots (*Cornus florida*), and from the shoots of red-twig dogwood (*C. sericea*). Dove coloring came from the bark of beech (*Fagus sylvatica*) or sweet gum (*Liquidambar styraciflua*).

Blue dyes are the most commonly thought of in the low country because of the cultivation there of indigo (*Indigofera anil* and *I. tinctoria*) in the

## Studying Once and Future Plants

Historical and contemporary interactions between plants and people are getting increased attention these days as indigenous cultures disappear, taking with them a storehouse of information on a great diversity of plants. Economic botany and ethnobotany are two academic disciplines that study this fascinating area. Ethnobotany is concerned with the direct relationship of a group of people and their plants and leans towards anthropology in asking who uses the plants, where, and how. Economic botany focuses on how the plants can be used outside of the indigenous culture, delving into the genetic origins of crops, their evolution, and the preservation of genetic diversity.

For example, ethnobotanists are currently working with indigenous peoples of the tropical rain forest, learning what plants they use, how they use them, and how the plants fit into their culture. Economic botanists will use this information with the hope of "liberating" the plants from their indigenous context and introducing them to a broader market for more general use. To confuse the matter further, ethnobotany is part of the larger discipline of ethnobiology, which also encompasses ethnozoology and other fields. To learn more about these subjects, contact :

✦ Society of Ethnobiology, Katherine S. Fowler, Secretary, Department of Anthropology, University of Nevada at Reno, Reno, NV 89557. Annual dues are \$35 for individuals (\$25 for students) and cover a subscription to the biannual *Journal of Ethnobiology*.

✦ Society of Economic Botany, Economic Botany Business Office, P.O. Box 368, Lawrence, KS 66044. \$30 annual dues (\$15 for students) cover subscriptions to the quarterly journal *Economic Botany* and a biannual newsletter.

1700s. But the native false indigos (*Baptisia tinctoria* and *B. australis*) also yielded the dye. Other plants used for blue coloring included larkspur flowers (*Consolida regalis*), fig skins (*Ficus carica*), boiled myrtle berries, and for silk, privet berries (*Ligustrum vulgare*). Sometimes the same plant produced different hues. *Quercus velutina*, the black oak, mixed with alumina, made a bright yellow dye. But mixed with tin oxide, the oak bark yielded pale lemon. Other shades of yellow available included saffron from yellowwood (*Cladrastis lutea*) and canary from American crabapple (*Malus coronaria*).

Purple, green, brown, orange, and many other colors also were available. Solferino pink called for one of the more interesting recipes, according to Porcher: Cut a piece out of the end of a pumpkin large enough to admit the hand. Take out all the seeds and leave the strings in. Mash pokeberries (*Phytolacca americana*) into pulp and fill the cavity of the pumpkin with them. Stir them up well with the strings and put the worsted yarn into the mixture, then cover it up close with the piece of pumpkin that was cut out. The next day take out the yarn and dry it in the day; when dry, put the yarn back into the pumpkin as before, and cover it up again till the next day. It will take a week to dye the deepest shade of pink.

Once fabrics were dyed, a number of plants were used for lathers and soaps to keep them clean. The flower racemes

of sweet pepperbush (*Clethra alnifolia*) would make suds when agitated in water, as would evening primrose (*Oenothera biennis*). Woolens, dyed cottons, and satin fabrics could be washed and whitened using the roots of the red buckeye. Balls of brake leaves (*Pteridium aquilinum*) cleansed linens.

Silk required different treatment, using potatoes (*Solanum tuberosum*) or sweet potatoes (*Ipomoea batatas*). A half pint of boiling water and a half pint of alcohol were poured over peeled and sliced potatoes. The liquid was sponged onto the right side of the silk, and the silk was ironed on its wrong  
**Continued on page 10**



Cotton tea was thought to be a contraceptive.



The down of cattails made a soft bed.

### Continued from page 9

side when it had half-dried. Velvet and crepe could be cleaned in the same way. Water from grated sweet potatoes would clean worsted curtains, carpets, tapestries, and oil paintings.

Soaps could be made hard or soft, fancy or plain by varying the plants used as ingredients. Chinaberries and mashed cottonseed, mixed with lye and boiled, made inexpensive soap cakes. Fresh wax myrtle berries, when boiled, released a greenish wax, which could be boiled again with ashes, lime, and salt to make soap.

While the Chinese tallow tree (*Sapium sebiferum*) also was used to make soap, it is better known for its use in making candles. The oil from its berries was used alone, or mixed with other plant products, such as boiled prickly pear leaves (*Opuntia vulgaris*), then poured into molds. Wax myrtle oil—either in its natural green or in a white obtained by drying it in the shade for a month—was mixed with grease to make candles.

The pith of bog rush (*Juncus effusus*) was used for wicks, and the down of woolly mullein leaves was used as tinder. The long, flowering stalks of the woolly mullein were dipped in suet or pitch and lit as torches. Other oil-bearing plants used for light included cotton, castor bean, black walnut (*Juglans nigra*), and palmetto (*Sabal palmetto*).

The spongy stems of the palmetto were used to make scrubbing brushes. Brooms were fashioned from the twigs and branches of river birch (*Betula nigra*) or the branches of gallberry (*Ilex glabra*) or the groundsel tree (*Baccharis halimifolia*). Ashes of fig leaves were used to polish metal. Smooth sumac (*Rhus glabra*) was so widely used for shoe wax that in some areas it became known as "shoemac."

## Crafts and Manufacturing

The use of some plants, such as building furniture out of native tree wood, is obvious. Less so are others, such as using the wood of tupelo (*Nyssa sylvatica*) to manufacture artificial limbs. Tupelo had many uses. The roots were used for floats for fishing nets, since they could bob like cork. This "root wood," cut one inch thick, was used for shoe soles, with cowskin nailed over the top to form the uppers. The wood could also be carved into cart sideboards, trays, bowls, cartridge boxes, mortars, and wheel hubs. Wood for wheels and cogs had to be hard, and not all trees were suitable. Both American hop hornbeam and the winged elm (*Ulmus alata*) were considered hard enough for this purpose. Hickory could be used for carriage axles, millwheel cogs, and ox yokes.

Furniture craftsmen were very specific in their choice of woods. Bedsteads were made with sassafras or red buckeye, because it was believed that these woods would not become infested with insects. The backs of Windsor chairs were made of hickory, but the seats were often of American linden (*Tilia americana*). For woven seats, white oak (*Quercus alba*) or canebrake (*Arundinaria gigantea*) could be used in place of cane. Sweet birch (*Betula lenta*) was used for sofas and armchairs. For stuffing upholstery, Spanish moss (*Tillandsia usneoides*) was a popular material. When the automobile age arrived, Spanish moss was used to stuff the seats of the Model T. Beech leaves collected in autumn made a pleasant-smelling, insect-free bed; cotton, the silky seed of milkweed, and the down of cattails (*Typha latifolia*) made soft beds, and saw palmetto (*Serenoa repens*) could also be used, once the leaves were shredded, boiled, and dried in the sun for a day or two.

Printers also found plants useful. Paper was made from canebrake, okra,



Various parts of the persimmon provided beer, wood for gunstocks, tannin for cowhide, and relief for teething pain.

and leather flower (*Clematis viorna*). Paper and envelopes could be sealed with gum made from plum, peach, and apricot trees. Chinese tallow tree, pear, and apple wood were used for printing blocks and type.

Hickory was one of the plants suitable for gunstocks and gunpowder. Others were maple (*Acer rubrum*), alder (*Alnus rugosa*), black walnut, and persimmon. Excellent gunpowder was made from the charcoal of burned alder, white cedar, dogwood, and willow.

A crucial step in the tanning of animal hides was the "bark," in which the hides were layered with tree bark and left to soak for several weeks. Depending on the type of hide involved, the bark was repeated three to six times. The plants used in the process contained tannins, which are compounds capable of precipitating the gelatin of animal hides as insoluble compounds resistant to putrefaction. Tannins are found in the bark of smooth sumac, black oak, white ash (*Fraxinus americana*), and witch hazel (*Hamamelis virginiana*); sweet pepperbush, sweet gum, myrtle, peach, and sweetbay magnolia all have tannins in their leaves. Other possibilities were the root of the palmetto, any part of the sweet flag (*Acorus calamus*), unripe persimmon fruit, or the flowers of Saint-John's-wort (*Hypericum perforatum*).

To make boats, builders used Eastern red cedar (*Juniperus virginiana*), live oak (*Quercus virginiana*), red mulberry (*Morus rubra*), and willow. Each type of plant had a specific use—for the mast, floors, timbers, frame, or spars. Canoes were made from cypress (*Taxodium distichum*).

Craftsmen also made items intended for relaxation. Sugarberry (*Celtis occidentalis*) was used to make flutes; boxwood (*Buxus sempervirens*) was used for other musical instruments. Smoking pipes were fashioned from hollow-stemmed plants such as black walnut, titi (*Cyrilla racemiflora*), American bladdernut (*Staphylea trifolia*), and fig.

## Folk Remedies

Of all the uses of plants, their application for medical purposes has been explored and written about the most. Hundreds of plants are listed as remedies, and since trial-and-error was the only way to determine efficacy, thousands more must have been tried. It is difficult to understand today how some illnesses—such as uterine cancer—could have been diagnosed, let alone treated successfully.

For example, mayapple (*Podophyllum peltatum*) was recommended for certain

uterine disorders. We now know that the plant contains podophyllotoxin, which is still useful for treating uterine problems, and is being investigated for anticancer properties. Native Americans chewed on willow bark (*Salix* spp.) to relieve pain, and the compound in that tree's bark, salicylic acid, is chemically related to the active ingredient in aspirin.

At first, folk remedies were based on the Doctrine of Signatures. Plants shaped like human organs were believed effective in treating disorders of those parts. Heart-leaved plants treated cardiac problems; plants with kidney-shaped leaves were effective for urinary disorders. In the low country of South Carolina, the root of the hooded pitcher plant (*Sarracenia minor*) was used for skin problems, since the pitchers had blotches that resembled blemishes.

Bitter plants were especially prized in this region. This harks back to the days of malaria, when quinine was the preferred treatment. The need for quinine substitutes was made clear during the Revolutionary War, when drugs from Europe were difficult to obtain. The same thing happened in subsequent wars. Among the drugs used for malaria, or "intermittent fever" as it was known, were amyroot, willow, and a decoction from boiling a handful of bark from the Georgia fever tree (*Pinckneya pubens*) in water.

Plants were used for all aspects of reproduction. Cotton tea was used as a contraceptive, while devil's-walking stick (*Aralia spinosa*) and smilax (*Smilax* spp.) roots were used as aphrodisiacs. Sexually transmitted diseases were treated with plants such as Spanish moss, water lilies (*Nymphaea odorata*), and winged sumac (*Rhus copallina*). Women in labor were given teas of Saint-John's-wort or horsemint (*Monarda punctata*) to hasten labor. After giving birth, mothers were given tea of Spanish moss to increase milk flow and help expel the afterbirth.

Feverish babies could be wrapped in canna leaves (*Canna flaccida*); larger children might have woolly mullein leaves wrapped around their heads. Teething pain and thrush could be relieved by rubbing unripe persimmon fruit inside a baby's mouth. Measles could be drawn out with sassafras tea. Whooping cough was treated with Jack-in-the-pulpit (*Arisaema triphyllum*). Ringworm could be treated with tree sap from figs, a tea made from peach leaves, or walnut hulls rubbed on the soles of the feet. Intestinal parasites could be expelled with a tea made from Indian pinkroot (*Spigelia marilandica*). Bedwetting was cured by having

children suck on the unripe fruit of winged sumac.

High blood pressure could be lowered by placing Spanish moss inside the shoes and bathing the head with a pokeberry mixture. An alternative treatment was mixing wild leek (*Allium ampeloprasum*) with vinegar, lemon juice, and Epsom salts and taking a teaspoonful every morning for nine days.

Although some low country residents tried to avoid snake bites by stuffing white ash leaves in their shoes, snake bites were common. *Eryngium yuccifolium* and *Liatris spicata*—the latter known today as blazing-star—were both called rattlesnake-master because they were believed to repel poisonous snakes. Agave (*Manfreda virginica*) drew out snake venom. Indian tobacco (*Lobelia inflata*), steeped in spirits, was given to victims.

Oddly enough, smoking the leaves of fig or woolly mullein was often recommended as a cure for asthma. White cedar cones were soaked in whiskey and the liquor drunk by asthma sufferers.

Cold and cough remedies were as numerous as over-the-counter drugs are today. Creosote derived from the longleaf pine relieved chest congestion. American holly twigs, soaked in lemon, quieted a cough; its roots relieved colds. Other cold remedies included teas of woolly mullein leaves or horsemint; a decoction of red cedar (*Juniperus silicicola*), devil's-walking stick, and blackroot (*Pterocaulon pycnostachyum*); and amyroot steeped in whiskey.

There were also folk remedies for cosmetic purposes, most sounding as dubious as claims made today. Juice from the insectivorous plant, sundew (*Drosera* spp.), was mixed with milk to remove freckles. Bruises were dispatched with a poultice of lily-of-the-valley root (*Convallaria majalis*). Hair could be made to grow by frying heartleaf (*Asarum arifolium*) and applying it to the hair; hair could be thickened with the flowers of wood anemone (*Anemone nemorosa*), which was also good for removing corns. Weight gains could be battled with diet drinks made of dandelions or smilax; obesity could be avoided altogether by drinking broth that had been boiled with dill. Wine infused with sage lessened perspiration, and the young, dried stems of dogwood were used to whiten teeth.

---

Liz Dolinar is former horticulturist at Brookgreen Gardens in Murrells Inlet, South Carolina. This article was adapted with permission from the Brookgreen Journal.

# GARDENING

by Hazel Weihe

## Drought Insurance

Droughts...severe winds...not enough rainfall...what's a plant to do?

Our pets found spots in the shade during last summer's heat. Plants can't lie in the shade unless they're planted there and they can't go in for a cool shower unless you give it to them with a hose. But you can help them get through a long hot summer by using an anti-transpirant called Wilt-Pruf.

Think of the plant as inhaling and exhaling. When a plant inhales, it takes water in through its roots. When it exhales, it gives off moisture through its leaves. There are tiny pores in the leaves that give off this moisture. If the supply of water to the roots is too low, leaves become limp because they continue to emit moisture. In the process, leaves curl, become brown and desiccated. This is because they're giving off more moisture than the plant is absorbing.

What an anti-transpirant does is hold a balance between water taken in and moisture given off. Wilt-Pruf can sometimes make the difference between saving a growing tree or shrub and losing it.

An anti-transpirant is especially helpful when transplanting a small tree or shrub. No matter how careful a person is, the plant's root system is disturbed and some roots are lost. Wilt-Pruf has helped my transplants retain additional moisture after transplanting. Transplants need to be watered heavily to get them over the shock of having been dug. My plants have indicated by their behavior (they haven't died!) that Wilt-Pruf has been a definite help to them in surviving their trauma.

Wilt-Pruf is a clear organic liquid that in no way inhibits growth or harms a plant. Available at nurseries, garden centers and hardware stores.

Hazel Weihe of Somers, New York, is an award-winning writer whose garden column is syndicated by *The North County News*.

**WILT-PRUF**  
ANTI-TRANSPIRANT

P.O. Box 469, Essex, CT 06426-0469  
203/767-7033



# Regional Notes

## Sonoran Exhibit in Fourth Year

The Desert Botanical Garden in Phoenix, Arizona, recently celebrated the third anniversary of its popular exhibit trail, "Plants and People of the Sonoran Desert," with a volunteer work day to clean and patch up the much-visited attraction.

The exhibit demonstrates the use of plants—both wild and cultivated—by the natives of the Sonoran Desert. A self-guided trail meanders through five different natural habitats—desert, desert oasis, mesquite thicket, semi-desert grassland, upland chaparral; and two cultivated areas—a native crop garden and a "future resources garden." The ethnobotanical exhibit was 18 months in the making. It involved Native American groups such as the Papago, the Pima, and the Apache, and Native Seeds/SEARCH, a nonprofit seed conservation organization that specializes in the traditional native crops of the Southwest United States and northwest Mexico.

Kevin Dahl, assistant director of Native Seeds/SEARCH, calls the Sonoran trail "an exceedingly accurate exhibit. The interconnection between people and plants is an important part of it. This exhibit is unique in that it shows human plant interactions in different ecosystems."

Within the three acres of the trail, visitors can see demonstrations of saguaro fruit harvesting, ancient native crop varieties of tepary beans (extremely drought tolerant), aboriginal pima cotton (*Gossypium hirsutum* var. *punctatum*), and amaranth (*Amaranthus cruentus*, a small grain crop), plus mesquite (used for fuel, building materials, and dyes), a variety of grasses, the terrace cultivation of agave, Spanish crops like pomegranate, figs, and wheat, and contemporary plants like guayule (*Parthenium argentatum*, a rubber substitute), jojoba, and the fiery hot pepper, chiltepinas (*Capsicum annuum* var. *aviculare*). The trail provides a good deal of practical information on how to use the plants—how to prepare saguaro fruit; how to make a gourd canteen, mesquite-pitch pottery paint, and a yucca brush; and how to roast agave hearts.



© 1989 COURTESY OF NATIVE SEEDS/SEARCH

Dahl says public plantings such as this help his organization spread the word about the importance and value of native varieties of crops. "They help us by acquainting people with the whole concept [of traditional seed conservation]

The man in maze symbol is the logo of the Papago (Tohono O'odham) people, symbolizing their entry into the world. They, along with the Pima and Lower Pima, developed some of the most drought-resistant, heat-tolerant, and alkali-adapted crops in the world, including 60-day corn, tepary beans, and striped cushaw squash. Their homeland extends from Phoenix, Arizona, to central Sonora, Mexico, and includes perhaps the hottest, driest areas of North America with summer temperatures regularly over 100 degrees.

and by acquainting us with people who may want to grow the crops."

The plants on display only hint at the fecundity of the Sonoran Desert, which nurtures over 400 edible plants and hundreds more with medicinal and other uses.

## Purple Pitcher Rescue Effort

The Atlanta Botanical Garden is attempting to repopulate the state with purple pitcher plants, whose numbers in Georgia had dwindled to fewer than 50 before a rescue operation last summer.

A decade ago, there were about 250 of the *Saracenia purpurea* in two remote mountain locations; all of those once growing on the state's coastal plain had disappeared. The bog plant can still be found farther north, said Ron Determann, superintendent of the garden's Fuqua Conservatory, but these two populations now represent its southernmost range and thus, may result from some genetic variation. The Fuqua Conservatory has a particular interest in preserving carnivorous plants and orchids.

Last July, garden staff, accompanied by others from the Chattahoochee Nature Center in Fulton County, the state's Department of Natural Resources, and the U.S. Forest Service, found 24 of the plants in one of the mountain locations, four miles off the road on national forest property. The plants were not healthy; they had neither bloomed nor reproduced, and their leaves, normally suffused with purple, were green. To bring the plants some much-needed sunlight, the group cleared brush and low branches from an area of about 900 square feet.



JIM FITTS

Purple pitcher plants flourish in an ABG greenhouse.

Determann took a cutting from each of 10 plants to grow at the conservatory. He estimates that it will take them about two years to flower and set seed. In the meantime, the agencies involved will establish a more hospitable site adjacent to the current population, with a higher water table and no other plants to compete with the pitchers for water. After they flower, the greenhouse seedlings will be nurtured for another year and a half before being transplanted to this new site. There they will be mixed with more divisions of the original population, to ensure that the genetic material is from the same population. This is important when trying to preserve a disappearing species, because adaptations to a

particular environment will best be expressed in the material growing on site, observes Determann.

Determann said the other purple pitcher plant site is on private property, but efforts are underway to persuade the owners to participate in conservation efforts.

## Conservation Center Moves

The seven-year-old Center for Plant Conservation, a network of 20 botanical gardens dedicated to saving rare and endangered plants of the United States, has moved its headquarters from Jamaica Plain, Massachusetts, to the Missouri Botanical Garden in Saint Louis.

The national office provides coordination and support services to its participating institutions in managing the National Collection of Endangered Plants. The collection consists of living plants collected from the wild in a manner intended to represent as closely as possible the genetic diversity found in the natural populations. This serves as a failsafe against extinction and makes the plants available for research.

Because the Missouri Botanical Garden will now provide such support services as accounting, personnel administration, development, and communications, the move should let the center streamline its operations and free more resources for its conservation programs, according to Donald Falk, center director. The center will remain a separately chartered organization with its own board of trustees and bylaws.

## Camellia Garden Named

The headquarters of the American Camellia Society in Fort Valley, Georgia, has been named Masee Lane Gardens. According to Ann Blair Brown, the name dates back to Needham Masee, who obtained about 1,100 acres, including the 160 acres on which the headquarters are situated, in the Land Grant of 1827. The road in front of the headquarters has been called Masee's Lane because it was used to take his products to market.

In addition to camellias, the site houses the Edward Marshall Boehm porcelain collection, believed to be the largest collection of Boehm porcelain in the world. The society is adding additional plantings so that visitors can enjoy bloom year round.

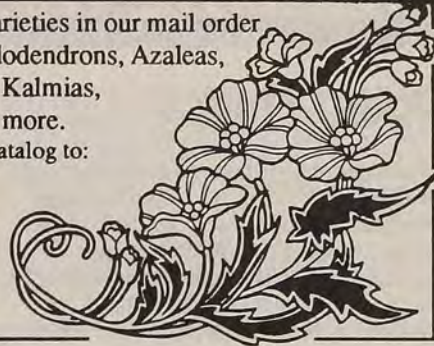
## BEAUTIFY YOUR LIFE

Choose from over 1500 useful plant varieties in our mail order catalog. Extensive collections of Rhododendrons, Azaleas, Conifers, Perennials, hardy Camellias, Kalmias, rare shrubs and trees and much, much more.

Send \$2.00 for our descriptive mail order catalog to:

### Roslyn Nursery

211 Burrs Lane, Dept. L  
Dix Hills, NY 11746  
(516)-643-9347



## TRAVEL/STUDY TRIPS FOR THE AHS GARDENER

**APRIL 21-28, 1991**

### GARDENS OF THE MISSISSIPPI

Experience the grandeur of the Mississippi from New Orleans to Memphis on board the *Mississippi Queen*. Ports of call along the river include Houmas House, Saint Francisville, Natchez, Vicksburg, and Greenville. Experience true Southern hospitality as AHS members and friends along the river open their homes and gardens for this horticultural adventure.

Leonard Haerter Travel Company, 7922 Bonhomme Avenue, Saint Louis, MO 63105, (800) 942-6666, (314) 721-6200 (in Missouri)

**MAY 12-23, 1991**

### ENGLISH COUNTRYSIDE GARDENS AND THE CHELSEA FLOWER SHOW

AHS members will have the unique opportunity to meet noted horticultural author, Rosemary Verrey, and visit her home and garden—Barnsley House—during this visit to the rolling hills of the Cotswolds and Kent. Participants will visit the gardens of Hidcote Manor, Sudeley Castle, Oxford, Denmans near Arundel, Nymans Gardens, Wakehurst Place, Great Dixter, Sissinghurst Place, and Isabella Plantation before transferring to London to enjoy the Chelsea Flower Show. Guest lecturer for this program is David Wilson, popular panelist on the BBC's series, "Gardener's Corner." The tour will be led by Elvin McDonald, lecturer and author and an AHS Board Member.

Leonard Haerter Travel Company

**JUNE 10-20, 1991 AND JUNE 23-JULY 3, 1991**

### GARDENS OF THE SOUTHWEST: COLORADO ROCKIES AND CANYONLANDS

Explore the diverse contrasts of plants from the alpine meadows of the Colorado Rockies to the desert plains of the Southwest. Explore unique, out-of-the-way parks like Arches National Park, the Goosenecks of the San Juan River, and Canyon De Chelly National Monument. See firsthand the varied use of native plants as AHS members and friends open their gardens and homes for our special visit.

Leonard Haerter Travel Company

**AUGUST 14-27, 1991**

### GARDENS OF THE MEDITERRANEAN

Cruise aboard Sun Line's yachtlike *Stella Maris* along the northern coast of the Mediterranean Sea from Nice to Venice. En route we visit magnificent private and public gardens of France, Italy, and Yugoslavia as well as the wildflower meadows among ancient ruins and botanical gardens in Greece. The itinerary includes two nights in Nice and three nights in Venice as well as calling at the ports of Portofino, Elba, Sorrento, and Messina, Italy; Katakalon and Corfu, Greece; and Dubrovnik, Yugoslavia. The BBC's David Wilson will be joined by AHS President George C. Ball Jr. for this memorable summer tour.

Leonard Haerter Travel Company

# AHS TOURS

# Making a Difference

## Doing Thyme

As coordinator of horticultural therapy for the North Carolina Department of Corrections, Jonathan Nyberg faces a not-so-typical array of gardening challenges. Not the sort outsiders might imagine, like lack of light or land, vandalism, or apathy, but bureaucratic prison rules and administrators. No plants taller than 18 inches, no trees or shrubs (they're easy to hide behind), control tools tightly, and watch for plants that can be converted into weapons (like hot chili peppers).

Despite all this, horticultural therapy for mentally ill and retarded inmates is flourishing in North Carolina prisons. Sixty inmates in five prisons grow vegetables, herbs, bulbs, perennials, annuals, and indoor plants. "Most things we grow," says Nyberg, "we grow for a purpose—to eat it, press it, or dry it." Vegetables are the most popular (and tomatoes the favorite) because of the brief respite they provide from the standard institutional mush.

The program began in 1982 when horticultural therapists from the North Carolina Botanical Garden began gardening with inmates, and has since become state administered. It is funded by profits from prison canteens as well as donated materials from nurseries (300 ornamental kale plants recently from one), clubs, and others.

The plants, like the gardeners, must be tough to survive the rigors of prison culture, which include irregular watering and other types of neglect. Hence, the selections are a lineup of old reliables—vinca, red salvia, marigold, petunias, black-eyed Susan, coreopsis, yarrow.

Nyberg leads inmates in a variety of plant-related activities—drying and pressing flowers, composting (they recently added an earthworm box), conducting plant sales, and playing horticultural Pictionary.

One offshoot of the program has been an awakening of intellectual curiosity that goes beyond gardening, into reading about gardening and reading in general. Inmates, most of whom read at a grade school level if at all, "start with posters, catalogs, or magazines and the next thing they know they are looking up in a book to find out what this weird looking bug is that is eating their favorite tomato plant—and then actually reading about it," says Nyberg.



Inmates at Umstead Correctional Center, Butner, North Carolina, work on a *Photinia* 'Red Tip' hedge.

The graduate horticultural honor society at North Carolina State University, Pi Alpha Xi, recently began collecting horticultural posters, magazines, and books to give to the inmates.

Nyberg says the horticultural program increases interaction between the staff and the inmates. And the plants transform the bleak prison grounds—"bare ground,

## Branch Bank

Saving Florida trees has been a concern of landscape architect L. Thomas Chancey for 25 years. And where better to save trees than a Tree Bank? After seeing development swallow up trees in south Florida, Chancey organized a donation plan for Fort Lauderdale.

The program works much like your local savings bank. Property owners donate trees that would be lost during construction and development; the "bank" puts them in "reserve" until it gets a request from properties in need of available specimens. The transfer may take anywhere from one month to one year. Donated trees usually remain on the original property while Chancey's team prepares them for moving—trees are root and crown pruned and fertilized—and finds them a new home.

Most trees stay in the same neighborhoods. Trees removed from public property are moved to public property; privately owned trees are moved to

like landscapes on the moon"—into greener and healthier oases.

Nyberg hopes the horticultural therapy program, besides teaching practical skills and providing greenery and fresh fruit and vegetables, will touch inmates at a deeper level. "Gardening connects you not only with plants, but also with rain and insects and soil and life and death and the cycle of the earth. I think one of the best things it does is to provide a medium to talk with these guys about these things that they may have never talked about before."

But he warns against a naive feel-good attitude concerning the benefits of prison horticulture. The rapid turnover of the prison population makes it difficult to work with inmates for long periods and the atmosphere does not exactly lend itself to creative self-development. "It's questionable to me that any sort of therapy can take place in a coercive situation."

Therapeutic or not, the horticultural therapy program will be expanded this year to two more prisons.

---

Send new or old horticultural posters, magazines, and books to Jonathan Nyberg, Division of Prisons, Mental Health Services, 831 West Morgan Street, Raleigh, NC 27603.

private property. Program participants are charged only for labor costs, and in some cases Chancey's company has donated its services.

The Fort Lauderdale News and Sun Sentinel donated mature trees from their property to "Riverwalk," a local renovation project, which planted them at a museum in a historic district. The Florida Department of Transportation gave a homeowners' association trees that would have been lost during the widening of a boulevard.

Chancey's advocacy efforts led Fort Lauderdale to pass city laws to protect historic and specimen trees and add provisions to stop hatracking, a harmful pruning practice similar to topping.

---

For more information contact Tree Bank, c/o L. Thomas Chancey & Associates, Inc., 1512 East Broward Boulevard, Suite 105, Fort Lauderdale, FL 33301.

# Gardeners' Q&A

**Q:** I purchased a plant labeled French tarragon from a local nursery and it has done very well in my garden, but it does not have the taste of culinary tarragon. Actually, it does not have any taste at all. Could I be doing something wrong?

A. B., Springfield, Missouri

**A:** It sounds as if you have purchased a plant known as Russian tarragon (*Artemisia dracunculus*). Russian and French tarragon are very similar in appearance yet taste very different. Russian tarragon has little or no taste, but grows more vigorously than the French. French tarragon (*Artemisia dracunculus* 'Sativa') is a sterile plant; it does not flower and therefore produces no seed. It must be propagated from stem cuttings or root division. Russian tarragon does set seed, so if you see tarragon seed for sale it is the Russian variety, not the French.

How do you tell the difference when you go to your local nursery? Dr. Arthur Tucker of Delaware State College says that mix-ups of the two different tarragons are quite common, especially in nurseries that do not specialize in herbs. Maureen Collins, assistant horticulturist at the National Cathedral in Washington, D.C., recommends that you ask the nursery manager if the tarragon is from nursery propagated rootstock or from seed. If it's from seed it is not French tarragon, but Russian. If the nursery manager doesn't know, you should try to find a nursery that has some knowledge of herb plants. You can also tell the difference just by taking a tiny piece of the leaf and tasting it. If it doesn't have a strong anise flavor it's Russian tarragon.

—Carol Dowling  
Horticultural Intern

**Q:** I would like to know more about the soil block makers I have seen advertised in several gardening catalogs. How do they work and are there advantages in using them?

P. H., Grass Valley, California

**A:** These tools are actually molds used to compress a potting soil mixture into individual cubes that function as a container for starting seeds and growing seedlings to transplant size. Gardeners who have used these blocks

say they greatly reduce root injury and growth delay caused by transplant shock. The blocks eliminate the need to buy, sterilize, and store containers, and reduce the use of nonrecyclable ones.

Two sizes of soil molds are available: a smaller one is used for germination and seedling development; a larger mold can be used to make a transplant soil block into which the smaller seedling block is set. As the seedling grows, the root system helps to hold the block together.

The secret to success in making the blocks is to arrive at the right soil mixture recipe. Experienced soil block makers suggest a mixture of peat moss, aged compost, sand, good garden soil, perlite, and a light addition of organic fertilizer. Add water until you get a firm consistency. The block should adhere well and be free standing, but not be so compacted as to interfere with root growth.

Extra care should be taken to make sure that the soil blocks don't dry out. Water as needed with a fine mist. A plastic cover can be placed over the blocks to keep humidity levels high for seed germination.

When ready to plant outside, the entire soil block is placed directly into the garden bed. Plants that are prone to root injury, such as cucurbits, do very well in soil blocks.

—Maureen Heffernan  
Horticultural Intern

Need advice? Call the AHS Gardeners' Information Service toll free at (800) 777-7931 from 11 a.m. to 3 p.m. EST Monday through Friday.

We value your support.  
Every gift is important.  
Help AHS reach its goal.  
Send your donation today  
to the 1991  
AHS ANNUAL APPEAL.

ARS  
E Good  
Morning  
America



1991 Award of Excellence winner for best miniature rose named for TV's top-rated morning program. Send \$7.45 to start your collection with this spectacular new sunshine yellow miniature rose.

Name \_\_\_\_\_  
Address \_\_\_\_\_  
City/State/Zip \_\_\_\_\_

or choose from over  
75 exciting varieties in our  
FREE color catalog.

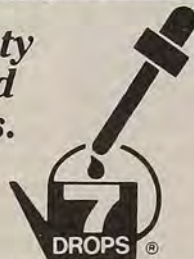


Nor'East  
Miniature Roses, Inc.

Box 307 AH - Rowley, MA 01969  
Phone: 508-948-7964

## "Schultz-Instant"®

The Highest Quality  
Liquid Plant Food  
For Over 40 Years.



PER QUART WATER  
GROWS ALL PLANTS



Available at leading Garden Centers and Plant Departments.  
Mfg. by Schultz Company, St. Louis, MO 63043

# AHS Bulletin Board

## Nine Nominated to AHS Board

Nine individuals have been nominated or renominated to the American Horticultural Society Board of Directors. The three-year terms begin with the Society's Annual Meeting in April.

**Beverley White Dunn** has been a member of the AHS Board of Directors since 1988. Dunn has given flower arranging seminars at Colonial

Williamsburg and for the benefit of the Birmingham Botanical Gardens. Dunn will be given this year's Frances Jones Poetker Award at the AHS Annual Meeting (see page 3).

**John Alex Floyd Jr.** is editor of *Southern Living* magazine. Floyd received a bachelor's degree in ornamental horticulture from Auburn University, and a master's degree in horticulture and a doctoral degree in plant physiology from Clemson University. He joined *Southern Living* as a senior horticulturist in 1977 and was named editor last December.

Public relations counselor **Lawrence V. Power** is an inveterate gardener. As president of McGrath/Power Associates, Inc., in New York City he has represented numerous corporations, including Reebok International, Waldenbooks, and Nikon, Inc. Power has also written books on landscaping and gardening and frequently contributes gardening features to *House & Garden*, *American Home*, and *House Beautiful*.

Former AHS Board Member **Julia Rappaport** of Santa Ana, California, has been nominated for another term. Rappaport served three terms as a Board Member and was chairman of the Education Committee for six years. She has developed horticulture and science curricula and garden programs for teachers and students and has taught "Gardening Science in the Classroom," a graduate course for teachers at the University of California-Fullerton.

**Josephine Shanks** of Houston, Texas, specializes in growing, photographing, and lecturing about Louisiana irises. Two Louisiana irises have been named for her—"Josephine Shanks" and "Empress Josephine". Shanks is a board member of the Society for Louisiana Irises and the Garden Club of Houston.

New York City resident **Mrs. Donald B. Straus** serves as vice president of the board of the New York Botanical Garden in Bronx, New York, and is a trustee of the Metropolitan Museum of Modern Art in New York City. She is also a member of the board of the Americas Society.

**Billie Trump** is vice president of the Alexandria (Virginia) Council of Garden Clubs and a member of the River Farm

Garden Restoration Committee. She is garden chairman of the Lee-Fendall House, a historic property in Alexandria, and a board member of the Virginia Trust for Historic Preservation.

Current Board Member **Andre Viette** has been nominated for another term. Viette has developed Andre Viette Farm and Nursery in Fishersville, Virginia, which grows over 3,000 varieties of perennials and has its own tissue culture laboratory. Viette teaches horticultural courses at Blue Ridge Community College and hosts a radio gardening program for WSVB in Harrisonburg, Virginia.

**Katy Moss Warner** is general manager of parks horticulture at the Walt Disney World Resort, encompassing the Walt Disney World nursery, horticulture services, pest control, and the landscape operations of the Magic Kingdom, EPCOT Center, and Disney-MGM Studios. She promotes horticultural education programs for both employees and guests.

### AHS Board of Directors Proxy

Notice of Election in conjunction with the 46th Annual Meeting of the American Horticultural Society. Cut out proxy and return by April 1, to President, AHS, 7931 East Boulevard Drive, Alexandria, VA 22308.

I will not be able to attend the Annual Meeting of the American Horticultural Society on April 18, 1991. Please assign my proxy to AHS President George C. Ball Jr., or

to cast my ballot in the annual election of the Society's Board of Directors, 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.

Vote for nine.

- Beverley White Dunn
- John Alex Floyd Jr.
- Lawrence V. Power
- Julia Rappaport
- Josephine Shanks
- Mrs. Donald B. Straus
- Billie Trump
- Andre Viette
- Katy Moss Warner

Write-in-Candidate

Write-in-Candidate

Name

Address

City/State/Zip

Signature

Date



GEORGE WATERS

The garden of Il Brolino in Santa Barbara, California, was one of many West Coast landscapes designed by Florence Yoch early this century. She will be one of five designers whose art will be described in "Masters of American Garden Design II: The Country Place Era," a symposium to be sponsored by AHS from 9 a.m. to 5 p.m. March 15 at PaineWebber, 1285 Avenue of the Americas in New York City. For more information about the event, which will also feature the work of Charles Platt, Annette Hoyt Flanders, Marian Coffin, and Florence Bell Robinson, call AHS at (800) 777-7931.



# Members' Forum

## Bonnie's Apple Seed

Like the 'Ginger Gold' apple in your November News Edition, the J. W. Jung Seed Company's new baking apple, 'Bonni-Best', seems to be a chance seedling discovered by happy circumstance.

Years ago, when Earl and Bonnie Keehn moved to their farm near Cooksville, Wisconsin, Earl cleared out an abandoned orchard to make a pasture for his dairy cows. One tree survived on a fence line despite being grazed down each year by the cows.

After Earl quit the dairy business, he noticed the tree as he took down the fence to expand his corn field, and was intrigued by the large size of its apples. He carefully pruned the branches each year until it became a full-sized tree, and Bonnie Keehn began to use the apples for baking, partly, she admits, because their large size meant she had to peel so few of them to make a pie.

Bonnie is not a casual baker: she's been known to make 100 pies in a week. She noticed that compliments increased when she started using this new, wild apple, and that people would sometimes stop by to get some apples for themselves.

One day about three years ago, the Keehns decided that since the old tree wasn't going to last forever, it would be a good idea to preserve these apples both for themselves and other apple aficionados. On their next visit to our garden center here, they told me about the tree. Now and then, people come in asking for help in saving a special tree, for sentimental reasons, or simply because they like the variety and don't know if it can be replaced, and we offer to save the tree from extinction by doing a graft onto one of our trees.

Bonnie mentioned that it made a good apple pie, so I jokingly said she should bring me one. That fall she did, along with some of the apples. The pie was great. So I called George Klingbeil, a professor emeritus from the University of Wisconsin Horticulture Department, to get his opinion. After tracking it for a year, Klingbeil determined that the tree was everything the Keehns claimed.

The apple is good to eat, but not like most of the newer dessert-type apples introduced in recent years. It has a fairly coarse flesh and tough skin, and really makes an excellent cooking apple. It seems relatively resistant to disease and insects, and it keeps very well through the winter.



COURTESY OF J. W. JUNG SEED CO.

Bonnie Keehn and her namesake.

The exact origin of the tree may always be a mystery. According to Klingbeil, the Wisconsin State Horticultural Society had a number of test orchards in the southern part of the state in the 1890s or so. But he and I agree that this may well have been an accident of nature, with a seed brought from somewhere by a bird, or perhaps some cross-pollination courtesy of a wayward bee.

Your January issue listed many interesting ornamentals and vegetables being offered through catalogs this winter. While our own lists other new fruit trees and other plants, the 'Bonni-Best' is special in representing two "ordinary" people who delighted in having found a treasure and who had the kindness to share it with fellow gardeners everywhere.

Dick Zondag  
Randolph, Wisconsin

## Fluoride Advice

The advice in your November "Gardeners' Q&A," that the damage to plants from fluoridated water can be reduced by letting the water stand a few days, conflicts with what I know as a professional chemist.

This works for chlorine in tap water, because elemental chlorine can disappear by reacting with water and its organic content, or by evaporation if water has free contact with a large amount of air.

The assumption that fluoride degrades into a more passive form in time is faulty reasoning, apparently confusing fluoride with fluorine. Fluoride ion is the passive form of fluorine, just as chloride ion is the passive form of chlorine. Elemental chlorine degrades to chloride ion in tap water. But it is fluoride ion, not elemental fluorine, that is added to tap water.

Fluoride and chloride are similar salts. They inhibit plant growth if their concentrations are too high. They don't disappear on standing. Salt must be removed from water to reduce its concentration to acceptable levels. The fancy term for this is desalination. Usually, this is done by distilling the water or passing it through a deionizing cartridge. Perhaps there are other absorbents for fluoride ion, but I don't know of them.

Alan N. Syverud, Ph.D.  
Midland, Michigan

*There seems to be little if any solid evidence that letting water stand reduces the effect of fluoride in tap water, so we fall back on the alternate suggestions in that column, to use distilled or deionized water.*

## Back Issues

I have a number of old issues of your magazine that I would like to offer to your members or collectors. Would you please mail to me a list of collectors or interested members?

Rod Barrette  
San Diego, California

*From time to time we hear from members who have back issues to share. We have no room to store them here at River Farm, but we would be willing to keep records of what members have and what other members are seeking and put them in touch with each other. Mr. Barrette has single issues dating back to 1932 and multiple issues from many years from 1959 to 1982. If you need to fill out a collection, write to us and we'll forward the request.*

## Corrections

The 'Honeybunch' squash mentioned in our January issue as a new offering from Shepherd's Garden Seeds did not appear in their catalog, a spokeswoman said, because variety trials, which were not finalized when their news release was sent out, revealed that the squash was not up to their standards in either seed or flavor.

In our contributions report in the November issue, the name of Robert Lindsay should have appeared under "General Gifts," and that of Ann Crammond under "Tour Participants."

# Gardeners' Bookshelf



## Butterflies: How to Identify and Attract Them to Your Garden

Marcus Schneck. Rodale Press, Emmaus, Pennsylvania, 1990. 160 pages. Color photographs and illustrations. Publisher's price: hardcover, \$24.95. AHS member price: \$21.20.

## Butterfly Gardening

Xerces Society / Smithsonian Institution. Sierra Club Books, San Francisco, 1990. 192 pages. Color photographs. Publisher's price: softcover, \$18.95. AHS member price: \$16.00.

The renewed interest in butterflies among American gardeners is seen by many as reflecting an appreciation of the interconnectedness of plant and animal life and an awareness of the negative biological impact of land development and horticultural chemicals.

Among new books on the topic, *Butterflies: How to Identify and Attract Them to Your Garden* by naturalist Marcus Schneck is a colorful guide to 250 of the most common butterflies in North America.

The "Butterfly Directory," the major portion of the book, provides several illustrations for each specimen, along with valuable information on geographic range, habitat, flight periods, host plants (larval food sources), and nectar sources—all useful for choosing plantings.

Schneck also includes brief but illuminating text on butterfly biology, basic butterfly garden principles, and a list of 74 commonly available "Plants for Butterflies."

*Butterfly Gardening* is a wonderful collection of essays and stunning photography. Conservationists and lepidopterists such as Dave Winter and Miriam Rothschild provide insights into butterfly behavior, physiology, and life cycles. Other chapters cover photographing butterflies, design and maintenance of a butterfly garden, and incorporation of native wildflowers. The garden design diagrams should be especially useful. Plant lists accompany the designs and are also found in the appendices, along with a butterfly list (including larval food plants), and source information.

Both books serve as excellent introductions to the world of Lepidoptera, with Schneck's work of most importance as a handy butterfly "finder," and the Xerces/Smithsonian book providing an in-depth look into the lives of butterflies and butterfly gardens.

—Joseph M. Keyser

Joseph M. Keyser is AHS director of programs. Additional information on public butterfly gardens, a bibliography on butterfly gardening, a comprehensive plant list, and other facts and sources, is available from the AHS Gardeners' Information Service for \$2.50 postpaid. Order GIS Bulletin 310, *Butterfly Gardens and Gardening*.



## The Experience of Place

Tony Hiss. Alfred A. Knopf, Inc., New York, 1990. 233 pages. Black-and-white photographs and drawings. Publisher's price: hardcover, \$19.95. AHS member price: \$16.95.

This is not a gardening book nor even a book about landscaping in the usual sense. It will speak to those who came to gardening through a love of the outdoors and the lifting of the spirit that only an expanse of green can provide. Tony Hiss attempts to explain that euphoria, and proposes some means of preserving the spaces where it occurs.

Hiss is at his best when he takes the reader to these special places. Not all are green: in Grand Central Terminal, we gain an appreciation of how its design can create a sense of confidence and cooperation among travelers. We stroll Frederick Law Olmsted and Calvert Vaux's Prospect Park in New York City, gasping as we first glimpse its Long Meadow through the Endale Arch. In Times Square, we see how proposed skyscrapers will diminish its sun, sky, and spaciousness.

But the human psyche needs not only natural landscapes and cities, but also working landscapes, or farmlands. It is the latter that seem most endangered: their sweeping and peaceful vistas are considered too common to be preserved by law, as are mountains or forests. They harbor little wildlife to be protected, and are perfect for developers in being cheap, flat, and well-draining.

A hopeful note comes from Massachusetts. Its Department of Environmental Management has developed a Landscape Inventory, identifying rural landscapes deemed "distinctive" or "noteworthy," and researchers at the University of Massachusetts have produced a *Design Manual* in which homes are clustered in a way that leaves vast areas open and unspoiled. The book contains only a few photos and drawings, but the "triptych" of before and after drawings from the manual is dramatic.

Hiss devotes too little space to some topics and too much to others—I wish he had expanded his scope beyond the East Coast and New York. But those who react to our changing landscape with a gnawing sense of unease and alarm will gain a better sense of why, and perhaps, what can be done about it.

—Kathleen Fisher



## Paradise Contained

William Stites, Kathryn George, and Mary Sears. Doubleday, New York, 1990. 96 pages. Color photographs. Publisher's price: hardcover, \$19.95. AHS member price: \$16.95.

Nothing brightens a dreary winter day like a pot of flowering narcissus bulbs or some brilliant red tulips sitting on a windowsill. Forcing bulbs is an easy way to extend the gardening season and to bring the pleasures of a spring garden into the house long before the first robin arrives. Since the procedure is relatively simple and can be accomplished with readily available materials, growing bulbs in containers may be especially intriguing to the apartment dweller or others without gardening space.

*Paradise Contained* is filled with useful information and helpful hints for the indoor bulb enthusiast. The first section provides basics on bulb types, storing, container selection, planting media, forcing, and potting. The second section is on hardy bulbs—those that grow outdoors in areas of freezing or near-freezing temperatures.

It contains details on how to force 10 different bulbs from glory-of-the-snow (*Chionodoxa*), lily-of-the-valley, and scilla to those more commonly used for forcing, such as hyacinth, tulip, and daffodil.

The last section describes 13 tender bulbs and tubers, which are subtropical in origin and intolerant of frost. Here you'll find such exotic beauties as lily-of-the-Nile (*Agapanthus*), *Clivia*, *Rhodohypoxis baurii*, and *gloxinia (Sinningia)*.

The many photographs include beautiful close-ups of flowers along with shots of rooms decorated with pots of flowering bulbs in a variety of containers. An appendix lists sources for bulbs and planters.

Forcing bulbs is an easy way to introduce the pleasures of gardening to a beginner. A copy of *Paradise Contained* wrapped with a selection of bulbs and an interesting container would make a wonderful gift and may start a lifetime of gardening enjoyment.

—Mary Beth Wiesner

## House Plants

Edited by John Brookes. Reader's Digest Association, Inc., Pleasantville, New York, 1990. 240 pages. Color and black-and-white photographs and illustrations. Publisher's price: softcover, \$14.95. AHS member price: \$12.70.

The RD Home Handbooks series is designed for busy people and includes easy-to-read text without technical language. Experienced gardeners may find the book too simplified but for new gardeners, *House Plants* will be a good introduction to indoor gardening.

The book contains tips on how to choose house plants, cacti, succulents, and bulbs for the home. A color photograph of each plant is included along with a description and brief notes on climate, size, feeding, and potting. Plant care symbols will allow readers to quickly determine each plant's needs for temperature, light, humidity, water, and ease of care.

Photographs and line drawings clearly illustrate techniques—planting containers, training climbing plants, pruning, propagation, repotting, and more. —M. B. W.

## Red Oaks & Black Birches

Rebecca Rupp. Storey Communications, Inc., Pownal, Vermont, 1990. 276 pages. Publisher's price: softcover, \$10.95. AHS member price: \$9.30.

I grew up in a back yard filled with trees. Among them: a tree that bore fruit northern Europeans once thought would cause pregnancy; one suggested by medieval magicians as just the thing for "skewering the hearts of vampires"; and one found in ancient Persian gardens and considered by George Washington to be "a clever kind of tree." Stumped? You won't be after reading *Red Oaks & Black Birches*, Rebecca Rupp's look at the fascinating world of trees. In lively prose, Rupp relates the history, science, and folklore of 20 common trees. You'll get a refresher on why leaves change color in the fall, and learn which trees generate the most heat when burned in your fireplace, how to make acorn coffee and pickled walnuts, and the best trees in which to build tree houses. In addition to oaks and birches you discover some surprising things about sycamores, poplars, redwoods, walnuts, elms, and beeches. And the trees in your own back yard will cease to be ordinary apples, sugar maples, and weeping willows. —M. B. W.

## Book Order Form

Please send me these books at the special AHS member prices.

- THE EXPERIENCE OF PLACE . . . . . \$16.95  
RAN169
- BUTTERFLIES: HOW TO IDENTIFY & ATTRACT . . . \$21.20  
ROD901
- BUTTERFLY GARDENING . . \$16.00  
SIE901
- PARADISE CONTAINED . . \$16.95  
DOU001
- RED OAKS & BLACK BIRCHES . . . . \$9.30  
GAR211
- HOUSE PLANTS . . . . . \$12.70  
RAN 127

I would like to order \_\_\_\_\_ books.

Postage and handling: \$2.50, first book; \$1.50, each additional book. Virginia residents add 4½% sales tax. Please allow six weeks for delivery. Prices are subject to change without notice.

Enclosed is my check for \$ \_\_\_\_\_

Charge to:  
 Visa  MasterCard Exp. Date \_\_\_\_\_

Acct. # \_\_\_\_\_

Signature \_\_\_\_\_

Ship to \_\_\_\_\_

Street \_\_\_\_\_

City \_\_\_\_\_

State \_\_\_\_\_ Zip \_\_\_\_\_

Daytime phone number \_\_\_\_\_

MAIL TO: AHS Books, 7931 East Boulevard Drive, Alexandria, VA 22308.

# Gardeners' Dateline

## Mid-Atlantic

♦ **Mar. 16-17. Gala Herb Weekend.**  
**Apr. 6-7. Water Lily Weekend.** Davidsonville, Maryland. Exhibits, discussions, slides. Information: Bittersweet Hill Nurseries, Rt. 424 & Governor's Bridge Rd., Davidsonville, MD 21035, (301) 798-0231.

♦ **Apr. 20. The 63rd Annual Georgetown Garden Tour.** Washington, DC. Benefit for the Georgetown Children's House. Information: (202) 342-0417 or (202) 333-4953.

♦ **Apr. 20-28. The 58th Historic Garden Week in Virginia.** Information: The Garden Club of Virginia, 12 East Franklin St., Richmond, VA 23219, (804) 644-7776 or (804) 643-7141.

♦ **Apr. 26-28. Spring Bonsai Show.** U.S. National Arboretum, 3501 New York Ave. N.E., Washington, DC. Sponsored by the Potomac Bonsai Association. Information: Tony Meyer, (301) 654-1854.

♦ **Apr. 27. Seventh Annual Herbs Galore Sale and Seminars.** Maymont Foundation, Richmond, Virginia. Information: Maymont Foundation, 1700 Hampton St., Richmond, VA 23220, (804) 358-7166.

## North Central

♦ **Mar. 3-5. Spring Garden Preview "This Land Is Your Land—A Salute to Great American Landscapes."** Fisher Auditorium, Wooster, Ohio. Produced by the Ohio State University Agricultural Technical Institute. Information: Dr. Gary Anderson or Brenda Linnick, (216) 264-3911.

♦ **Mar. 9, 23-Apr. 13, 20. Garden Design and Plant Culture Symposia.** Columbus, Ohio; Indianapolis, Indiana; Kansas City, Missouri; and Milwaukee, Wisconsin. Information: Horticultural Consultants, 111A North Kirkwood Rd., Saint Louis, MO 63122, (314) 821-5138 or (800) 347-6565.

♦ **Mar. 13-17. Spring Flower Fest.** Olbrich Botanical Gardens, Madison, Wisconsin. Information: (608) 246-4551.

♦ **Mar. 16-Apr. 21. "Holland's Glory" Spring Bulb Show.** Foellinger-

Freimann Botanical Conservatory, Fort Wayne, Indiana. Information: Foellinger-Freimann Botanical Conservatory, 1100 South Calhoun St., Fort Wayne, IN 46802, (219) 427-1267.

♦ **Mar. 21. Designing and Raising an Herb Garden.** Plimoth Plantation, Plymouth, Massachusetts. Information: (508) 746-1622.

♦ **Apr. 11-14. Ann Arbor Flower and Garden Show.** Yost Ice Arena, University of Michigan, Ann Arbor, Michigan. Produced by the University's Matthaei Botanical Gardens. Information: Judith Corkran Katch or Karen Fine, University of Michigan's Matthaei Botanical Gardens, 1800 North Dixboro Rd., Ann Arbor, MI 48105-9741, (313) 998-7343.

♦ **Apr. 26-28. Second Annual Cincinnati Flower and Garden Show.** Cincinnati's Ault Park, Ohio. Information: Mary Margaret Rochford, Greater Cincinnati Flower and Garden Show Society, 1117 Pendleton St., Cincinnati, OH 45210, (513) 579-0259.

## Northeast

♦ **Mar. 8-10. Fourth Annual Capital District Garden and Flower Show.** Presented by Wildwood Programs, New York Association for the Learning Disabled, Capital District Chapter. Knickerbocker Arena, 51 South Pearl Street, Albany, New York. Information: (518) 783-3421.

♦ **Mar. 8-17. The 1991 New York Flower Show.** Pier 92, 51st Street and the Hudson River, New York. Information: The Horticultural Society of New York, 128 West 58th St., New York, NY 10019, (212) 757-0915.

♦ **Mar. 10-17. Philadelphia Flower Show.** Philadelphia Civic Center. Information: Pennsylvania Horticultural Society, 325 Walnut St., Philadelphia, PA 19106-2777.

♦ **Mar. 12. Lecture: Help for the Home Gardener.** **Mar. 19. Lecture: Roses: Best of the Old and New.** Wilmington Garden Center, Wilmington, Delaware. Information: (302) 658-1913.

♦ **Mar. 28. Symposium: American Residential Garden Design.**

Haverford College, Haverford, Pennsylvania. Co-sponsored by the Arboretum of the Barnes Foundation. Information: Arboretum Office, Haverford College, 370 Lancaster Ave., Haverford, PA 19041, (215) 896-1101.

♦ **Apr. 26-May 12. The 13th Annual Philadelphia Open House.** House and Garden Tours. Coordinated by the Friends of Independence National Historical Park. Information: Philadelphia Open House, 313 Walnut St., Philadelphia, PA 19106, (215) 928-1188.

## Northwest

♦ **Mar. 1-May 31 (Saturday through Wednesday). Spring Visitor Blooming Season.** The Rhododendron Species Foundation, Weyerhaeuser Corporate Headquarters, Federal Way, Washington. Information: The Rhododendron Species Foundation, P.O. Box 3798, Federal Way, WA 98063, (206) 661-9377.

## South Central

♦ **Mar. 23-Apr. 28. Wildflower Fields on Tour.** Presented by Wildseed Farms, Eagle Lake, Texas. Information: Wildseed, Inc., P.O. Box 308, Eagle Lake, TX 77434, (409) 234-7353, or Chamber of Commerce, P.O. Box 216, Eagle Lake, TX 77434, (409) 234-2780.

♦ **Apr. 20-21. Wildflower Days Festival.** National Wildflower Research Center, 2600 FM 973 North, Austin, Texas. Information: (512) 929-3600.

## Southeast

♦ **Mar. 22-24. The 36th Annual Spring Orchid Show: Oriental Splendor.** Winter Park Mall, Orlando Avenue, Winter Park, Florida. Information: (407) 876-2625.

♦ **Mar. 26-27. Seventh Annual Davidson Horticultural Symposium: Hand in Hand with Nature.** Davidson, North Carolina. Sponsored by the Davidson Garden Club. Information: Polly Brockway, P.O. Box 1145, Davidson, NC 28036, or call Nan Hubbard (704) 892-5266 or Anne White (704) 892-8674.

♦ **Apr. 27-28. Plant and Herb Sale.** Raleigh, North Carolina. Information: Capital Area Preservation, Inc.,

Mordecai Historic Park, 1 Mimosa St., Raleigh, NC 27604.

◆ **May 4-7. The 12th Menninger Sunbelt Tree Conference.**

Cooperative Extension Office, West Palm Beach, Florida. Information: MSTC, P.O. Box 6524, Clearwater, FL 34618, (813) 446-3356.

◆ **May 11-12. Eighth Annual Gardens for Connoisseurs Tour.**

Atlanta, Georgia. Hosted by the Atlanta Botanical Garden. Information: (404) 876-5859.

## Southwest

◆ **Mar. 18-30. Seminar and Workshop: Remote Sensing for Water Resources Management.**

Denver, Colorado. Information: American Water Foundation, 1616 17th St., Suite 376, Denver, CO 80202, (303) 628-5516.

◆ **Apr. 6-7. African Violet Flower Show and Sale.**

Albuquerque Garden Center, 10120 Lomas N.E., Albuquerque, New Mexico. Sponsored by the Albuquerque African Violet Society. Information: Lynda McBride, (505) 296-6020.

◆ **Apr. 20-21. Cactus and Succulent Show and Sale.**

Albuquerque Garden Center, 10120 Lomas N.E., Albuquerque, New Mexico. Sponsored by the Cactus and Succulent Society. Information: Lynda McBride, (505) 296-6020.

## West Coast

◆ **Mar. 2-17. Tulipmania.**

Pier 39, San Francisco, California. Information: (415) 981-8030.

◆ **Mar. 7. Lecture: Flower Arranging.**

Presented by John S. Furman. The Huntington, San Marino, California. Information: (818) 405-2141.

◆ **Mar. 9. Conference: Botanical and Natural History Illustration.**

The Huntington, San Marino, California. Information: (213) 251-0550.

◆ **Mar. 30-31. Early Iris Show.**

Los Angeles State and County Arboretum, Arcadia, California. Sponsored by the Southern California Iris Society. Information: (818) 821-3222.

◆ **Apr. 17-21. Sixth San Francisco Landscape Garden Show.**

Fort Mason Center, San Francisco, California. Sponsored by the Friends of Recreation and Parks. Information: (415) 221-1310.

## Spring Events at River Farm

Spring is a great time to visit River Farm. From late March through April daffodils, crocuses, snowdrops, lilacs, and irises will be putting on a show in the formal gardens and along the newly cleared river bank. We've also lined up some special events for those months.

◆ **March 1-15. "Watercolors of Hawaii,"** an art exhibit by Lassie Corbett, open Monday through Friday, 8:30 a.m. to 5 p.m. Free.

◆ **March 2 and April 6.** A back yard composting class will be held at 10 a.m. each day. Each will include a tour of the National Backyard Compost Demonstration Park at River Farm. Free.

◆ **March 16.** The AHS lecture series begins with "The Philosophy and Artistic Background of Chinese Gardens," by Louise Barnett, an AHS member who has travelled frequently in China. The program begins at 2 p.m. Tickets are \$5. Call AHS for reservations.

◆ **March 19 and 20.** "The Renaissance—Heir to Many Flower

Traditions," a two-day flower arranging course sponsored by the International Design Symposium and AHS. Kenn Stephens of IDS will present "Flower Arrangements and a New Renaissance" on March 19 and "Designs that Speak of Form and Texture" on March 20. Each 10 a.m. to 4 p.m. session is \$75 and includes supplies and lunch. Call AHS for more information and registration.

◆ **March 24.** An opening reception for the Springfield Art Guild Spring Show from 2 p.m. to 5 p.m. The juried show runs until the end of April. Exhibit hours are Monday through Friday, 8:30 a.m. to 5 p.m. Free.

◆ **April 20.** Alexandria Council of Garden Clubs annual plant sale. 11 a.m. to 2 p.m. Free.

◆ **April 25 and 26.** Holly and Ivy Craft Guild Spring Show. 10 a.m. to 4 p.m. Admission is \$1.50.

For more information write or call the American Horticultural Society, 7931 East Boulevard Drive, Alexandria, VA 22308, (703) 768-5700 or (800) 777-7931.



**PORTABLE ELECTRIC  
POWER SPRAYER**

**DRAMM**  
Exceptional Garden Products

DEPT. AH, P.O. BOX 1960, MANITOWOC, WI 54221, U.S.A.  
(414) 684-0227 FAX (414) 684-4499

# Classifieds

**Classified Ad Rates:** \$1 per word; minimum \$20 per insertion. 10 percent discount for three consecutive ads using same copy, provided each insertion meets the \$20 minimum after taking discount. Copy must be received on the 20th day of the month three months prior to publication date. Send orders to: American Horticultural Society Advertising Department, 7931 East Boulevard Drive, Alexandria, VA 22308, or call (703) 768-5700 or (800) 777-7931.

## AFRICAN VIOLETS

America's Finest—177 best violets and geraniads. Color Catalog and Growing "Tips" 50 cents. FISCHER GREENHOUSES, Box H, Linwood, NJ 08221.

## THE AVANT GARDENER

DIFFERENT, EXCITING, GREAT FUN TO READ! Subscribe to the unique news service that brings you the most useful information on new plants, products, techniques—with sources. 23rd year. Curious? Sample copy \$1. Serious? \$12 full year (reg. \$18). THE AVANT GARDENER, P.O. Box 489M, New York, NY 10028.

## BONSAI

Bonsai Plants, Pots, Tools, Books, Supplies. Catalog \$1. BONSAI FARM, Box 130AH, Lavernia, TX 78121.

## BOOKS

1985 Edition EXOTICA 4, with 16,300 photos, 405 in color. 2,600 pages in 2 volumes, with Addenda of 1,000 updates by Dr. A.B. Graf, \$187. TROPICA 3, revised 1986, 7,000 color photos, now 1,156 pages, \$125. Exotic House Plants, 1,200 photos, \$8.95. Shipping additional. Circulars gladly sent. ROEHRS COMPANY, Box 125, E. Rutherford, NJ 07073.

**CAROL DIDRICK'S LITTLE RED BOOK ON OLD GARDEN ROSES.** Where to get them and where to plant them. An introduction to OLD GARDEN ROSES. Each book signed and numbered. Send \$14.95 postpaid. CAROL DIDRICK, 1535 Willard Dr., Orrville, OH 44667. \*Please add \$2 for out-of-country mailing.

Books Available Horticulture, Botany, Landscaping, Flowers, Fruits, Herbs, Rural Matters, published 1550-1990. Catalog free. POMONA, Rockton, Ontario, Canada L0R 1X0.

## BULBS

Dutch bulbs for fall planting. 12 CM Tulips, DNI Daffodils, Hyacinths and Miscellaneous. Catalog Free. Paula Parker DBA, Mary Mattison van Schaik. IMPORTED DUTCH BULBS, P.O. Box 32AH, Cavendish, VT 05142.

## CARNIVOROUS PLANTS

Carnivorous (Insectivorous) Plants, seeds, supplies, and books. Color brochure free.

PETER PAULS NURSERIES, Canandaigua, NY 14424.

## CHESTNUTS AND PERSIMMONS

CHESTNUTS AND PERSIMMONS. Blight-Resistant Dunstan Hybrid Chestnuts, New Oriental Persimmons. CHESTNUT HILL NURSERY, Rt. 1, Box 341AH, Alachua, FL 32615.

## DWARF CONIFERS AND LAURELS

DWARF CONIFERS: Send for our 50-page Catalog No. 8 (\$2, refundable on first order) describing over 200 types of dwarf conifers and hybrid kalmias by size, shape, color, and texture. Available via UPS in 1, 2, and 3 gal. container sizes. WASHINGTON EVER-GREEN NURSERY, P.O. Box 388AH, Leicester, NC 28748.

## GARDEN TOURS

Tailor-made garden tours of West Country English gardens for small parties. Visits to both historic and private gardens and homes personally organized and guided by Sarah Hollis, author of *The Shell Guide to Gardens of England and Wales*. ASHRIDGE HOUSE, Tigley Cross, NR. Totnes, S. Devon, TQ9 6EW, ENGLAND.

## GARDENING SUPPLIES

GOATSKIN GLOVES. Tough, lightweight, napa goatskin stretches and becomes form-fitting, giving wearer ultimate in fit, grip, dexterity. Natural lanolin in leather keeps hands soft. Sizes 7-10 or send outline of hand. \$11.50 postpaid. PUTNAM'S, Box 295-AH, Wilton, NH 03086.

FREE GARDEN CATALOG—4,000 Items, Seeds, Plants, Trees, Supplies, Greenhouses, Beneficial Insects. MELLINGER'S, Dept. 320F, Range Rd., North Lima, OH 44452-9731.

## GROUND COVERS

QUALITY GROUND COVERS AND PERENNIALS. Aegopodium, European Ginger, Ivies, Lamiums, Hardy Cactus, Plumbago, Sweet Woodruff, Sedums, Vincas. Over 100 varieties. GILSON GARDENS, INC., Dept. H, P.O. Box 277, Perry, OH 44081.

## HELP WANTED

We at the American Horticultural Society are often asked to refer individuals for significant horticultural positions around the country. We are not in a position to offer full placement services to candidates or employers. However, as a service to our members, both individuals and employers alike, we would be very glad to receive résumés and cover letters of individuals seeking job changes and employers seeking candidates. All responsibility for checking references and determining the appropriateness of both position and candidate rests with the individuals. AHS's participation in this activity is only to serve as a connecting point for members of the Society. Inquiries and informational materials should be sent to: Horticultural Employment, American Horticultural Society, 7931 East Boulevard Dr., Alexandria, VA 22308.

## HERBS

GALA HERB WEEKEND March 16-17. WATER LILY WEEKEND April 6-7. Exhibits, Discussions, Slides, Door Prizes, and Refresh-

## AHS MEMBERSHIP SERVICES

Your satisfaction with our member service is very important to us. If you have a question or problem concerning your membership, please contact the Membership Department for assistance.

You can help by giving complete information when you call or write. Please refer to the five-digit number that is on the mailing label on your magazine or News Edition. The number helps us to quickly identify your membership record for corrections.

### CHANGING YOUR ADDRESS?

Please allow 6-8 weeks advance notice. Attach a current mailing label in the space provided (or write in your old address) then fill in your new address on the lines below.

#### OLD ADDRESS:

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY/STATE/ZIP \_\_\_\_\_

MEMBER # \_\_\_\_\_

#### NEW ADDRESS:

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY/STATE/ZIP \_\_\_\_\_

Mail to: Membership Services, AHS, 7931 East Boulevard Drive, Alexandria, VA 22308.

ments. Held in our WARM GREENHOUSES, RAIN OR SHINE 9 a.m.-5 p.m. BITTERSWEET HILL NURSERIES, Rt. 424 & Governor's Bridge Rd., Davidsonville, MD 21035. (301) 798-0231.

#### HOSTAS

CHOICE SELECTION. Catalog \$2. SAVORY'S GARDENS, INC. Hybridizers and Growers. 5300 Whiting Ave., Edina, MN 55439. (612) 941-8755.

#### HOUSE PLANTS

ORCHIDS, GESNERIADS, BEGONIAS, CACTI & SUCCULENTS. Visitors welcome. 1990-1991 catalog \$2. LAURAY OF SALISBURY, 432 Undermountain Rd., Salisbury, CT 06068. (203) 435-2263.

#### MINIATURE ROSES

Award-winning varieties from America's top miniature rose breeder and grower. Over 75 varieties for garden or container growing. Send for FREE color catalog: NOREAST MINIATURE ROSES, INC., Box 307AC, Rowley, MA 01969. Miniature roses are our only business and we do it right!

#### NURSERY STOCK

MILLIONS OF SEEDLINGS: High Quality, Reasonable Prices. Over 100 Selections for Christmas Trees, Ornamentals, Windbreaks, Timber, Soil Conservation, Wildlife Cover. Free Catalog. CARINO NURSERIES, Box 538, Dept. J., Indiana, PA 15701.

HARDY KIWIS, PAW PAWS, PERSIMMONS, PASSIONFLOWERS, CHESTNUTS and other rare and unique plants. Curl-resistant peach, dwarf antique apples, books, tools and more. Free catalog. NORTHWOODS NURSERY, Box AH3, Cramer Rd., Molalla, OR 97038. (503) 651-3737.

#### ORCHID SUPPLY

User Friendly! Teas orchid and exotic plant supply catalog. Send \$2 to TEAS NURSERY COMPANY, INC., P.O. Box 1603, Bellaire, TX 77402-1603. Or call (800) 446-7723 M - F 9 a.m. to 6 p.m.

#### PEONIES

Also DAYLILIES, JAPANESE and SIBERIAN IRIS, HOSTA. 1991 catalog ready in February—\$1 (deductible). CAPRICE FARM NURSERY AH, 15425 S.W. Pleasant Hill, Sherwood, OR 97140. (503) 625-7241.

#### PLANTS (UNUSUAL)

OVER 1,000 KINDS OF CHOICE & AFFORDABLE PLANTS. Outstanding Ornamentals, American Natives, Perennials, Rare Conifers, Pre-Bonsai, Wildlife Plants, much more. Descriptive catalog \$3. FORESTFARM. 990 Tetherah, Williams, OR 97544.

Subzero citrus, exotic fruits, nuts, berries! 150+ Northern, Southern varieties. Fascinating catalog! \$1. RARE FRUIT NURSERY, 1065-A Messinger, Grants Pass, OR 97527. (503) 846-7578.

Trees, shrubs, perennials. Container grown, outdoors. Catalog \$2. OWEN FARMS, Rt. 3, Box 158-AAH, Ripley, TN 38063-9420.

DISTINCTIVE PERENNIALS & OLD ROSES—Specializing in uncommon Japanese and Siberian Irises, Lilliums, New Hostas, Daylilies, and Old Garden Roses. Simply "The

Best Cultivars"! FREE descriptive catalog. YORK HILL FARM, 271 North Haverhill Rd., Kensington, NH 03833.

#### ROSES

HORTICO ROSES: The following are just a few from our wide selection of excellent, Canadian-grown roses and are available until May 15: Hybrid Teas: Alec's Red, Ave Maria, Berolina, Blue River, Bride's Dream, Canadian White Star, Cpt. Harry Stebbings, Champion, Double Delight, Duet, Dutch Gold, Eiffel Tower, Elizabeth Taylor, Folklore, Fragrant Charm, Jadis, Lemon Sherbet, Lover's Meeting, Maid of Honour, Nightingale, Elina (Peaudouce), Old Castle, Pink Parfait, Precious Platinum, Rebecca Claire, Rubaiyat, Silver Jubilee, Stephanie Diane, Stokes, Sunstation (Veldfire), Ten Ten CFRB, Wimi, World Rose; Floribundas: Annisley Dickson, Brown Velvet, Escapade, Evelyn Fison, Iceberg (FL + CL), Margaret Merrill, Waiheke, The Fairy; Antique Shrub Roses (70 varieties) including: Shalome, Stadt Rosenheim, Surf Rider, Celestial, Felicite et Parmentier, Maiden's Blush, Queen of Denmark, Coup d'Hebe, La Reine Victoria, Bourbon Queen, Petite de Hollande, Robert le Diable, Dam. Versicolour (York & Lancaster), Cardinal de Richelieu, Gallica complicata, Gallica officinalis, Rosa Mundi, White Bath, William Lobb, Penelope, Om. pteracantha, Paul Noel, Pink Bells, Red Max Graf, Sea Foam, Rosa repens alba and repens rosea, Conrad F. Meyer, Rug. Flamingo, Mrs. Anthony Waterer, Scabrosa, Snowdwarf; as well as a wide assortment of other excellent shrub roses such as: Alfred Colomb, A. MacKenzie, Cardinal Hume, Cornelia, Dornroschen, Duchess of Portland, Elvishorn, Excelsa (Red Dorothy Perkins), Ferdinand Pichard, Fred Loads, Golden Wings, Karl Foerster, Nevada, Paul de Fontaine, Reine Des Violettes, Rheinaupark, Robusta, St. Alban's Gem, Sally Holmes; 25 varieties of English Garden Roses, including: Charmian, Chianti, Claire Rose, Cymbaline, Graham Thomas, Immortal Juno, Lucetta, Shropshire Lass, Sir Clough (pink), The Miller (pink), The Reeve (pink), Wenloch (red), Windrush; super hardy roses, including the Canadian Explorer\* roses: \*William Baffin, Celsiana, Harrison's Yellow, Persian Yellow, Rugosa alba, Rugosa rubra, Dart's Dash, Rosa rubrifolia (glauca), Adelaide Hoodless, \*A. MacKenzie, \*Champlain, \*Henry Kelsey, \*Jens Munk, \*John Cabot, \*John Davis, \*John Franklin, \*David Thompson, Hansa, Therese Bugnet, Morden Centennial, Mrs. John McNab, Roseraie de l'Hay, Parfum de l'Hay; and climbing roses and tree roses, totalling over 600 varieties. Discounts on large quantity orders for rose societies and individuals. Catalog on request: \$2. HORTICO INC., 723 Robson Rd., Waterdown, ON L0R 2H1. (416) 689-6984, 689-3002. Fax (416) 689-6566.

#### SEEDS

Free catalog: unusual seed varieties. Giant Belgium, evergreen, pineapple tomatoes, and more. We make gardening fun. GLECKLER SEEDMEN, Metamora, OH 43540.

#### SOFTWARE

TIE A STRING AROUND YOUR GREEN THUMB with the Perpetual Garden Journal and Reminder System. IBM Compatible. \$29.95. Free brochure. DOUBLE-PAWED

SOFTWARE, AHS, 432 Bigelow Hollow, Eastford, CT 06242.

#### WATER LILIES

Learn from the professionals how to put beautiful and fragrant Water Lilies in your garden. Send \$2.50 for a complete Water Garden color catalog from America's Oldest Water Garden Specialist Est. 1895. We have the largest selection of Water Lilies in America. WILLIAM TRICKER, INC., Dept. AH, 7125 Tanglewood Dr., Independence, OH 44131. (216) 524-3491.

#### WILDFLOWERS

hardy, easy, reliable, showy from our nursery to your garden. Send \$2.00 for 40 page descriptive catalogue or SASE for list of wildflowers, hardy ferns, perennials.

#### SUNLIGHT GARDENS

Rt. 1 Box 600-AH10  
Andersonville, TN 37705



Owen Farms

TREES • SHRUBS • PERENNIALS

2951 Curve-Nankipoo Road  
Route #3, Box #158-A  
Ripley, Tennessee 38063-9420

Catalog \$2.00

## HERBS & PERENNIALS OVER 300 VARIETIES

Our catalog is packed full of cultural information, herb usage, recipes and garden designs as well as helpful gardening tips.

WRITE or CALL FOR  
YOUR FREE CATALOG

Fast's  
GREENERY, INC.

RT. 1 BOX 78, ARRINGTON, TN. 37014  
(615) 395-4688

# New Zone Map Developed at Rutgers

A meteorologist and a former student at Rutgers University's Cook College have produced a new plant hardiness map that they believe is far superior to those now in use by gardeners.

The familiar map produced by the U.S. Department of Agriculture, and the less well-known "AA map" developed by the Arnold Arboretum in Massachusetts, both rely on an area's extreme minimum air temperature to determine whether various plants are likely to be hardy there.

Cook meteorologist Mark D. Shulman and graduate student Arthur T. DeGaetano, now with the Institute of Atmospheric Science at the South Dakota School of Mines and Technology, spent three years developing a classification system and hardiness map that takes into account such factors as maximum and minimum air temperatures, precipitation, wind speed, sunshine, relative humidity, growing season length, and elevation.

The latest version of the USDA map, released last year, divides the United States into 10 zones, with the Florida Keys, two tiny areas in California, and part of Hawaii in an 11th. The Rutgers map, which also includes Canada, has 23 zones. A larger number of clusters, said the researchers, would have resulted in a classification too detailed for practical use.

"All that the new USDA map did was to use newer temperature data" than the map developed 25 years earlier, said Shulman. But trees, shrubs, perennials, and other plants respond to other factors. For example, current

maps put northern New Jersey and all of northern Oklahoma in Zone 6. But while New Jersey receives an average of 45 inches of precipitation a year, northwestern Oklahoma may receive only 20 inches. The two areas also differ in the amount of sun they receive, the amount of snow cover, and the length of their frost-free periods.

Shulman and DeGaetano developed the map by gathering meteorological data from more than 3,000 weather stations, and sorting them with advanced statistical techniques. The new zones, said Shulman, closely follow natural ecological boundaries. "You can clearly see the division between the Appalachian highlands and the prairie, and between the Arctic tree line and the tundra," for example.

Dr. H. Marc Cathey, director of the National Arboretum in Washington, D.C., and the driving force behind the most recent update of the USDA map, said he had not seen the Rutgers map and so could not comment on it specifically. "There have been a number of other ecologically based maps developed, notably by the U.S. Forest Service," he said. "But none of them have been tied to the marketing of plants." No zone map can be of practical value to gardeners unless it corresponds to the zones used by nurseries and gardening books, and to change all such references, he notes, would be a tremendous undertaking.

The map has not yet been made available in quantity. Since the study was published in a recent issue of *Agricultural and Forest Meteorology*,

Shulman said, he has received about 80 requests for reprints.

---

*For reprints, write Mark D. Shulman, Chairman, Department of Meteorology and Physical Oceanography, Cook College, P. O. Box 231, New Brunswick, NJ 08903.*

## Slow but Sure

It's not an instant miracle fertilizer, but compost can make a very dramatic difference in plant growth. Florida researchers found that municipal compost dumped into a forest 19 years ago increased the diameter of slash pine seedlings by 25 percent, their dry weight by 70 percent, and their height by nine percent over untreated controls.

The compost used by the researchers from the University of Florida's Institute of Food and Agricultural Sciences contained paper, yard waste, and other biodegradable organic materials.

The growth was comparable to what could be expected from petroleum-based fertilizers, and no harmful ecological effects were noted. Water supplies are about 60 feet underground at the site, in the Austin Cary Forest near Gainesville, and any metals, nitrates, or phosphates would be absorbed by plants, broken down by soil microbes, or would be chemically bound to soil particles as they passed through the heavy clay that constitutes the soil there, the researchers said.



**American Horticultural Society**

7931 East Boulevard Drive, Alexandria, VA 22308

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