A horticulturist at the University of Minnesota has made an important step toward preserving our native North American orchids. In experiments at the University, Peter Ascher has become the first person to grow these delicate terrestrials, many of which are endangered, from seed in a growth medium in which all the ingredients are known and defined. According to Ascher, in a few years, "we could be generating plants that could replace all commercial production." Laboratory produced plants would greatly reduce the demand for collected specimens and stress on wild populations.

The problem of growing terrestrial orchids in the greenhouse has plagued horticulturists for years. To survive, these plants must develop a mycorhizal association with a fungus that wraps itself around the orchid's roots and supplies the plant with some essential, but unknown, nutrient. Ascher believes that not all species of terrestrial orchids require this mycorhizal association throughout their life span, and that some may only require it during the early stages of their life cycles. If a plant could be grown past this point in a laboratory and could be transplanted into a pot successfully, growers could one day produce and sell terrestrial orchids without having to rely on division (a procedure that at this point is unable to keep up with demand) or threatening wild populations by collection.

Discovering exactly what combination of nutritional supplements is required by each of the 16 orchid species Ascher has experimented with has not been easy. He calls his cultures "shotgun experiments" that happened to hit their targets.

In the case of the lady slipper orchids, Cypripedium species, Ascher may have hit the target, but he has yet to hit the bullseye. In three years of test-tube growth plants have produced root systems and leaves, but Ascher and his assistants have not produced a plant that can survive transplanting into a pot. Thus far, only one of the species Ascher has worked with, Epipactis gigantea, commonly called the giant helleborine, has done well upon transfer from test tube to flower pot. This is the only species that has flowered.

Ascher thinks the lack of winters in the laboratory may be the problem. "We haven't figured out the environmental trigger," he admits, but an alternating heat/cold cycle might be the answer.

There have been many other problems in nursing the sensitive orchids, but Ascher is confident he can solve them. If he succeeds, commercially cultured terrestrial orchids may be available in a few years.
River Farm Notes

It's mid-September as I write this and the heat of August is behind us, mollified by chilled nights. No longer echoing from the gardens, the voices of neighborhood children ring out from packed school buses, and Rudbeckia is giving way to chrysanthemums: fall is on the way.

For me, fall is one of the two most cherished seasons of the year (spring being the other). Fall's abundant color makes tolerable even the inevitable increase in maintenance and planting. Of course, the more desirable temperatures probably do contribute to this feeling of wellbeing, but I prefer to think it is due simply to the magic of colors—colors subduing the tensions and frustrations that normally come in loud and clear.

The first few hints of things to come are making their appearances, and we expect that fall at River Farm will be nothing less than spectacular. The dominant oaks, maples and sassafras hesitate to dress for the occasion, but our beloved dogwood and the winged euonymus, among others, already show exciting reds where unblemished green existed just days before. There is a magical transformation in progress, from the inconspicuous to the bold and brilliant. Oh, how I love this season.

It's sad to see our summer beauties wane, ready for the long winter's rest, but it's not quite so bleak when we remember just what awaits us in this year's last performance. As every gardener well knows, this show does not simply happen. It is created through countless hours of labor, which brings me to a related subject.

A very dedicated crew, composed of three full-time staff members, volunteers and interns, works constantly to maintain and develop our 25 acres of public gardens, trees and meadows.

In past summers we have been able to bring into our fold three horticulture students. They have given us the opportunity to establish educational displays worthy of the Society—our Ideas Garden, for example. Each day they work to the brink of exhaustion, receiving in return the horticultural experience of their lives.

In addition to enjoying the tangible results of our interns' daily efforts, I feel deep satisfaction knowing that the Society, by giving these students practical training, is fulfilling one of its goals: to increase horticultural knowledge and interest throughout America.

I bring this program to your attention because it is in jeopardy. We find ourselves unable to offer these people what they deserve financially, what—in almost every case—they must earn to continue their educations. Instead of expanding this much-needed program, we face the prospect of cutting it back.

I am appealing to you, our members, to help us avoid such a gloomy possibility. We are establishing a Summer Internship Fund, and we will depend on you for the contributions which will allow the Internship Program to continue. I assure you, even your smallest contribution will make a difference. Help us with this educational opportunity; help us to bring knowledge to these young people, who constitute our future.

As this beautiful season continues, reminding me daily of the coming winter silence as well as growth, I hope I can look forward to next year's abundance knowing that the 1983 harvest will reflect the efforts of energetic, dedicated AHS interns. Let us work together in this endeavor. It is worth it to each and every one of us not to let this program suffer an untimely death.

—Steve Davis

AHS Directory Published

Our new directory, North American Horticulture, A Reference Guide, is now in print. Those of you who ordered copies by September 1 should have them in hand. We hope you are as pleased with this new publication as we are, and we welcome your comments and suggestions for future editions.

Because the Society serves the needs and interests of professional and amateur horticulturists, our new directory is designed for an unusually diverse audience. We realize, however, that some of you would not use a reference of this type often enough to justify the cover price of $50. The ever present problem of rising prices combined with the vastly increased size and scope of this edition of our directory made it impossible for us to keep the price of the book within a lower bracket.

To those of you who do not plan to buy the directory for your personal library, please ask your local library to purchase a copy for its reference shelves. Perhaps your garden club could purchase a copy for a financially strapped school or public garden library. If you need an extra copy(s) of our brochure about the directory, please write to me in care of the Society. We believe each copy of the directory sold will benefit horticulture in North America.

—Barbara W. Ellis
New Board Members Elected

The Society elected 12 new directors to serve on its board at the 37th Annual Meeting in Cincinnati. Six are incumbents and six are new members. The incumbents are Mr. Edward N. Dane (the Society’s new president), Mr. Jackson R. Eddy, Mrs. A. Lester Marks, Mrs. Edward C. Sweeney (the Society’s new 1st Vice President), Mrs. William C. Weaver and Dr. John A. Wott.

The new board members are: Mr. Russell Clark, former President of the Massachusetts Horticultural Society and a partner in a Massachusetts investment firm; Dr. Thomas A. Fretz, former Associate Professor of Horticulture at The Ohio State University and now Professor and Head of the Department of Horticulture at Virginia Polytechnic and State University; Mrs. Bruce Gunnell, a Director of the Garden Club of America and a member of the Friends of River Farm; Ms. Carolyn S. Marsh, president and owner of Carolyn Marsh & Associates, Inc., a landscape design and installation company; Mr. Everitt L. Miller, director of Longwood Gardens, Kennett Square, Pennsylvania; and Mrs. Philip Temple, the official White House Florist, who unofficially served in that position during the last three administrations.

Society Announces 1982 Award Winners

Newly elected AHS President Edward N. Dane announced the 1982 American Horticultural Society award winners Saturday, October 2, at our 37th Annual Meeting in Cincinnati.

Fred C. Galle has been awarded the Liberty Hyde Bailey Medal, the highest honor the American Horticultural Society can bestow upon an individual. Mr. Galle has devoted 40 years to his interest in plants and gardens, always willingly contributing his time and knowledge to the many organizations with which he has had association. He has served as the president of the American Horticultural Society, the American Rhododendron Society and the American Association of Botanic Gardens and Arboreta. He has also served as a director of the Holly Society of America, as Secretary-Treasurer of the Georgia Horticultural Society and on the Advisory Council of the U.S. National Arboretum.

Mr. Galle has been with Callaway Gardens, Pine Mountain, Georgia since 1953, serving as Director of Horticulture and now Curator. Before coming to Callaway he taught at the University of Tennessee and the Ohio State University, where he earlier received his B.S. and M.S. degrees.

Mr. Galle also writes frequently on subjects of interest to amateur and professional horticulturists. He is now engaged in the ambitious task of editing Frederic P. Lee’s popular Azalea Book, which has not been revised since 1965.

The G. B. Gunlogson Award, given to an individual whose creative use of new technology makes home gardening more productive and enjoyable, was awarded to James W. Wilson, who most recently served as Executive Secretary of the All-America Selections/National Garden Bureau. As Secretary, he saw to it that hundreds of thousands of Americans learned about the latest developments in vegetable and ornamental gardening each
year. By popularizing the concept of "All-America Selections," he made it possible for research scientists and commercial seed producers to justify the tremendous dollar investment involved in improving the quality of plants for our gardens.

In his spare time Jim has written countless magazine articles and a book on gardening. He also has served as a technical editor for a number of books by Ortho, Sunset and Countryside. He is presently working with Countryside on an anthology on home vegetable gardening.

This year the Society's Amateur Citation was awarded to Stanley M. Rowe, Sr. who, with his wife Dorothy, established a private arboretum in 1924. The Stanley M. Rowe Arboretum, in Cincinnati, now contains a remarkable collection of conifers, crabapples, magnolias, oaks and beeches on its 170 acres. The Rowe Arboretum has tested many plants for various reseach organizations over the years, and Mr. Rowe has produced a showplace that hundreds of amateur and professional horticulturists enjoy visiting each year.

Mr. Rowe also helped found the Cincinnati Nature Center in 1965 and is a past director of the National Audubon Society. He is a life member of the American Horticultural Society.

Eliot Wadsworth, II, the winner of the Commercial Citation this year, is a relative newcomer to horticulture, but in five years he has made quite an impact. Formerly an investment banker, Mr. Wadsworth bought White Flower Farm Nursery in 1977. Thanks to his outstanding management, his business maintains its reputation as one of the finest perennial nurseries in the country. White Flower Farm is also famous for its lovely and very educational mail-order catalogue. Through this publication, thousands of gardeners, beginners or old hands, are introduced to new and exciting plants each season.

Last year Mr. Wadsworth embarked on yet another horticultural adventure. He and The New Yorker joined forces to buy Horticulture magazine. His goal, in his own words, is "for Horticulture to become to gardening what Gourmet magazine is to cooking."

As a successful nurseryman and a horticultural publisher, Mr. Wadsworth is a doubly deserving winner of this citation.

The writing citation was awarded to Robert Smuaus, Associate Editor of the Los Angeles Times Home Magazine and a former contributing editor of Sunset magazine.

Mr. Smuaus' articles on gardening reach over a million readers every week and, as his editor has written us, the articles are "timely, factual and presented with beauty befitting a garden."

He comes by his interest in gardening naturally. His grandfather was a pioneer landscape architect in the San Francisco Bay area and a keen gardener himself. Mr. Smuaus has devoted volunteer time to horticulture as well, having served on the board of the Southern California Horticultural Institute.

The Landscape Citation was awarded to Disneyland in California. Bill Evans, Disneyland's original landscape contractor and horticulturist, must be given much of the credit for establishing the aesthetic standards the park continues to uphold. Today the staff of 49, headed by Ken Inouye, maintains seven acres of turf and nine acres of shrub areas containing plants indigenous to many countries. The crew cares for 2,500 trees and a sizeable amount of topiary, all of which they grow themselves.

As Mr. Inouye writes, "the entire park is a stage. . . flower beds are mysteriously changed overnight; trees appear to be in consistent symmetrical form; weeds and excess leaves seem to be non-existent."

Don't pinch these plants before they bloom or flowers won't appear until the plants go through another cooling process.

To improve the quality of your plants extend the day length to 16 to 18 hours using artificial light. Also, use a well aerated potting mix and keep the plants uniformly moist. Avoid using high ammonia nitrogen fertilizers, but do maintain a regular, balanced feeding schedule.

A new citation for local horticulture has been created to recognize an individual or group who has contributed to the improvement of horticulture in the host city for the Society's annual meeting. The first recipient of our local Horticultural Citation was Marlene Holwadel, founder of the very successful Adopt-A-Plot programs featured in the August issue of American Horticulturist. Mrs. Holwadel is also one of the two founders of the Cincinnati Park Board Volunteers. In that capacity she started the gift shop in the Krohn Conservatory and developed guided tours of both the Conservatory and the Mt. Airy Arboretum. In addition, she and her army of volunteers have contributed plants to the Conservatory and have made a number of important physical improvements to the Conservatory's buildings. She helped establish the Living Gift Fund to provide for tree plantings in city parks and raised money for the city's annual Fountain Square Christmas Display. In 1980 the Cincinnati Enquirer selected her as a Woman of the Year.

Jane Steffey was awarded the Society's Meritorious Service Award,
The coupon below is special. Because the Society has arranged to have GEICO PREFERRED programs available to you, you can use the coupon to request a free rate quotation from GEICO. If you qualify, you may save money on auto and home insurance. As a Society preferred group—like AHS—whose driving records are better than average. Better drivers cost GEICO less. And these savings result in low rates.

**LOW RATES FOR QUALIFIED DRIVERS.**

GEICO PREFERRED insures those members of preferred groups—like AHS—whose driving records are better than average. Better drivers cost GEICO less. And these savings result in low rates.

**GUARANTEED ONE-YEAR RATE ON YOUR AUTO POLICY AS WRITTEN.**

Many auto insurance companies now offer only 6-month auto policies. But as long as you don't change the conditions of your policy, GEICO PREFERRED rates are guaranteed to remain the same for a full year—so you don't risk having your rate increased after just 6 months.

**LOW-COST HOME INSURANCE, TOO.**

Just check the appropriate box at the bottom of the coupon, and you will also receive free information on low-cost insurance for homeowners, renters and owners of condominiums. Your application will receive special consideration.

**YOU CAN CUSTOMIZE YOUR OWN COVERAGE.**

The coverages GEICO offers vary by state, but you have many options in putting together your car and home insurance packages, both in the amounts and kinds of protection. You also get a wide choice of convenient payment plans. GEICO auto insurance is not available in New Jersey and Massachusetts. Homeowner insurance is not available in New Jersey and Mississippi.

**YOU GET GEICO PREFERRED TREATMENT.**

All Society member inquiries receive prompt, preferential service by a GEICO PREFERRED Insurance Counselor.

**FOR A FREE RATE QUOTATION**

**CALL TOLL FREE 1-800-368-2734**

In Maryland Call Collect (301) 986-3500

Your AHS membership entitles you to special consideration for low-cost auto and home insurance. Good drivers, find out how much you may save. For a free rate quotation, call today. Or mail this coupon. No obligation. No salesman will call.

---

**THIS GEICO PREFERRED RATE REQUEST FORM IS BROUGHT TO YOU BY AHS FOR YOUR BENEFIT.**

Send to: GEICO PREFERRED, GEICO Plaza, Washington, D.C. 20076

If student away at school, give distance from home

<table>
<thead>
<tr>
<th>Miles</th>
<th>CAR 1</th>
<th>CAR 2</th>
<th>CAR 3</th>
</tr>
</thead>
</table>

Year & Make (Buick, Dodge, etc.)

Model (Skylark, Omni, etc.)

Body type: 2 dr, Sta, Wag, etc.

No. of cylinders

Est. Total Mileage

Est. Annual Mileage

Days per week driven to work, school or depot

One way distance

Is car used in business except to/from work?

Car location if different than mail address:

City: State

* If "yes" explain...

---

*For accidents, traffic convictions, or license suspension, give dates and complete details, including cost of damages, on a separate sheet. Check for information on Homeowners Insurance □ Boatowners Insurance □ Auto Insurance not available in New Jersey or Massachusetts.
recognizing her outstanding service and support of the Society’s programs, services and activities. Few people have been greater friends and supporters of AHS; since 1971 Ms. Steffey has volunteered her time as our Horticultural Information Service Director, answering thousands of inquiries from our members who had gardening problems, needed guidance or were looking for special plants. Since 1980 she also has written a regular feature for American Horticulturist—Strange Relatives—which has become a favorite of our members.

Before coming to AHS as an almost full-time volunteer, Ms. Steffey worked in Washington for the USDA in the Agricultural Economics Program of the Extension Service. She also worked for the Soil Conservation Service in Ames, Iowa. In all, she worked for USDA 36 years. Her only non-government job was with Burpee’s, for whom she worked immediately after graduating from Hood College with a degree in Botany.

She is a member of the Indoor Light Gardening Society and is a past president of her local chapter, a member of the Gloxinia and Gesneriad Society and of Garden Writers of America. For five years she was garden columnist for The Weekly of the Washington Post.

Donald Egolf, winner of this year’s Professional Citation, has devoted his professional life to improving plant stock for gardeners everywhere. After receiving his Ph.D. from Cornell University and attending the University of London for two years on a Fulbright Scholarship, he joined the U.S. National Arboretum. As Research Horticulturist there, he has introduced 30 new cultivars to gardeners since 1958, all from four genera, Hibiscus, Lagerstroemia, Pyracantha and Viburnum.

He is greatly responsible for making the breeding program at the U.S. National Arboretum one of the most comprehensive of its kind anywhere in the world. For these efforts the American Association of Nurseriesmen has recognized him with their Norman Jay Colman Award, and the Horticultural Research Institute has given him research grants for further study. Dr. Egolf also has been given the Hutchinson Award from the Chicago Horticultural Society and the Jackson Dawson Medal from the Massachusetts Horticultural Society.

Franklinia-Camellia Cross Successful

W. L. Ackerman, a research horticulturist at the U.S. National Arboretum, and Margot Williams of the U.S. Department of Agriculture, have successfully crossed Camellia japonica and C. sasanqua with Franklinia alatamaha. These intergeneric hybrids are the result of an extensive series of crosses, 6,574 in all, attempted between genera in the tea family, Theaceae, which includes Camellia, Franklinia, Stewartia and Tutcheria.

There is a great deal of work left to be done in this area, but according to Ackerman and Williams, “Any intergeneric hybrids developed between Franklinia and other members of Theaceae may be of ornamental as well as academic interest. Hybrids with Camellia would be of particular interest for their commercial potential. Franklinia is winter-hardy in Massachusetts and when hybridized with Camellia should increase the cold-hardiness of the latter, or change the color and flower form of the former.” The scientists experimented with using several chemicals in conjunction with pollinations to induce fertilization and seed development of these hybrids. According to their report the effectiveness of these applications varied depending on the treatment used and the seed parent involved.

Of all of the crosses made the only successful ones that resulted in valid hybrids were made between Camellia japonica and Franklinia and C. sasanqua and Franklinia. Germination percentages were very low, and only two plants from the first cross and one from the second have survived.

—HortScience, August, 1982
Herb or Erb?
A simple four-letter word, h-e-r-b, has been the cause of much discussion as to its pronunciation. In America one is often considered uncultured if he pronounces the h; in England he is apt to be branded a cockney if he drops the h.

Until 1475 the word was erb, both in spelling and in pronunciation. It came to England from the Latin herba, through the Old French Herbe or erbe. At the beginning of the sixteenth century, the Latin h was re-attached to the word, but it remained mute until 1800. Since then pronunciation of the h has come into use; herb is correct in England. American usage still clings to the historical erb. Take your choice. When in London, say herb, when in New York, say erb; when in Rome . . .

—Brooklyn Botanic Garden Handbook on Culinary Herbs

Slug Control
A few fall and winter maintenance tasks can help prevent a population of slugs from developing to ruin your garden next season. Gardens For All, News recommends that you slug-proof your yard by eliminating dark, moist, cool areas where slugs hide (the undersides of boards or shingles are examples), keep weeds and grass cut down, maintain a clean yard around the edge of your garden and edge it with bark, wood ashes, sand and other sharp or alkaline irritants.

“In the winter,” the article suggests, “fill in crevices in basements and wells with mortar to eliminate hiding places. Keep basements and vegetable storage areas as dry as possible—slugs thrive in warm, damp places during the winter.”

Finally, learn to recognize slug eggs, which are the way these pests overwinter. The oval, translucent, yellow eggs are laid in masses of 25 or more and can be found in almost all moist places where slugs are found hiding. Slugs can oviposit all year round, so watch for them indoors all year and outdoors from spring to fall.
Upcoming AHS Events

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

November 1-17
Autumn in the Orient tour of Japan and its gardens
Information: Call or write Dorothy Sowerby at the Society

November 6
Fourth Annual California Native Plant Sale
Rancho Santa Ana Botanic Garden
Claremont, California
Hours: 8:00 a.m. to 3:00 p.m.
Information: Barbara E. Haner, Director of Education Services, Rancho Santa Ana Botanic Garden, 1500 North College Avenue, Claremont, CA 91711, (714) 626-1917, 626-3922

November 9-12
Holly Society of America Annual Meeting
Sheraton Inn Convention Center
South Pines, North Carolina
Information: Holly Society of America, Mrs. Edward H. Richardson, Jr., Secretary, 304 North Wind Road, Baltimore, MD 21204

November 10-12
Sixteenth Annual National Agricultural Career Show
H. Roe Bartle Exposition Hall
Municipal Auditorium
Kansas City, Missouri
Information: National FFA Center, 5632 Mt. Vernon Memorial Highway, P.O. Box 15160, Alexandria, VA 22309, (703) 360-3600

November 12-14
Mid-America Orchid Congress and Peoria Orchid Society Show
Holiday Inn
4400 North Brandywine Drive
Peoria, Illinois
Information: Mrs. Jeanette Dodge, 1805 W. Sherman Avenue, Peoria, IL 61606

November 14-18
Professional Grounds Management Society Conference and Trade Show
Vacation Village
San Diego, California
Information: Professional Grounds Management Society, 7 Church Lane, Pikesville, MD 21208, (301) 635-2742

November 29-December 3
Combined Meeting of the Entomological Societies of America, Canada and Ontario
Royal York Hotel
Toronto, Ontario, Canada
Information: Jeffrey A. Gorma, ESA, 4603 Calvert Road, College Park, MD 20740

December 16
American Horticultural Society Christmas Open House
River Farm
Mt. Vernon, Virginia
Information: Call or write the Department of Education at the Society

March 19-22
Spring Symposium, Charleston, South Carolina

April 1-24
"China Discovery" tour of the warm provinces of Yunnan, Sichwan (Szechwan) and the Southwest. The prolific rhododendrons and azaleas are a feature as are the Buddhist cave sculptures at Dazu and sacred Mt. Emei, the site of much botanical research.

April 14-28
Spring tour of California’s private and public gardens, parks and nurseries from San Francisco to San Diego. The itinerary includes visits to Strybing Arboretum, Hearst Castle, Descanso Gardens, a winery and the Getty Museum.

April 28-May 18
Tour of Japan in the spring featuring a visit to Kyushu, Japan’s southern island famous for its rhododendrons and azaleas. Also scheduled are visits to public and private gardens in Kyoto and Tokyo and lovely Hakone National Park.

April 30-May 7
"Spring in Bermuda” tour of this island’s public and private gardens

May 12-26
Our annual trip to the famed Chelsea Flower Show. Also scheduled are visits to public and private gardens in Sussex and the Cotswolds, including Sissinghurst and Pusey.
BOOKS FOR SERIOUS GARDENERS
Christmas discount to AHS members from the Society and Timber Press
Save from $2 to $10 on these definitive gardening books

THE TERRACE GARDENER'S HANDBOOK Raising Plants on a Balcony, Terrace, Rooftop, Penthouse or Patio by Linda Yang. "...Both pictures and text bear the stamp of originality, enthusiasm, a fresh approach and sensible good horticulture..." (Flower and Garden). 283 pages, 112 photos, 32 line drawings, paper, $13.95 retail
AHS Special Price $10.95

HOW TO IDENTIFY FLOWERING PLANT FAMILIES A Practical Guide to Identification for Plant Lovers & Gardeners by John Philip Baumgardl. Sponsored by the Rare Plant Group of the Garden Club of America. The Rare Plant Group recognized the need for a flowering plant family identification book and J.P.B. wrote it. Approx. 190 pages, numerous illustrations, paper, $22.95 retail
AHS Special Price $17.95

GETTING STARTED WITH RHODODENDRONS AND AZALEAS by J. Harold Clarke. The facts about rhododendrons and azaleas are all here, organized for handy reference in this definitive gardening book written by a renowned expert. 268 pages, 73 black & white photos, paper, $14.95 retail
AHS Special Price $11.95

THE COMPLETE BOOK OF ROSES Gerd Krussman
"For once the title does not lie — this is the COM-plete book of roses... without any question, this book should be in the library of any serious gardener." (Gill Daniels, President, The American Horticultural Society). 436 pages, 300 line drawings & illustrations, cloth, $50.00 retail
AHS Special Price $39.95

JAPANESE MAPLES J.D. Vertrees
"Authoritative... enjoyable reading... a beautiful and valuable book." (American Horticulturist). "Finally, the first comprehensive work on Japanese maples... a wonderful book." (Pacific Horticulture). 192 pages, 200 color plates, cloth, $40 Retail
AHS Special Price $31.95

LEPIDOTE RHODENDRONS RHODODENDRON SPECIES, VOL. I: LEPI-DOTE RHODODENDRONS H.H. Davidian This is a must book for all dedicated gardeners and rhododendron fanciers. H.H. Davidian is one of the foremost authorities on this family. Approx. 470 pages, 97 color photos, 39 line drawings, cloth, $39.95 Retail
AHS Special Price $47.95

ROCK GARDENING A Guide to Growing Alpines and Other Wildflowers in the American Garden by H. Lincoln Foster, Drawings by Laura Louise Foster. "Few American titles on this subject are available today, although the best one, by H. Lincoln Foster, will soon be available in reprint" (Plants and Gardens). 466 pages, many line drawings, paper, $22.95 retail
AHS Special Price $17.95

GARDENING IN THE SHADE Harriet Morse
What gardener doesn't have shade, be it country, city or indoors? This book is for those people. This book has been for many years the standard work on this widespread phase of gardening. 242 pages, 32 photos, paper, $12.95 retail
AHS Special Price $9.95

TREES AND SHRUBS FOR WESTERN GARDENS Gordon Courtright
"...Provides the visual input lacking in the New Western Garden Book... a valuable book..." (American Horticulturist). 250 pages, 800 color plates, cloth, $40.00 Retail
AHS Special Price $33.95

GARDENS OF ROSES H.H. Davidian
"...A must for all gardeners..." (Gill Daniels, President, The American Horticultural Society). 240 pages, 138 color plates, cloth, $45 Retail
AHS Special Price $33.95

THE ESSENTIALS OF BONSAI The Editors of Shofunotomo and Timber Press Introduction by Donal Richie
This is one of the finest bonsai books published to date. Its span is for the beginner to intermediate enthusiast. It covers all the necessities. 108 pages, 26 color photos, many black & white photos and line drawings, $9.95 Retail
AHS Special Price $7.95

AVAILABLE FOR CHRISTMAS

RHODODENDRON SPECIES, VOL. II LEPIDOTE RHODODENDRONS H.H. Davidian This is a must book for all dedicated gardeners and rhododendron fanciers. H.H. Davidian is one of the foremost authorities on this family. Approx. 470 pages, 97 color photos, 39 line drawings, cloth, $39.95 Retail
AHS Special Price $47.95

TO ORDER YOUR COPY Mail to: DOROTHY SAMS, American Horticultural Society, P.O. Box 1015, Mount Vernon, Virginia 22121
Please send a copy of:

$1.75 postage for the 1st book, 75¢ for each additional.
Virginia residents add 4% sales tax.

<table>
<thead>
<tr>
<th>Name</th>
<th>Address</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total

State Zip
Try Fothergilla for the Fall Garden

Of the wealth of plants a gardener may choose from to add autumn color to the landscape, members of the genus *Fothergilla* are too often overlooked. Members of the Hamamelidaceae or witch hazel family, which contains a number of spectacular plants for this use, the four or five species of *Fothergilla* are all native to the United States. They grow naturally from North Carolina to Alabama, but fortunately for gardeners, these small- to medium-sized deciduous shrubs are hardy far north of their natural range—up to USDA Zone 4. The Arnold Arboretum has grown them for many years, and I have grown them in my northern Illinois garden with much success.

Although regarded by some as spring blooming shrubs, these handsome plants exhibit a special glory in the autumn when their green leaves become a flame of bright yellow, gold and crimson. Their foliage will steal the spotlight for many days before the leaves fall to the ground, and it is for this attribute that they are most appreciated.

Surprisingly, these shrubs are little used in gardens, even though they are very easy to grow. The three most common species in the genus, named for Dr. John Fothergill, a distinguished 18th-century English plantsman and gardener, are *F. gardenii*, *F. major* and *F. monticola*. All have similar flowers and branching habits. They are rounded, compact, graceful shrubs that differ somewhat in height at maturity. The foliage is witch hazel-like—simple, alternate, oval or obovate and coarsely toothed. The veins of the two- to four-inch long leaves are very conspicuous.

Creamy white, fragrant flowers appear in the spring before the leaves unfurl. They are borne in dense terminal heads at the tips of the branches and are very showy, although they have no petals. The many yellow stamens enhance their bottle-brush-like beauty. The leaves generally appear just after the blossoms have fallen.

Besides beauty, fothergillas have other virtues to recommend them.

They flower at a tender age, have an attractive, orderly growth habit, are easy to transplant, do not sucker or spread by creeping roots and require little pruning. They also seem to be free from attack by insects and diseases.

Any of the *Fothergilla* species make fine specimen shrubs, but they also may be used in a grouping. They prefer a slightly acid, well-drained, sandy/peaty soil and appreciate a sprinkling of bone meal at planting.

Of the species, *F. gardenii* is perhaps the choicest of the lot. Named for Dr. Alexander Garden, a physician practicing in Charleston, South Carolina, and the man for whom *Gardenia* was named, *F. gardenii* grows only three feet high and is an excellent plant to select for its creamy-white April flowers and golden-yellow fall foliage. One is apt to be disheartened by the price of this small shrub, but placed in a prominent spot in the garden where it can be enjoyed from all sides, a single specimen can be very worthwhile. Its small stature makes it a perfect selection for planting among herbaceous plants such as ferns, ligustrum or hostas, or in the front of a shrubbery border or small group of evergreens.

Of the other two most common species, *F. monticola* is a six-foot, spreading shrub, and *F. major* is a somewhat more pyramidal, less spreading, 10-foot-tall plant.

*Fothergilla* can be propagated from softwood cuttings taken in July, but they probably will take two years to establish. The plants do set seed, which is doubly dormant. To germinate it successfully, stratify in moist peat at room temperature for five months, followed by a cold period (40°F) of four months. *F. gardenii* can also be propagated from suckers and root cuttings.

*F. gardenii* and *F. monticola* are available from Gossler Farms Nursery, 1200 Weaver Road, Springfield, OR 97477, catalogue $1.00. *F. gardenii* is available from WAYSIDE Gardens, Hodges, SC 29655, catalogue $2.00 and Woodlanders, Inc. 1128 Colleton Avenue, Aiken, SC 29801, catalogue $1.50. *F. monticola* is also available from Greer Gardens, 1280 Goodpasture Island Road, Eugene, OR 97401, Catalogue $2.00.

—Mrs. Ralph Cannon
A Problem for African Violets

Soil mealybugs are a serious pest of African violets, a problem made more complicated because the pests are very small and not usually visible without removing the plant from its pot and inspecting the roots very closely. Plants may be infested with moderate numbers of soil mealybugs for long periods without showing symptoms, but infested plants subject to stress can exhibit serious symptoms such as yellowing leaves and rapid wilting.

Dr. Charles L. Cole, Texas A & M University, tested five insecticides to demonstrate soil mealybug control: Dymet, Knox-Out, Orthene 2G, Thiodan and Malathion. The insecticides were applied as a soil drench at the rate recommended on the label, and the plants were allowed to stand in the excess solution for two hours after treatment. Then the saucers were drained and the plants were placed under growing lights. After 28 days plants treated with Dymet, Knox-Out, Orthene 2G and Thiodan showed 100 percent control. The plants treated with Malathion showed only 65 percent control after that period. According to Dr. Cole, for successful control of this pest it is important to thoroughly drench the entire root ball during treatment.

—African Violet Magazine September, 1982

1983 Seed Program

Many generous companies and individuals have donated seed to our 1983 program, so many, in fact, that we cannot accept any more donations if we are to have time to bag and tag the selections we have on hand. We’re delighted with the response and the selection we’ll be able to offer you next year. Expect to get your seed catalogue in the mail about mid January.

Two New Books to Order

The Brooklyn Botanical Garden’s new Handbook on Culinary Herbs is an excellent collection of articles on this popular group of plants. Articles by the curators of the herb gardens at the National Arboretum and the New York Botanical Garden feature their favorite plants, and other articles in the 64-page book discuss growing herbs in containers, propagation and how to identify the familiar families of herbs.

To obtain a copy request publication 98, Handbook on Culinary Herbs, from the Brooklyn Botanic Garden, 1000 Washington Avenue, Brooklyn, NY 11225. Send $2.25 plus $.80 postage and handling for the first Handbook and $.10 for postage and handling for each additional Handbook.

A new edition of the Mailorder Association of Nurserymen’s free booklet, “Gardening by Mail: Where To Buy It,” is also now available. This useful publication lists 400 different plants, from Abelia to Yucca, and the names and addresses of 76 different mailorder companies where they can be bought. To order a copy send a large (#10), self-addressed envelope with two 20¢ stamps to the Mailorder Association of Nurserymen, Inc., Department AHS, 210 Cartwright Boulevard, Massapequa Park, NY 11762.

Verbena Germinates Better With Light

According to FloraScope, March, 1982, Verbena germination can be improved by giving the planted seeds light 24 hours a day. Cover the seed with a 1/8-inch layer of vermiculite, use a fungicide to control damping-off, and keep the medium evenly moist. Temperatures of about 70° F are recommended. The layer of vermiculite helps maintain an even moisture level in the medium, and thus improves germination.

Propagation Breakthrough

Nothing comes even close to the propagation yields, convenience and versatility of Aquamonitor Mist Controls.
1. AQUAMONITOR’s sensor is placed in the cutting seed bed. Its automatic multi-level mist is unique and unequalled.
2. All system adjustments are at the sensor, handy for “hardening off.” You save time, steps and avoid moving plants.
3. Mist blasts can be set for 1/10 second up to 100 and more.
4. AQUAMONITOR is exceedingly stable and reliable in or outdoors. The sensor is self cleaned automatically.
5. It costs nothing to install or move. It is pre-wired, pre-plumbed, plug in, pull out, hand lifted and portable.
6. It is amazingly easy to operate and adjust.
7. One kit can operate a single nozzle or as many as 150. Power is less than two watts. Multi-kit installations cost less and provide better control.
8. It’s rugged, durable, trouble free, safe, dependable, solid state and has little wear or upkeep. The first kits sold 11 years ago are operating today.

WRITE FOR OUR FREE LITERATURE AQUAMONITOR Box 327-Z Huntington, N.Y. 11743
Pines Can Get Nematodes Too

A new cause of pine tree death came to light in February, 1979 when a sample of wood from a 40-year-old Austrian pine (Pinus nigra) was sent to the Plant Pathology Diagnostic Laboratory at the University of Missouri-Columbia for analysis. The tree had wilted severely during the summer of 1978 and died before the end of the summer.

The cause of the tree’s death might have remained a mystery if Dr. S. Ouchi, a Japanese Plant Pathologist, hadn’t been visiting the University. Most pine mortality is attributed to conditions such as root damage, improper moisture, winter damage, chemical injury, attack by bark beetles or disease, but Dr. Ouchi had a hunch the pine died for another reason. He suggested the laboratory staff soak a sample of the log’s center in water. When this was done literally thousands of nematodes emerged. Dr. Victor Dropkin, a nematologist, identified the microscopic organism as Bursaphelenchus xylophilus. This was the first time pine wilt was brought to the attention of American scientists.

A curious, intricate relationship exists between these nematodes and their vectors, a wood-boring insect commonly called the long-horn beetle. Adult beetles emerge from dead trees carrying nematodes in their tracheae. Selecting trees under stress from a variety of causes, the insects begin feeding. The nematodes migrate from the beetles’ throat and enter the tree through feeding injury caused by the beetles.

Once the nematodes enter a tree, population growth is rapid—a generation takes only five days during the summer. The tiny organisms begin feeding on the cells lining the resin canals of the tree. As these cells are damaged the infested tree becomes unable to transport water and soon wilts. Needles change from green to yellow and finally brown. The tree retains its dead needles, and looks as if it had been near a fire. By the onset of winter it will be dead. In Japan the disease generally affects the entire crown of the tree, but in this country it can cause the symptoms to appear in a portion of the crown, or even on a single branch.

Dr. Ouchi first suspected nematode infestation because it is an all too familiar problem in his country, having reached epidemic proportions in sections of Japan since its discovery in Nagasaki in 1905. In their intensive studies of the disease Japanese scientists have identified three types of control measures, which are still being investigated, that seem to offer some degree of success.

- Sanitation—removing and or burning infested wood to prevent the spread of insect vectors.
- Pesticides—experimental spraying with insecticides. Also, systemic nematcides and insecticides are being tested.
- Genetic resistance—some individuals within a species of pine are more resistant than others and these are being tested in breeding programs.

In our country research is just getting underway. According to Dr. Mark Lovel, an entomologist at the University of Missouri-Columbia, American research will focus on the nematodes, their vectors, the susceptibility of various pine and other tree species to the wilt and the role of toxins in tree death. Experiments indicate the presence of nematode-produced toxins, and the way in which these toxins affect healthy trees is not well understood.

How can healthy trees be protected from pine wilt? Data is incomplete, but several steps appear to be effective.

- When planting trees select pines known to be tolerant of the disease.
- The beetles are attracted by trees that are already under stress, so provide optimum cultural conditions. Adjust pH and fertilize if tests indicate this is needed. Water deeply if the weather is dry. Don’t prune the trees unless it is absolutely necessary, because observers note that pruned trees often suffer infestation while unpruned trees nearby escape attack. Clean up all limbs and debris under trees, and use insecticides to protect valuable trees if pine wilt is present in your area.
- Finally, sanitation is an important aspect of any control program. If you have a dead pine and suspect pine wilt, write or call your local county extension agent or the Department of Plant Pathology at your state university. They will give you instructions on preparing a sample of wood for diagnosis and will tell you where to send it for analysis.

If your sample is positive for pine wilt, cut down the tree and burn all wood immediately, including branches, needles and stump. Do not put wood from a diseased tree onto a woodpile because the beetles infesting the tree will complete their life cycle there and fly to healthy trees to spread the disease.

Pine wilt appears to be endemic in American forests, but scientists need more confirmed reports to accurately determine the geographic and host distribution of the disease. Share with others the information needed to diagnose this disease. Vigilance on the part of concerned gardeners can go a long way toward helping prevent further spread of this threat to our forest and ornamental evergreens.

-Pamela K. Bahr

Pine Wilt Susceptibility

Not all pines are equally susceptible to pine wilt. The following is a partial listing of the sensitivity of some species of pine.

<table>
<thead>
<tr>
<th>SUSCEPTIBILITY</th>
<th>SPECIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>Monterey, red, sugar, jack, loblolly</td>
</tr>
<tr>
<td>Moderate</td>
<td>Virginia, ponderosa, Scotch, western white, lodgepole</td>
</tr>
<tr>
<td>Low</td>
<td>Southwestern white, Jeffrey, Eastern white</td>
</tr>
</tbody>
</table>

The sensitivity of other species of evergreens to pine wilt is not yet fully known. Spruce (Picea glauca), larch (Larix laricina) and cedar (Cedrus deodora and C. atlantica) have died from the disease. As more data is accumulated other species may join the list.
Perennial Corn

Rafael Guzman, a young Mexican botanist, may have made the botanical find of the century when he discovered *Zea diploperennis*, a wild perennial relative of corn previously unknown to science. This newly discovered plant produces fertile offspring when crossed with corn, thus providing plant breeders with very important genetic material that could lead to corn cultivars with immunity to several serious diseases. It also provides the potential for breeding perennial corn. Shortly before he discovered *Z. diploperennis* five years ago Guzman also rediscovered *Z. perennis*, which scientists thought was extinct in the wild. This perennial species is tetraploid, so unlike *Z. diploperennis*, it produces sterile offspring when crossed with corn, a diploid species.

Perennials generally are more resistant to systemic plant diseases than annuals, and *Z. diploperennis* has proven to be no exception. It is immune to or tolerant of most of the serious viral diseases of corn, and initial hybridizing efforts seem to indicate this valuable immunity can be bred into commercial corn cultivars. According to L. R. Nault and W. R. Findley (Desert Plants, Winter 1981-1982), *Z. diploperennis* "may help provide resistant germplasm for foliar and root pathogens as well as insect pests such as corn earworms, stalk borers and rootworms." Their studies also suggest the species "may provide genes for greater stalk and root strength, multiple ears per plant and tolerance to poorly drained soil."

There are obvious advantages to growing perennial corn, and, according to Nault and Findley, there are some disadvantages. Perennial popcorn or sweet corn could be perfect for the homeowner who doesn’t need an entire field of plants and doesn’t want to replant each year. Perennial corn may be perfect in developing countries where annual races are poor producers. Nault and Findley mention two disadvantages. "A perennial must divide its nutrient resources between the seed and its rhizomes, the overwintering structures. Therefore, a perennial corn plant might not be expected to produce as much grain as an annual. Also, it might not be possible to grow a perennial corn plant in the northern corn growing regions of the United States where winters are often severe. Frost occurs in the mountains of southern Jalisco where *Z. diploperennis* grows, but the ground does not freeze as it does in the Cornbelt states."


Attention Left-Handed Gardeners

R. C. Geiger Company now offers a pruning shear designed especially for the left hander. It features a reversed locking catch, anvil and blades. The price is $22.85 (style number Felco #9). Left-handed Tina grafting and budding knives are available too. The grafting knives are four inches long, have a curved handle and brass lining and sell for $21.75. The four-inch budding knives have a straight handle, also feature brass lining and sell for $21.95.

Order from E. C. Geiger, Box 285, Harleysville, PA 19438. Note: Geiger charges a $3.00 service charge on all orders under $30.00.
AFRICAN VIOLETS
1983 list $1.50 featuring 15 of my new hybrids in color. List contains over 200 varieties including variegated foliage varieties and miniatures. THE BLOOM ROOM, 3459 East Street, Birmingham, AL 35243.

Director of the 1982 African Violet and General Introduction in full color from leading amateur and commercial hybridizers with full addresses. Printed in Japan. Money back guarantee. 1 copy $7.95; 2-9 $7.00 ea. IDAI, Ltd./GERNERA, 309 Montauk Highway, E. Moriches, NY 11950.

Starters—$18 per dozen postpaid. All different and labeled. Newest varieties. Descriptive Catalog $1.00 refundable on first order. FREE Gift Certificate with every catalog. Shipping through November 30th. TRAVIS' VIOLETS, PO Box 42, Oschloome, GA 31773.

Hard to find supplies—Violet Rings—Fertilizers—Potting Mix—Free list with SASE. CAROL'S VIOLETS, 2943 No. 109th St., Toledo, OH 43611.

African Violet Starter Plants—$18.00 per dozen postpaid all different and labeled. Peggy's African Violets, 1106 Kondale Ave., Kannapolis, NC 28081.

THE AVANT GARDENER
“DIFFERENT, EXCITING, GREAT FUN TO READ!” for the gardener who wants to get more out of gardening! Subscribers, please address all communications to THE AVANT GARDENER, Box 489M, Newington, CT 06111.

ANTHRURIUMS
“ONLY THE BEST FOR 40 YEARS” BLOOMING PLANTS READY FOR POTTING. OAKES...Two color blossoms. KAUMANA...Deep red KOZAHARA...Deep red OZARK...Lipstick pink. PASTELS...many colors. ONE PLANT OF EACH VARIETY READY FOR PLANTING SHIPPED VIA AIRMAIL POSTPAID...$21.50. HISA-E CAMPBELL, PO Box 1232, PAHOA, HI 96778.

AUSTRALIAN WILDFLOWER SEEDS
Rare selection of over 200 species, specializing in brilliant WESTERN AUSTRALIAN WILDFLOWERS. Banksias, Bottlebrushes, Eucalyptus, Kangaroo paw, Grass trees, Everlastings, Hakeas, Wattles, Honey-myrtles, Boronias, Starflowers, Cone Flowers, Desert Pea, Feather Flowers, Xmas Bush, Waxflowers, Flowering Ferns, Smokebush, Dryandra and many more. Planting Guide with order. For FREE descriptive lists, send International Postal Reply Coupon to: AMERICAN FLORA AUSTRALIAN SEED SPECIALISTS, PO Box 118, Scarborough 6019, Western Australia.

REACH THE SINGLE MOST DEVOTED GROUP OF GARDENERS IN THE COUNTRY BY ADVERTISING IN OUR CLASSIFIED SECTION.

CLASSIFIED AD RATES:
50c per word; $10.00 minimum per insertion. Copy must be received two months prior to publication date. Send orders to the attention of Cindy Weakland, American Horticultural Society, Box 0105, Mt. Vernon, VA 22121. Or call (703) 768-5700. Payment for all classified advertisements must be made in advance. All copy subject to the approval of the Society.

BEGONIAS
THE THOMPSON GREENHOUSE “A Living Museum of Begonias” owned and operated by Mildred and Edward Thompson. Over 1,400 different species and cultivars of begonias are displayed. HOURS: 9-12 noon Mon, Wed, Thurs; 2-5 p.m. Fri. Other times by appointment; call the Thompsons at (516) 283-3237. LOCATION: Southampton College Campus, Southampton, N.Y. Open all year. No admission fee. A number of small plants are available for sale.

BONSAI

BOOK SEARCH SERVICE
Send your list of wanted gardening books or general titles to me. (Out of print, antiquarian, second hand) I'll try to locate them. No obligation. Edward F. Smiley, Bookseller, RFD 5, 43 Liberty Hill Rd., Bedford, NH 03102.

BOOKS
New EXOTICA 4, enlarged to 16,300 photos, by Dr. A. B. Graf; 2,590 pages in 2 volumes, $175. TROPICA—7,000 Color photos of exotic plants and trees, $115. EXOTIC PLANT MANUAL—4,200 photos, $37.30. EXOTIC HOUSE PLANTS—1,200 photos, $8.95. Circulators gladly sent. ROEHRS, Box 125, E. Rutherford, NJ 07073.

DRY YOUR FLOWERS for Winter Bouquets! Two Step-by-Step Books. “PRESERVED FLOWERS” $2.95 and “DRIED BOUQUETS” $8.95. SHOW-AND-TELL DIRECTIONS with hundreds of photos, so anyone can do it. $1.00 postage on both books. FREE NEWSLETTER, send stamp. Roberta Moffitt Designs, Box 3597, Wilmington, DE 19807.

BRITISH TEAK GARDEN SEATS
Solid Teakwood Garden Seats—featured in the abbeutums & gardens of England. The perfect heirloom gift for church, park or private garden. Send $1.00 (deductible) for color catalogue and current price list. COUNTRY CATALOGUE, 17317 Germantown Road, Germantown, MD 20874. (301) 428-3434.

BROMELIADS
DECORATIVE SPECIES & HYBRID BROMELIADS at reasonable prices. Unique 22 page DESCRIPTIVE LIST with prices $1.50. Also 80 page book BROMELIADS FOR MODERN LIVING with 135 Bromeliad color photos—sold only with LIST $5.00 for both. THE BROMELIADS TREASURY, 639 Bond Drive, Sunnyvale, CA 94087.

CATTI & SUCCULENTS

CARNIVOROUS PLANTS

CLOTHING

FRAGRANCE
Seeds for fragrant, rare and old-fashioned plants, trees, vines etc., THE FRAGRANT PATH Box 328A, Ft. Calhoun, NE 68023. Catalogue $1.00 deductible.

GARDENERS’ CARRYALL
Garden holster with sturdy, adjustable, brown webbed belt. For men and women. Two detachable, green canvas canvas, reinforced pouches for tools. Roomy Velcro pocket for smaller necessities. WASHEABLE. Be quick on the draw! Stocked $27 each, 2 for $52. VISA, Mastercharge, Check, Money Order, Res. add 5%. VALLEY COTTAGE INDUSTRIES, A-1 Box 623, Amherst, MA 01004.
GREENHOUSE GROWING
FREE! "How to propagate cuttings better in and outdoors." Get information on a "breakthrough" write now. AQUAMONITOR, Box 327-B, Huntington, NY 11743.

HELP WANTED
Working foreman to manage grounds crew on estate in Pawling, N.Y. Energetic person with experience in plant care. Excellent benefits, housing, and training. Immediate start. David Rutten, PO Box AA, Pawling, NY 12564. Phone: (914) 852-1311 or 1755.

HOLLIES
Holly hobbyist has 30 flex ssp. over 100 distinct cultivars evergreen and deciduous. Donor's garden, original stock for local college arboretum. 1,000 azaleas with many dogwoods, camellias, magnolias; some with modern 6-2¼ brick retirement home, built 1968. Moderately priced. Available June 1983. Principals only write Fred Ebersole, 2140 Midland Rd., Southern Pines, NC 28387.

HORTICULTURAL GIFTS

HOUSE PLANT SUPPLIES

HOUSE PLANTS

HOYA SPECIAL
WHAT'S A HOYA? Send $1.00 for descriptive list. Limited Hoya introduction offer. Different Hoya plants for $15.95 PPD, guaranteed. SAN LUIS GARDENS, Rigglety Rd, Box 269A, San Luis Obispo, CA 93401.

HYBRID AFRICAN VIOLET SEEDS
Select from Regular Foliage Mix, Variegated Foliage Mix, Elephant Mix, Miniature Mix, $4.25 per packet of 100 seeds. Complete instructions, unconditional guarantee. For list only (includes sp-citive crosses list) send 50¢. NADEAU SAINTPULIA SEED CO., 48A Queensbrook, St. Louis, MO 63132.

INDOOR GARDENING
Grow beautiful delicious OYSTER MUSHROOMS indoors ON NEWSPAPER. Spawn, supplementary nutrients and complete instructions $10 postpaid. MYCOLOG HOUSE-ASH, 41 Concord Road, Sudbury, MA 01776.

IVIES
Rare and unusual ivies for you in 82! TROPICO TROPIC SPECIALIZING in R. chapmannii, R. austrinum, R. magnoloides. Select from Regular Foliage Mix, Variegated Foliage Mix, Elephant Mix, Miniature Mix, $4.25 per packet of 100 seeds. Complete instructions, unconditional guarantee. For list only (includes sp-citive crosses list) send 50¢. NADEAU SAINTPULIA SEED CO., 48A Queensbrook, St. Louis, MO 63132.

RARE NATIVE PLANTS
Rhododendron chapmannii, R. austrinum, R. magnoloides. Select from Regular Foliage Mix, Variegated Foliage Mix, Elephant Mix, Miniature Mix, $4.25 per packet of 100 seeds. Complete instructions, unconditional guarantee. For list only (includes sp-citive crosses list) send 50¢. NADEAU SAINTPULIA SEED CO., 48A Queensbrook, St. Louis, MO 63132.

RARE PLANTS
RARELY OFFERED SOUTHEASTERN NATIVES—exotic, herbeaceous, nursery-grown. Many hardy northward. Also newly introduced exotics selected for Southern gardens. Send SASE for extensive mailorder list. WOODLANDERS OH, 1128 Colleton Ave., Aiken, SC 29801.

RHODODENDRONS and AZALEAS
GABLE RHODODENDRONS—best selection, largest sizes. Hardest azaleas and rhododendrons. Mailorder catalog $2.00 (deductible). CARLSON'S GARDENS, Box 305AH, South Salem, NY 10590.


SEDUMS & SEMPervivums
Unusual Collection of Sempervivum-Sedum. Catalog 25¢. ALPINE GARDENS, Box 247AH, Dallas, OR 97338.

SEEDS
IMPORTED SEEDS from the World's largest and most famous seed catalog. 200 pages, 4,000 varieties, 1,000 color pictures. A major book of reference. The Encyclopedia of how and what to grow from seed. The Bible of seed catalogs to gardeners in over 100 countries. Vegetables, pot plants, exotics, perennials, alpines, rockery, latest and best annuals, trees, shrubs and bulbs from all over the world. Write for your free copy: THOMPSON & MORGAN, INC., Dept. AHN3, PO Box 531, Pinson, AL 35126.

TOPIARIES
Topiary frames, charming animal shapes, geometrics. Write for price list, wholesale or retail. TOPIARY, INC., 41 Bering, Tampa, FL 33606.

UNUSUAL INDOOR PLANTS

WILDFLOWERS
FALL PLANTING. Guaranteed highest quality wildflower tubers, roots, etc. 20¢ descriptive catalogue. MASTER GARDENS-B, 3900 Kingston Pike, Knoxville, TN 37919.
Rhododendron Guidebook Available

Rhododendron enthusiasts and gardeners with an interest in purchasing some of these lovely plants will want to obtain a copy of *Greer's Guidebook to Available Rhododendrons*, written by Harold E. Greer, owner of Greer Gardens, a prestigious West Coast nursery boasting one of the world's largest and most complete collections of rhododendrons.

Most of this 150-page book is devoted to a list and description of over 580 species of *Rhododendron* and about 1,300 cultivars. Each description gives an approximate height in 10 years, a hardiness rating, flowering season and a quality rating as well as a description of the plant. The parentage of each cultivar is indicated, and each species description is accompanied by classification information, its origin and an indication of what the species name means.

The book also features over 100 color photographs and a chart indicating the distinctive features of the cultivars listed.

*Greer's Guidebook to Rhododendrons* lists for $12.95, but it is available to Society members at a discount price of $11.35, including postage and handling. Mail your order to Dorothy Sams, American Horticultural Society, PO Box 0105, Mt. Vernon, VA 22121. Virginia residents, add 4% sales tax.

Fire Ant Control

A new method for extinguishing the fire ant could be on the market next year thanks to the discovery of a juvenile hormone called MV-678. Developed by U.S.D.A. research chemist Meyer Schwarz, this compound disrupts the development and metamorphosis of the immature fire ants. It will be marketed by the Stauffer Chemical Company.

The compound can be applied in very low dosages (1/6-ounce per acre) and is mixed into a bait consisting of soybean oil and corn grits. Worker ants feed the hormone to the immature ants, which then develop abnormally or fail to develop at all. Eventually, without new workers to gather food and tend the brood, the fire ant society crumbles. MV-678 degrades quickly when left to the elements, but inside a colony workers hold the hormone in their bodies where it remains active for months. Although it takes several months to destroy an ant colony, most disappear with virtually no adverse impact on the environment.