

June 1987

American Horticulturist



Let Tetra Pond turn your yard into a Living Showplace!



Dr. John Gratzek, Professor of Veterinary Medicine at the University of Georgia, is photographed beside his Tetra pond in his Athens, Georgia home. Dr. Gratzek is one of thousands of people now enjoying a Tetra pond.

Above-ground a Tetra pond is easily constructed using landscape timbers—in fact, you can even put a Tetra pond indoors!



Tetra's flexible pond liners let you create the pond you want... the size, the shape, and in your choice of location. In-ground, by following simple step-by-step directions, you can create a natural setting any professional landscaper would be proud of. Above-ground you can use landscape timber to create a design for any location... even in your home. Tetra's 32 Mil, flexible PVC liners are double-bonded and UV stabilized to withstand the coldest winters and hottest summers year after year.

Tetra's quality pond products let you successfully establish a new pond or maintain an existing pond.

In the winter there is no need to worry. Your Tetra pond liner can withstand the worst conditions and unless the pond water freezes completely to its lowest depth, your fish will remain in a dormant state until the spring. **No matter where you live, you can enjoy a yard pond!** For more information on how to construct and maintain your Tetra yard pond, write Tetra Sales.



Tetra liners are available in seven pre-cut sizes. Order by stock no.: **16378** (8' x 13'), **16370** (10' x 16'), **16371** (13' x 13'), **16372** (13' x 20'), **16373** (16' x 23'), **16374** (20' x 26'), **16375** (23' x 30').



The Tetra Luft Pump and Brilliant G Pond filter provide biological and mechanical filtration and aeration for ponds up to 1500 gallons.



Tetra Pond fish food and special color-enhancing Koi food provide complete fish nutrition. Tetra foods float and will never foul pond water.



Tetra water chemicals ensure the health and well-being of your fish and plants.

AquaSafe Pond Formula: neutralizes pond water to be safe from chlorine, chloramine and toxic heavy metal ions.

DesaFin: combines formaldehyde and malachite green to treat and prevent a broad range of fish diseases.

FloraFin: the optimum fertilizer for growth and hardness of all water plants including lilies and hyacinths.

We are the water garden experts!



Tetra Pond

Tetra Sales (U.S.A.)
201 Tabor Road, Morris Plains, N.J. 07950
Telephone: 800-526-0650
In New Jersey (201) 540-4285

Contents



This hand-colored lithograph from Jane Loudon's *The Ladies' Flower-Garden of Ornamental Perennials* relates to two of the articles in this month's issue. To read the fascinating story of Jane Loudon's life, turn to page 15 for "Jane Loudon: First Lady of Gardening." For an article on the history of botanical prints—complete with a useful sidebar on starting your own collection—turn to Margaret Parke's article on the subject, which begins on page 18. Print courtesy of the Hunt Institute for Botanical Documentation.

President's Page: Season of Growth by Everitt L. Miller	2
Plant Collections: S.U.N.Y. Greenhouse by Patricia Barnes-Svarney	5
The Design Page: The White Garden by Margaret Hensel	11
Jane Loudon: First Lady of Gardening by Elisabeth Sheldon	15
Botanical Prints by Margaret Parke	18
Liatris by Stanley M. Harmon	25
Longue Vue Text by Doris M. Stone Photography by Roger W. Stone	28
Pronunciation Guide	33
Sources	34
Classifieds	36
Book Reviews by Barbara W. Ellis	40
Public Gardens: Practical but Spectacular by Erin Monica Hynes	42

On the Cover: *Liatris* is a native American perennial wildflower that was, until recently, overlooked by gardeners. Not only do these plants provide showy summer color in gardens and undisturbed wild areas alike, they also—as this tiger swallowtail attests—attract pollinators that rival the beauty of the flowers. For more on *Liatris*, turn to page 25.

EDITOR, PUBLICATIONS DIRECTOR: Barbara W. Ellis. ART DIRECTOR: Rebecca K. McClimans. ASSOCIATE EDITORS: Lynn M. Lynch, A. Brooke Russell, Brian C. Little. HORTICULTURAL CONSULTANTS: Gilbert S. Daniels, Jane Steffey. ASSISTANT TO THE EDITOR: Martha Palermo. PRODUCTION ASSISTANT: Lynn M. Lynch. ADVERTISING REPRESENTATIVE: C. W. Advertising, P.O. Box 138, Mount Vernon, VA 22121, (703) 360-6666. MEMBERSHIP DIRECTOR: Sallie Hutcheson. COLOR SEPARATIONS: Chromagraphics Inc. EDITORIAL ADVISORY BOARD: Dr. Gerald S. Barad, Flemington, NJ; Dr. Harrison Flint, West Lafayette, IN; Peter Loewer, Cochection Center, NY; Dr. Elizabeth McClintock, San Francisco, CA; Frederick McGourty, Norfolk, CT; Janet M. Poor, Winnetka, IL; Maire Simington, Phoenix, AZ; Jane Steffey, Sykesville, MD; Dr. James E. Swazey, Newark, DE; Phillip E. Chandler, Santa Monica, CA.

Replacement issues of AMERICAN HORTICULTURIST are available at a cost of \$2.50 per copy. The opinions expressed in the articles that appear in AMERICAN HORTICULTURIST are those of the authors and are not necessarily those of the Society. Manuscripts, art work and photographs sent for possible publication will be returned if they are accompanied by a self-addressed, stamped envelope. We cannot guarantee the safe return of unsolicited material.

AMERICAN HORTICULTURIST, ISSN 0096-4417, is the official publication of the American Horticultural Society, 7931 East Boulevard Drive, Alexandria, Virginia 22308, (703) 768-5700, and is issued monthly. Membership in the Society includes a subscription to AMERICAN HORTICULTURIST. Membership dues start at \$20.00 per individual or \$25.00 per family per year, \$12.00 of which is designated for AMERICAN HORTICULTURIST. Copyright © 1987 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, P.O. Box 0105, Mount Vernon, Virginia 22121.

AMERICAN HORTICULTURAL SOCIETY

OFFICERS 1986-1987

Mr. Everitt L. Miller
Kennett Square, Pennsylvania
President

Mrs. Carolyn Marsh Lindsay
Rochester, New York
First Vice President

Mrs. John M. Maury
Washington, DC
Second Vice President

Mrs. Charles W. Allen, Jr.
Glenview, Kentucky
Secretary

Mr. Richard J. Hutton
West Grove, Pennsylvania
Treasurer

Mr. Edward N. Dane
Boston, Massachusetts
Immediate Past President

BOARD OF DIRECTORS

Mrs. Charles W. Allen, Jr.
Glenview, Kentucky

Mr. Richard C. Angino
Harrisburg, Pennsylvania

Gerald S. Barad, M.D.
Flemington, New Jersey

Mrs. Benjamin P. Bole, Jr.
Cleveland, Ohio

Mr. J. Judson Brooks
Sewickley, Pennsylvania

Dr. Henry M. Cathey
Washington, DC

Mr. Russell Clark
Boston, Massachusetts

Mrs. Erastus Corning, II
Albany, New York

Mr. Richard J. Hutton
West Grove, Pennsylvania

Mrs. Carolyn Marsh Lindsay
Rochester, New York

Mr. John M. Maury
Washington, DC

Mr. Everitt L. Miller
Kennett Square, Pennsylvania

Mrs. Daniel Pierce
Dedham, Massachusetts

Mrs. Frances J. Poetker
Cincinnati, Ohio

Mr. Edward King Poor, III
Winnetka, Illinois

Dr. Julia W. Rappaport
Santa Ana, California

Mrs. Philip Temple
Little Compton, Rhode Island

Mr. Roy G. Thomas
Woodstock, Vermont

Mrs. Harry J. Van de Kamp
Pasadena, California

Mr. John H. Whitworth, Jr.
New York, New York

Mrs. Jean Verity Woodhull
Dayton, Ohio

Dr. John A. Wott
Seattle, Washington

Season of Growth

As spring takes hold here at River Farm, we gear up for our Summer Internship Program. Each year we select as many as five college students majoring in horticulture or a related field to work and learn on the 25 acres of our headquarters' estate. Since many of these students attend colleges that offer little or no practical horticultural experience, the internships are vital. After all, academic study can only go so far in this profession. Hands-on experience is truly essential, as any gardener knows!

Looking back over the Internship Program's history, I am pleased to see many former interns thriving today. Notable among them are Steve Bender, now Assistant Garden Editor at *Southern Living* magazine; Karl Stromayer, a Peace Corps Volunteer in Africa; and Brian Little, Associate Editor in the Society's Publications Department and Horticulturist for our Gardener's Information Service. These former interns have already repaid the Society's investment in their futures by contributing much to their chosen field. And Brian Little, intern from the summer of 1985, tells us that our investment in his career has proven invaluable as he handles hundreds of questions from Society members each year.

"Without the internship, I would have the theoretical knowledge to answer the questions," Brian said recently, "but I wouldn't have the first-hand experience with the problems. There's a big difference between saying 'Oh yes, I read about that in college' and 'I know what you mean, I had to help solve that problem in *our* garden.'"

Society members depend on Brian's education and practical knowledge when they have gardening questions. (If you have not taken advantage of Brian's expertise through our free Gardener's Information Service, available to members only, I invite you to do so by writing to Brian in care of the Society.) As members, we reap the benefits of Brian's training, and we can be proud that we sponsored a program that gave Brian and other former interns precious practical experience. Their internships laid a foundation for superb careers in horticulture, and many people who love gardening will benefit from the talent and dedication of horticulturists who got their start at River Farm.

Of course, our interns would not have had the chance to gain this expertise without the support of Society members. The Summer Internship Program is funded entirely through contributions from our members, and this year I invite you to help once again by underwriting a portion of an intern's salary. Whether you can help by supporting a single day of intern work-time or by sponsoring an entire summer, your generosity is much needed and greatly appreciated—not just by me and by the Society's Board of Directors, but by the young horticulturists who jump at the opportunity to spend a summer being paid practically nothing, and working from dawn to dusk in the sweltering Virginia heat and humidity, just to learn first hand the beauty, excitement, and challenges of horticulture.

I hope summer finds you reveling in the glories of your garden. At River Farm, we are enjoying a multitude of perennials and early flowering trees. We owe much of River Farm's recurring splendor to the efforts of all our American Horticultural Society interns. I hope I can depend on you to help ensure their return this year to another season of glory, and of growth.

—Everitt L. Miller
President



Is Something Missing From Your Garden?

Is your garden missing jewel-like flowers floating on a shimmering water surface and the darting brilliance of goldfish? Are you missing the melodic sounds of water spilling from a fountain, vessel or waterfall?

What you need in your garden is a water lily pool. A water lily pool is a garden whose plants like damp to very wet feet. Fish and frogs like to live there and butterflies will like your garden better than ever. A water garden is simply

one of the most satisfying forms of gardening. If you haven't one, you are missing a great deal of satisfaction from your garden.

Let Lilypons and TETRA POND help you to get started today by ordering one of our durable TETRA POND 32 mil, flexible 2 ply PVC pool liners. So easy to install and maintain you will ask yourself why you waited so long to begin this adventure.

Choose from the seven sizes listed (sizes are approximate, for depth 1½' to 2' in your own design.):

- | | |
|---|---|
| <input type="checkbox"/> Lilypons water gardening catalogue subscription \$ 4 | <input type="checkbox"/> 8' x 12' liner makes 4' x 8' pool \$ 99 |
| <input type="checkbox"/> 10' x 16' liner makes 6' x 12' pool \$145 | <input type="checkbox"/> 13' x 13' liner makes 9' x 9' pool \$165 |
| <input type="checkbox"/> 13' x 20' liner makes 9' x 16' pool \$199 | <input type="checkbox"/> 16' x 23' liner makes 13' x 19' pool \$299 |
| <input type="checkbox"/> 20' x 26' liner makes 26' x 22' pool \$399 | <input type="checkbox"/> 23' x 30' liner makes 19' x 26' pool \$499 |

Use your personal check or circle credit card: AE CB CH DC MC VS.

Card Number: _____ Exp. Date _____

Name _____ Address _____

City _____ State _____ Zip _____ Phone () _____

Catalogue free with liner order. Maryland (5%) and Texas (5-1/8%) residents please add sales tax.

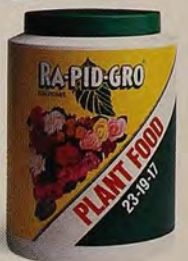
Lilypons Water Gardens

1526 Amhort Road
 P.O. Box 10
 Lilypons, Maryland 21717-0010
 (301) 874-5133 Washington Local 428-0686

1526 Lilypons Road
 P.O. Box 188
 Brookshire, Texas 77423-0188
 (713) 934-8525 Houston Local 391-0076



**PLANT FOOD SO GOOD
IT'S BEYOND BELIEF.**



S.U.N.Y. Greenhouse

Adjacent to the biology building on the campus of the State University of New York (S.U.N.Y.) at Binghamton is a large glass building. Most people pass right by this structure; others stare in amazement, for on the other side of the glass are over 5,000 species of plants representing almost every continent, from New York's own native club mosses (*Lycopodium* spp.) to South African succulents. This is S.U.N.Y. Binghamton's Teaching Greenhouse, one of the best educational and research facilities in the state.

Plans for building a large greenhouse facility at S.U.N.Y. Binghamton were years in the making. The original greenhouse was a small glass house attached to the old biology building. Eventually, a larger greenhouse was built at the same location to accommodate the growing number of plants. For nearly 15 years, this structure was used by biology students and researchers. Then, the Biology Department moved to a new building, leaving the greenhouse facility behind. This arrangement made it very difficult to teach botany laboratories, since plants for study and dissection had to be carted from the greenhouse to the biology classrooms three buildings away. Winters took their toll on many fragile plants, while rainstorms added to the problem.

Finally, the state allocated money for the construction of the Teaching Greenhouse, which was finished in 1982. This structure, close to five times the size of the old greenhouse, is attached to the Biological Sciences Building. The facility also contains a headhouse, offices of the greenhouse staff, and a teaching section, where students use old soapstone laboratory tables for plant dissections and lectures. Since this new structure was built, the Biology Department has been able to expand its collection and enhance the reputation of the greenhouse as an educational facility by exchanging and purchasing groups of rare, exotic, and primitive plants from botanical gardens all over the world.

Two full-time staff members—Ike Heier, manager of the greenhouse, and Paul Campbell, assistant manager—have been



ABOVE: Students examine the many unusual succulents found in the desert section of the S.U.N.Y. Greenhouse. RIGHT: A staghorn fern (*Platycerium* sp.) thrives in the tropical room.

“We try to . . . allow the students to observe the actual growth and development of a great number of plant species. . . .”



instrumental in building up the greenhouse collection. Besides lecturing to students and tending and keeping track of the thousands of plants, they travel all over the world in search of additions for the greenhouse collection. “We are basically a teaching and research facility, with an emphasis on teaching,” explained Heier. “We try to add plants to our collection that will allow the students to observe the actual growth and development of a great number of plant species. Not only will they gain an insight into the basic biology of plants, but they will also gain a greater understanding of the diversity of world environments.”

In order to keep the plants healthy, the greenhouse environment is thermostatically controlled. There is evidence of technological ingenuity everywhere, from the automatic misters that create an oppressive humidity in the tropics room, to the

huge silver air conditioner hanging overhead in the alpine room. When winter strikes the Binghamton area, side heaters take over for the sun. In the spring, summer, and fall, a delicately balanced climate-control system maintains correct temperatures.

Around September, the greenhouse becomes a center of activity as undergraduate and graduate students study plants from four separate botanical environments. A wall of glass separates the different plants from one another—the diverse specimens of the subtropical room; the colorful, cool plants of the alpine section; the strange shapes of the dry desert area; and the greenery of the hot, humid tropics center. Visitors need sweaters at one end of the greenhouse; by the time they reach the tropics room, however, they are sweating.

Besides the 600 to 700 students that pass

PLANT COLLECTIONS

through the greenhouse during the year, students from area high schools and visitors and researchers from all over the world come to enjoy the beauty of the greenhouse. People with varying degrees of interest in plants, from the casual observer to the serious plant enthusiast, come to visit the facility. "We even have people with anthropology, art, physical geography, chemistry, or photography backgrounds visiting the greenhouse," said Heier. "For instance, a chemist interested in extracts from various plants once visited the greenhouse. And we often have photographers taking pictures of some of the rarer plants in bloom."

Both tiny seedlings and mature specimens are on display. Most of the potted plants throughout the greenhouse have been placed on waist-high benches made of metal mesh. These benches, arranged in rows or against the greenhouse walls, allow air to circulate around the plants. In the desert and tropics rooms, several of the larger plants are grown in a deep raised bed that covers about one-fifth of the room.

Each plant has a white identification tag

with the genus and species name, as well as information about the origin of the plant—a necessity for students studying botany. For special tours and certain courses, the greenhouse staff has placed larger, plastic-covered labels in various locations. These labels provide interesting bits of information, such as how a banana plant develops sucker shoots from a long-lived root system to replace its annual top growth; or how the banyan tree begins its life by climbing up other trees.

The temperature in the first room, labeled "subtropical," never falls below 55° F, and the climate is similar to that of central Florida, where cool winters and warm summers dominate. Multicolored coleus, begonias, and tropical orchids dot the room, and in springtime, the smell of pink, blue, and white hyacinths fills the air. These familiar hardy flowers are used in introductory plant systematics courses for dissection and study.

There are also some rarities in the subtropical room, including many male and female cycads, primitive plants whose ancestors date back to the Upper Carbon-

iferous period, approximately 310 million years ago. Only nine genera and over 100 species of cycads are known to exist throughout the world. The greenhouse has specimens representing all nine genera and around 40 species, including a species of *Zamia* native to Florida. "It takes years for the cycad plant to reach maturity," said Heier, "and once a male cone starts to shed pollen, you have to find a compatible female plant. Unfortunately, cycads seem to have a mind of their own, because the male and female cones often mature at different times. That is one of the reasons why the population has decreased over the last few million years."

Adjacent pools located at the far end of the room offer two different aquatic environments. One pool, kept at a warm temperature, is home to lilac- and white-flowered tropical water lilies (*Nymphaea* spp.). The other pool is kept at room temperature and is filled with papyrus and floating bunches of the tiny organism-trapping bladderwort (*Utricularia*). Also in this cooler pool are two turtles and several small fish, which help maintain the

TAKE THE PRECAUTIONS NECESSARY WITH MOST PESTICIDES, AND YOU COULD FRIGHTEN THE BUGS TO DEATH.

Conventional pesticides are made from petrochemicals. So you're well-advised to make certain that they don't come in contact with your body, and that you don't inhale their fumes.

Safer™ pesticides, on the other hand, *aren't* petrochemical-based. Scientifically derived from biodegradable ingredients, Safer products kill bugs and weeds, but they're safe to use, indoors and out. Even around children and pets.

You decide. Are you going to use a pesticide that requires you to dress to kill? Or are you going to take the Safer approach?

Safer™
The Safer Pesticide



© 1987 Safer, Inc. All rights reserved.

Sculptured 14kt gold. Glistening emeralds. And a brilliant diamond.
The ultimate rose.



The rose. More radiant than ever before. Blooming in a romantic ring of solid 14 karat gold and set with a dazzling full-cut diamond. Surrounded by precious leaves of faceted emeralds. Brilliant design. Uncommon value.

An original design by The House of Fratelli Coppini. Master jewelers who have crafted exquisite works of art for



Europe's titled and elite for more than two centuries.

Indulge yourself in jewelry so exclusive you won't find it in the finest Fifth Avenue shops... or even in the world-famous Coppini studio. It's available only from The Franklin Mint.

The Coppini Rose Ring. Elegant. Fabulously rich.

© 1987 FM

COMMISSION AUTHORIZATION

The Franklin Mint
Franklin Center, Pennsylvania 19091
I wish to commission The Coppini Rose Ring, to be crafted of solid 14 karat gold and set with four faceted emeralds and a full-cut diamond.

I need send no payment now. I will be billed shortly before shipment for a deposit of \$150.* and, after shipment, in 4 equal monthly installments of \$150.*

**Plus my state sales tax.*



THE HOUSE
OF FRATELLI
COPPINI

Indicate ring size _____
If no size is specified, you will receive a ring sizer to enable you to determine the correct size with your first invoice. Correct fit is guaranteed. If the ring does not fit when you receive it, you may return it for adjustment at our cost.

NAME _____
PLEASE PRINT CLEARLY

ADDRESS _____

CITY/STATE/ZIP _____

SIGNATURE _____
ALL COMMISSIONS ARE SUBJECT TO ACCEPTANCE.

20

THE COPPINI ROSE RING • EXCLUSIVELY FROM THE FRANKLIN MINT

Why not plant the very best Quality Perennials?

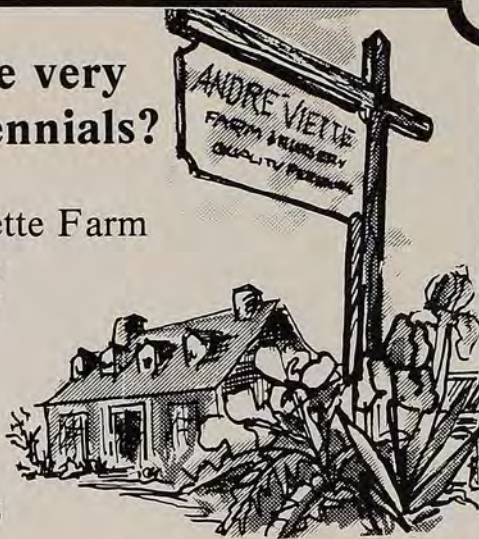
The Famous André Viette Farm and Nursery, located in Fishersville, has one of the largest collections in the East. We ship nationally.

Fields of Flowers

Specializing in
Flowering Perennials
Rock Garden Perennials
Woodland Plants
Daylilies

Rare and Unusual
Plants

703-943-2315 • Dept. AHS, Rte. 1, Box 16, Fishersville, VA 22939
Write For Our Catalogue — \$2.00



Come visit our gardens André

André Viette

Quality Perennials
Accept No Substitute

PLANT COLLECTIONS

oxygen/carbon dioxide balance.

The next section in the greenhouse contains the alpine plants. The climate here is not that of the Himalayas, but of the high-mountain, tropical alpine areas—cool, but never freezing. Many of the plants here are crossovers from other climates where cool temperatures, especially in summer, help them to flourish. For instance, there are conifers from the warmer regions of California and the Mediterranean Sea, along with primroses, camellias, begonias, and other showy plants that provide splashes of bright red, yellow, and orange. As in the subtropical section, the more common plants are used for classroom study and dissections.

One of the more popular trees in the alpine room is the giant redwood (*Sequoiadendron giganteum*). Sequoias grow rapidly to great heights; many of the trees in California are 2,000 years old and over 300 feet tall. S.U.N.Y.'s redwood, with its tiny green needles, was started from seed eight years ago and is already over four feet tall.

The environment of the greenhouse desert could pass for that of the deserts of the southwestern United States or South Africa: cool winters and dry, hot summers. The plants that fill this room are extremely diverse, and include euphorbias and living-stones (*Lithops* spp.) from South Africa, as well as *Mammillaria* species from the southwestern deserts of this country. In the center of the room is a large rock garden created by Mr. Campbell, where over 50 green, spiny, succulent plants poke out from a dark desert sand.

There is tremendous diversity among desert plants, including strange coloring and twisted shapes, cacti with leaves, and climbing euphorbias. Students learn about how each plant has adapted special defenses against predators and the hostile environment. For instance, *Agave horrida* has spikes on its leaves to ward off predators, while *Pachypodium succulentum* has a bulbous trunk to store much-needed water when rain is scarce.

The last and most spectacular room contains the tropical plants. Mistlers provide humidity, while the sun (or wall heaters, on cloudy winter days) supplies tropical heat. This room is the best place in the greenhouse for plant propagation; over 100 stems and leaves line the far wall. The cuttings of such plants as begonias and impatiens grow quickly and are excellent for demonstrating propagation principles in

WATER Lilies

Colorful water lilies, shallow water bog plants, "how-to" information, algae control, pumps, filters and maintenance supplies are offered in 56 page color catalog. Send \$2.00

Van Ness Water Gardens
2460 N. Euclid, # 876
Upland, CA 91786-1199



FREE CATALOG

Sundials,
Weathervanes.

Wind & Weather

Box 2320 - AH
Mendocino, CA 95460
(707) 937-0323

introductory botany classes.

The only difference between this tropical oasis and the real tropics is that the former is a controlled environment. Trees are pruned to provide sufficient sunlight to all plant species. In addition, no trees, leaves, or plants are allowed to lie and decay to create a mulch for further propagation. This control is necessary; along with decay come fungi and insects, creating a stress this jungle microcosm could not handle. As in the rest of the greenhouse, any traces of insects are eliminated by direct water spray, Malathion, Pyrethrum, or a new biodegradable, non-toxic soap.

The plants in this room display typical tropical characteristics. The larger plants try to maneuver for position in the sun, while others cling to the taller trees. Certain plants, such as members of the genus *Xanthosoma*, channel water to their base through trough-like stalks—an adaptation to speed rainwater to their roots in spite of their large leaves.

Some of these tropical plants have grown in the greenhouse for only a few short years. One particular specimen of *Brachychiton*, commonly called bottle tree, is a favorite of Heier, who carried the seed in his back pocket all the way from Australia. By the time the plant was five years old, it had been cut back twice (an average of 10 feet) and still reached the 38-foot peak of the greenhouse. That same year, in between the sassafras-like leaves, several bunches of bright red flowers appeared for the first time.

The greenhouse staff plans to expand the collection by planting about 350 rare and unusual annuals, biennials, and perennials on the sunny slopes surrounding the building. Labels will identify the plants to help those interested in growing these selections in their own gardens. (For information on visiting the S.U.N.Y. Greenhouse, see "Sources" on page 34.)

The S.U.N.Y. Teaching Greenhouse is a haven for many diverse plants that would not survive the winter cold and summer heat of Binghamton. It is not only a superb hands-on laboratory for students and researchers, but also a fascinating living museum that is bound to delight anyone curious enough to look inside. ☉

—Patricia Barnes-Svarney

Patricia Barnes-Svarney is a free-lance writer and photographer living in Endwell, New York.

Turner Greenhouses

FREE CATALOG

Rib-spacing 24 inches on center. Some competitive models use only half as many.

Choice of two coverings.

Energy-efficient "Dutch design"



Extendability.

Inexpensive base requirements.

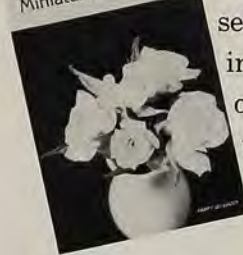
A Turner Greenhouse makes gardening year-round a reality. Call 1-919-734-8345 or write to:



TURNER GREENHOUSES
Hwy. 117 Bypass
Goldsboro, NC 27530

Its *Nor'East* for the Very Finest in Miniature Roses

Nor'East Miniature Roses, Inc.



We carry the best selection, featuring the very best of the older and the very newest varieties.

Send My Free Color Catalog Today!

Name _____

Address _____

City _____

State _____

Zip _____

Nor'East Miniature Roses, Inc.

58 Hammond Street, Dept. AH
Rowley, Massachusetts 01969

WINTER WONDER.

Without Wilt-Pruf



When the ground is frozen, plants lose moisture that can't be replaced. During this time, shrubs become easy targets for serious injury — even death.

Wilt-Pruf® shields plants from winter-kill by providing a protective coating that holds in moisture.

Wilt-Pruf also protects

With Wilt-Pruf



against drought, windburn, air pollution, salt spray damage and transplant shock. Plus it's biodegradable and organic.

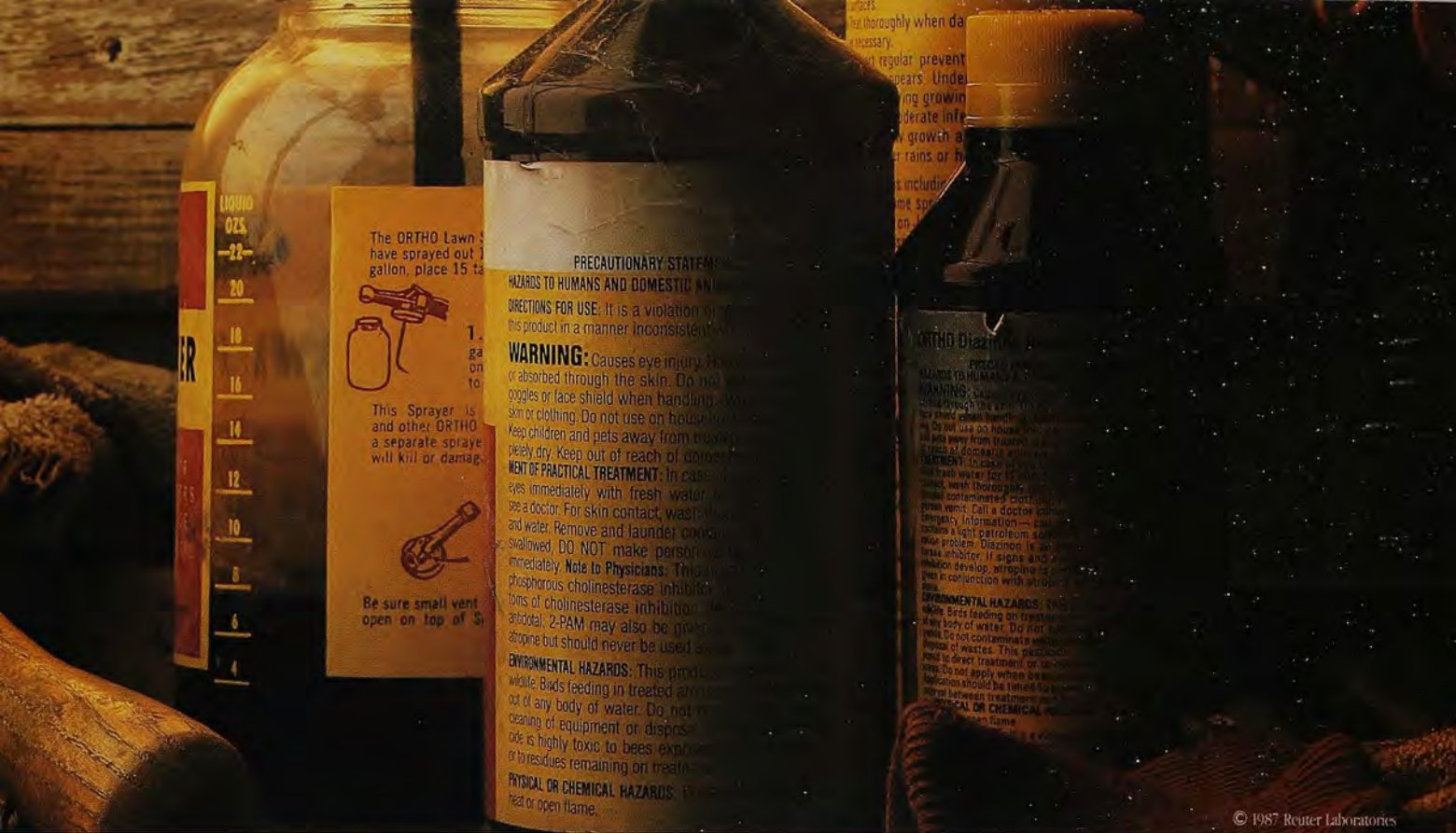
It's the perfect remedy for the winter. Or any season.

WILT-PRUF
ANTI-TRANSPIRANT

Guards against moisture loss year 'round.



P.O. Box 4280, Greenwich, CT 06830-0280.



© 1987 Reuter Laboratories

If Bugs Could Read, The Labels On Most Pesticides Would Scare Them To Death.

There's a reason chemical pesticides carry such terrifying warnings.

Synthetic chemicals such as diazinon, malathion, and carbaryl can cause skin rashes. Respiratory problems. Vision loss. Even nerve damage.

Good reasons to consider switching to Attack® Natural Pest Controls. These remarkable products are made from natural ingredients such as pyrethrum, bacteria, and insecticidal soaps. All of which are extremely deadly to insects. But harmless to cats, dogs, and — most importantly — people. That's why Attack labels carry only common-sense precautions.

Attack is so safe, you can use it to protect your vegetables right up to the minute you harvest. Something you dare not try with most chemical pesticides.

So look for Attack. Because the only thing that should be scared of an insecticide is an insect.



Attack[®]
Natural Pest Controls That Work[®]

For free literature, please call 1-800-368-2244. Or write Reuter Laboratories, 8450 Natural Way, Manassas Park, Virginia 22111.

The White Garden

For years, I thought the idea of an all-white garden was boring at best. And when some enthusiastic gardener raved about plans for a garden full of nothing but white flowers, I figured he or she had to be a bit mad. With all the wonderful colors and possible combinations of perennials—forget-me-nots and yellow lily-flowered tulips, deep scarlet roses and azure-blue delphiniums—why would anyone plan a garden solely around white flowers?

“But you must see the White Garden at Sissinghurst,” argued a friend one day when I was being my most adamant. “Then you’ll understand.” And of course, he was right. I’ve been to Sissinghurst perhaps a dozen times since then, and each time, the White Garden has provided important lessons on design, plant combinations, placement, textures, and surprisingly enough, color.

On a sunny afternoon in spring or summer, the White Garden’s narrow paths are invariably crammed full of people peering at plants, poking around for labels, or scribbling furiously in their garden notebooks. Laid out by Harold Nicolson and planted by Vita Sackville-West as her “grey and white garden,” it is far more than a collection of white flowers. Here, the foliage of a variety of artemesias, *Salvia argentea*, *Stachys byzantina*, *Macleaya cordata*, and *Hosta sieboldiana* ‘Elegans’, all in various shades of gray and green, is just as important as the flowers.

Essentially a square surrounded on all sides by walls or hedges, the White Garden is divided by four main paths. These paths intersect in the middle beneath a metal arch covered with *Rosa longicuspis*, and are then divided into smaller parterres by more paths. As the visitor enters the garden from the Tower Lawn, the arrangement is highly informal. Plants are combined in bold groups, which are planned for a long succession of bloom and diversity of form. On the right are spires of lupine, clumps of violas, arching sprawls of iris, and an almost architectural mass of hostas—in all, a beautifully articulated contrast of foliage and plant forms, without a hint of stiffness.

The inner half of the garden is highly



In the inner portion of the White Garden at Sissinghurst, low hedges of clipped boxwood are used to accent a variety of white-flowered plants.

stylized. Individual plants such as *Rosa* ‘Iceberg’, underplanted with *Pulmonaria* ‘Sissinghurst White’ and *Dictamnus albus*, are planted within tight, low squares of clipped box hedge. Here, the white flowers are singular characters, isolated and highlighted by green hedges. The effect is simple but dramatic, in direct contrast to the informal foliage and flower combinations in the first half of the garden. The design

is simple, but the interaction of design elements is reasonably complex, and it took several visits before I began to see why this little garden was such a success.

As I began to do a bit of research on how white works, I discovered that it wasn’t a color at all, but the reflection of light rays; the purest white flowers reflect all the light that hits their surface. I also observed that the degree of reflection is in-

A NEW WAY OF LIFE —FOR YOUR PLANTS



**A TRULY
DRAMATIC EXPERIENCE
FOR YOUR PLANTS—LIQUID
CONCENTRATE, GUARANTEED RESULTS**

JUNGLE JUICE (2-5-4) for fantastic foliage growth and super green.

GRANNY'S BLOOMERS (0-6-5) ZERO nitrogen and special trace for abundant african violet blooms, you won't believe your eyes.

CACTUS JUICE (1-7-6) For outstanding specimens and helps promote flowering.

FLOWER CRACKER (1-6-5) For Impatiens, Orchids, Bromeliads, Geraniums, all flowering plants.

6oz. bottle makes 12 gals. capful measure.
\$3.85 ppd. Any 4-6oz. btls., \$11.85 ppd.
Free catalog write.

Dept. AHS
Deerfield, IL 60015

Clarel
Laboratories, Inc

NOW . . . BY MAIL!

**Unusual, Hard-
To-Find Flower
Arranging
Supplies:**

**Tool, Techniques,
Tricks of the Trade**

**SPECIAL OFFER—
MAKES A GREAT
GIFT:**

The Original Stem Stripper

A unique tool for removing
thorns and leaves from
stems.

only **\$9⁹⁵** ea including
postage & handling

Catalog . . . \$1.00
M.C. & VISA ACCEPTED

The Keth Company
P.O. Box 645
Corona del Mar,
California 92625



THE DESIGN PAGE

fluenced by the texture of the flowers. For example, in the White Garden I noticed that some flowers, such as the iris, were translucent, so the reflective light seemed to sparkle. Earlier in the season, the high gloss of tulip 'White Triumphator' reflected an entirely different kind of light. Whites were hard, or soft, like the clouds of small white flowers on the six-foot *Crambe cordifolia*.

Few of the flowers I observed were pure white. Many had subtle stripes or dots, or were washed with lavender, blue, yellow, or green. Some that appeared white were actually various shades of cream. Often the foliage or surrounding plants influenced how white flowers were perceived. The shimmering quality of an iris bloom, for example, was exaggerated by the high gloss of nearby *Hosta* foliage.

At dusk, the garden was undoubtedly at its best, its silver foliage luminescent and its white flowers glowing with an almost ethereal light. The scene would certainly be enough to convince most gardeners that a white garden is something worth having.

Of course, the inevitable question arose: What did this English garden, however lovely, have to do with gardening here in the United States? How could lessons in design or plant placement be relevant when a good percentage of the plants used were tender and only suitable where winter temperatures rarely dip below 20° to 25° F? One approach, of course, would be to stick to those White Garden plant combinations that are hardy from USDA Zones 4, 5, and 6. For a different approach, however, I began to wonder how the various effects might be translated as ideas rather than copied verbatim. How could we create the stylized drama of 'Iceberg' roses against a yew hedge without sticking roses in box parterres and waiting a decade or two for a yew hedge to mature? What, in our existing landscapes, could be used to create that marvelous contrast of light and dark, of white flowers floating against a background of shadows? I wondered, too, how to create a contrast of styles as satisfying as that of the cottagey scramble of perennials and the very architectural box-edged paths of the inner garden.

I shared these thoughts with a friend as we walked through his garden one sultry summer evening. Inspired, perhaps, by the thought of white roses and deep shadows, he observed that a line of mature hemlocks looked very much like the yew hedge in the White Garden. But rather than roses,

NEW!

Build a 10' x 12' portable greenhouse for under \$299!



- Attractive, specially-engineered hoop design with 4' wide beds, 2' wide door.
- Expandable in 4' lengths (no limit).
- Convenient, sturdy galvanized steel tubing/plywood/greenhouse film construction.
- Flexible enough to follow the contour of your land.
- Usually, no building permit is required.
- Easy assembly/breakdown.
- Can expand your growing season by up to 4 months!

Write today for
more information:

**HOOP HOUSE
GREENHOUSE KITS**
FOX HILL FARM
20 LAWRENCE ST. • ROCKVILLE, CT 06066

we imagined broad sweeps of late-blooming astilbes—the 18-inch 'White Gloria' and 36-inch 'Diamond'—edging the path that leads to a simple white arbor in a clearing just inside the woods. And in our imagination, all was covered with *Clematis paniculata* in late August.

From the terrace, we looked out onto a lawn, then down into an area being established as a wildflower meadow filled with bright summer flowers like *Asclepias tuberosa*, *Helianthus angustifolius*, goldenrod, and late-blooming native asters. Beyond this meadow was to be a gazebo. But thinking of the White Garden again, we realized this was our opportunity to create that contrast of styles and provide a bit of evening drama at the same time.

We could, we decided, define the boundaries of the wildflower meadow, repeating the shape of the lawn above, and divide it in half by a mown path leading to a classical, rather boxy gazebo. The gazebo could then be surrounded by squared-off areas of white, blue, and yellow perennials. To ensure a long season of bloom, we could begin the season of the formal gazebo garden with white peonies, lupine, and various iris, along with the all-important foliage contrasts; the choices for June and early July would be too numerous to mention.

August was another matter. Except for *Phlox paniculata*, it is generally a slow month for perennials, let alone "white" flowers. But looking through some old gardening books, we added a dozen or so plants to our list of "white" possibilities, including *Aconitum napellus* 'Album', *Boltonia asteroides*, *Campanula lactiflora* 'Alba', *Malva moschata* 'Alba', and *Verbascum* 'Miss Willmott'.

In addition to the contrast of formal and informal, we had conceived a rather dramatic transition into evening. During the day, the meadow would be a seasonal progression of bright colors, and the edge of the mown path would be naturalized with fragrant, white-flowered bedstraws (*Galium*). At dusk, when our eyes are less responsive to color than to amount of illumination, we would see the bright meadow and green lawn as black, while the white-edged path and the white and blue flowers around the gazebo would seem luminous, floating beyond a lawn and meadow dancing with fireflies. ☉ —Margaret Hensel

Margaret Hensel is a writer and landscape designer living in western Massachusetts.



DAYLILIES

1/3 OFF SALE

Get more for your money by acting NOW... Plus FREE "Big Name" Bonus Plant (on orders of only \$20.00 or more)

Get dazzling color and eviable gorgeous blooms THIS SUMMER, or make your home floral arrangement excitingly beautiful with WILD'S guaranteed top quality, magnificent Daylilies. A rare and limited opportunity, so select your old favorites and choose from the glamorous new varieties, all at 1/3 off prices shown (min. order \$10), plus \$3.00 packing and handling charge. Order NOW! All orders must be received by April 30, 1987.

Cat. Price	Cat. Price	Cat. Price
<input type="checkbox"/> ANNIE WELCH EM Re OE Blush pink, sunfast 2.00	<input type="checkbox"/> HALLOWELL EM Dor Re Creamy yellow & rose-pink 2.00	<input type="checkbox"/> ROYAL GARNET M Velvety garnet red, ruffled 2.50
<input type="checkbox"/> BIG WIG ML Dor Lemon or chartreuse with pink overlay 2.50	<input type="checkbox"/> JAY M Re OE Vibrant rose red, ruffled 3.00	<input type="checkbox"/> SILVER CIRCUS EM OE F Large yellow, pink infusion 3.00
<input type="checkbox"/> CANDY APPLE M Dor Re OE 6" rich pink melon 2.50	<input type="checkbox"/> JULY GOLD LM Dor Re OE 6" ruffled gold 3.00	<input type="checkbox"/> SMALL WAYS EM Dor Pale lemon yellow, green heart 2.50
<input type="checkbox"/> CAPE COD EM Re OE Ruffled, deep wine red 7.50	<input type="checkbox"/> LEMOINE BECHTOLD M OE 6-8" dusty rose 3.00	<input type="checkbox"/> STAGECOACH INN EM OE Light yellow pink 4.00
<input type="checkbox"/> CATHEDRAL ML Dor Ruffled apricot brushed rose 2.50	<input type="checkbox"/> LILLIAN FRY M Dor Re OE 3" medium yellow, apple green heart 3.00	<input type="checkbox"/> STAKE RACE LM Dor Re Long blooming pale orange yellow 3.00
<input type="checkbox"/> CHRISTMAS CAROL EM Velvety red, green heart 3.00	<input type="checkbox"/> LITTLE LOVE ML Re Excellent small melon 2.00	<input type="checkbox"/> SUMMER SPLENDOR M OE Re Apricot-buff flushed orange 2.00
<input type="checkbox"/> CONSTITUTION ISLAND EM Dor Re Ruffled deep yellow 2.50	<input type="checkbox"/> LITTLE MUCH EM, 3-1/2" ruffled yellow, red eye markings 2.50	<input type="checkbox"/> TIMELESS M Dor Re OE 8" muted ivory flesh peach 3.00
<input type="checkbox"/> CUP RACE M Re 4-1/2" salmon pink 2.50	<input type="checkbox"/> LITTLE TYKE M Dor Bright red, yellow green throat 2.00	<input type="checkbox"/> TINA RENAE EM Ruffled peach 2.00
<input type="checkbox"/> DATE BOOK EM Medium rose pink 3.00	<input type="checkbox"/> MAGIC WORD M Lovely creped pale yellow 2.50	<input type="checkbox"/> TROPIC TANGERINE EM Re Very ruffled sparkling tangerine 2.00
<input type="checkbox"/> DOLL HOUSE EM OE Extremely ruffled tangerine 5.00	<input type="checkbox"/> MATEUS EM Ruffled rose wine 5.00	<input type="checkbox"/> WESTWARD VISION EM Dor Re OE Dark velvety, wine red 3.00
<input type="checkbox"/> ETERNAL LOVE M Dor OE Light cream infused pink 3.00	<input type="checkbox"/> MYSTERY VALLEY ML Re Smooth coral pink 3.00	<input type="checkbox"/> WILD HEART ML Dor Velvety red 3.00
<input type="checkbox"/> FRANS HALS ML, Bicolor of yellow & red 2.00	<input type="checkbox"/> MY WAYS EM Dor Re OE Velvety ruffled bluish red 12.50	<input type="checkbox"/> WILD KEY EM Re 4" peach pastel 2.00
<input type="checkbox"/> GEORGE CALEB BINGHAM M Ev OE F 7-8" pink blend 3.00	<input type="checkbox"/> NOB HILL EM Re OE Large pale lavender pink 2.00	<input type="checkbox"/> WIND CHIMES EM 3" yellow melon pastel 2.50
<input type="checkbox"/> GIANT FLING EM-M OE 8-1/2" light creamy yellow 3.00	<input type="checkbox"/> PILOT LIGHT EM-M Re OE Lavender pink, large lemon heart 2.50	<input type="checkbox"/> WINE TIME EM Ev OE Velvety, deep wine red 4.00
<input type="checkbox"/> GLISTENING BEAUTY M Ruffled orchid pink 2.00	<input type="checkbox"/> PLUSH EM Ruffled, deep raspberry red 2.50	<input type="checkbox"/> WINNIE THE POOH M Adorable 3" pastel yellow 2.00
<input type="checkbox"/> GOLDEN CHANCE EM Re OE Big gold with deep red edges 3.00	<input type="checkbox"/> PRAIRIE BUTTERFLY M Dor Re 6-7" orchid pink 2.00	<input type="checkbox"/> WISDOM M Dor Re OE Buff pink melon 2.00
<input type="checkbox"/> GOLDEN GIFT M Re Outstanding brilliant gold 2.50	<input type="checkbox"/> PRECIOUS ONE EM Pale cream overlaid pale pink 3.00	<input type="checkbox"/> YOUNG COUNTESS M Re 4-1/2" pale orchid pink 2.00
<input type="checkbox"/> GREEN CANYONS M Orchid pink, green heart 3.00		

EASY TO GROW BEAUTIFUL TO SHOW

KEY TO ABBREVIATIONS:

E-Early; Ev-Evergreen; EM-Early Mid; M-Midseason; ML-Mid Late; L-Late; OE-Opens Evenings; Re-Reblooming; F-Fragrant; Dor-Dormant.

ANY \$15.00
WORTH..... ONLY \$10

Any \$22.50 worth, \$15; any \$30 worth, \$20, etc. Min. order \$15 worth for \$10. Add \$3.00 pkg. & hdlg.

BONUS PLANTS

We will send these magnificent Daylilies FREE with orders shown:

- \$20.00 Order, WILD KEY
- \$30.00 Order, PRECIOUS ONE
- \$40.00 Order, WINE TIME
- \$50.00 Order, MATEUS

"WE WILL NEVER COMPROMISE QUALITY FOR PRICE"....

John Wild

GUARANTEED SAFE DELIVERY

Wild's plants are true to name and guaranteed delivered safe. Wild's ships only large, sturdy, well-cared-for and healthy plants ready to take root and produce profuse blooms.

SEND NOW FOR OUR 96-PAGE COLOR CATALOG

Choose from more than 1300 varieties of Iris, Peonies and Daylilies. Catalog shows many in full color and gives timely planting tips and instructions. Sent FREE with minimum \$10 order...or send only \$2.00 for catalog (deductible on your first catalog order).



NO C.O.D.'S PLEASE

GILBERT H. WILD & SON, INC.
AH-687 Joplin St., Sarcoxie, Mo. 64862-0338

- Please send varieties checked. I enclose \$_____ (1/3 off total order at prepaid prices shown) plus \$3.00 pkg. & hdlg. charge. Send FREE catalog and any EARNED FREE PLANT. Missouri residents add 5.8% sales tax to order.
- Enclosed is \$2 for 96-page Color Catalog only (deductible on first catalog order).

NAME _____
ST./R.FD. _____
CITY _____ STATE _____ ZIP _____



JANE LOUDON

First Lady of Gardening

BY ELISABETH SHELDON

Much has been said and written about women who have distinguished themselves in the field of horticulture—Gertrude Jekyll, Ellen Willmott, Vita Sackville-West, Beatrix Farrand, to name just a few. But one hears very little about Jane Webb Loudon. During her lifetime, Jane wrote magazine articles and, as a journalist, covered the first big horticultural shows in England. Besides a novel and several collections of stories, she wrote 16 excellent books on gardening, botany, and natural history. These books were very popular in her day and much admired by William Robinson, who re-edited and published her *Amateur Gardener's Calendar* in 1870. Most of the material in her *Gardening for Ladies* and *Ladies' Companion to the Flower Garden* is just as pertinent today as it was in the 19th century.

Jane Webb was born in 1807 in Birmingham, England, into a non-literary, non-gardening family. Her father, a businessman, provided a governess for her and allowed her to read the books in his library. Upon the death of her mother, 12-year-old Jane traveled with her father to the Continent, where she studied German, French, and Italian. When the two returned to England to live in the country, Jane took on the task of running the house for her father. In her spare time, she drove about in her pony chaise, studied languages, sketched, and wrote verses.

This portrait of Jane Loudon, which appeared in *Lady with Green Fingers: the Life of Jane Loudon* by Bea Howe, was taken from a miniature in the possession of Loudon's great granddaughter. The miniature is the only known portrait of Jane Loudon. Portrait courtesy of the Hunt Institute for Botanical Documentation, Carnegie-Mellon University, Pittsburgh, Pennsylvania.

When Jane was 17, her father died, leaving her with little money. Unfortunately, few occupations were open to young gentlewomen at that time, and Jane's options for paid employment were limited. She could hire herself out as a governess, paint miniatures and card racks, or become a wealthy lady's "companion" (a fate sometimes even more grim than that of being a governess). She could open a school, if she knew enough wealthy people who would send their children to her. Or she could write, just as the Brontë sisters did some years later.

Young and alone, Jane set out to write books to augment her sparse income. Her first little volume consisted of one original story and translations from German, Spanish, and Italian verses. In 1827, when she was 20, she published her second book, *The Mummy*, a kind of science fiction novel. In it, a mummy of one of the Egyptian pharaohs, who has been revitalized by a scientist, stalks through England in the year 2126. The book is remarkable for its foresight. Jane describes a welfare state in which education is universal and leisure is available to all. Travel is by air (albeit by means of balloons), and communication is handled by letters and telegraphs that flash through the air to special receiving towers. Houses are air-conditioned, commodities are mass-produced, and the fields are worked by steam plows.

The Mummy was so well received that Jane proceeded to write *Stories of a Bride*, which appeared in 1829. In 1830, John Claudius Loudon included a glowing review of her work in his *Gardener's Magazine*. He wangled a personal introduction to the author, was impressed by her, and married her within several months.

John Loudon was an extremely handsome man. The son of a Scottish farmer,

he had been educated in Edinburgh, where he assiduously studied Latin, French, and Italian, as well as arithmetic, botany, chemistry, and agriculture. So bent was he on self-improvement that he established what became a regular practice of sitting up all night twice a week, studying and keeping himself awake by drinking strong green tea. Having decided that he wanted to go into landscape gardening, he apprenticed himself, as draftsman and assistant, to several nurserymen in succession.

In 1803 John went to London to seek his fortune as a landscape gardener. By the time he met Jane Webb 27 years later, he had made a name for himself in the horticultural world. Among his many accomplishments, he had already published numerous articles and at least 12 books, including encyclopedias on agriculture, gardening, and plants. His *Hortus Britannicus* came out in 1830, the year of his marriage. (He was dictating to his secretary as he was being dressed for the wedding ceremony.) At the time he and Jane met, he was also editing two magazines, one on gardening and the other on natural history. Besides his literary and design work, John had traveled widely in Europe, and had run a school at which he taught Scottish methods of agriculture. He also found time to build a duplex on Porchester Terrace, in semi-rural Bayswater, near London.

John was extremely productive, in spite of tremendous physical handicaps. He suffered attacks of what was thought to be rheumatism. The pain in his right arm was so intense that he submitted to treatment by some bungling masseurs who succeeded, over a period of months, in breaking the arm in two places. In 1824, when it had failed to mend, his right arm was amputated. His left arm also was affected,

It is difficult to imagine how Jane managed to work on publications of her own along with those of her husband. Despite her heavy workload, however, her books came thick and fast following her debut as a horticultural writer.

and he could use only two fingers of his remaining hand. In addition, one of his knees gave him trouble. Even with these disabilities, however, he forged ahead, never breaking his pace.

Life at Porchester Terrace must have been something of a shock to Jane, who was plunged into a world of horticulture and hard work immediately upon arriving in her new home. The Loudon house, complete with a domed conservatory, stood on about one-quarter of an acre of land, which was filled with nearly 3,000 species of plants—annuals, bulbs, perennials, vines, trees, and shrubs. There was also a border of mosses as well as a saltwater tank containing a collection of seaweed. In addition, on a stone shelf in one of the garden sheds was a collection of 600 alpiners in small pots. During the year of his marriage, John planted 58 new trees and shrubs, which he planned to keep under control by drastically pruning the roots in alternate years.

The plants in the garden, conservatory, and potting sheds required constant care, and there was only one part-time gardener available to help. Jane's meticulous husband hated untidiness or "tawdriness"; everything indoors was kept clean and in its proper place, and plants were trimmed, staked, labeled, and kept free of weeds. The lawn had to be cut with hand shears to prevent the thousands of bulbs that inhabited it from being damaged. During periods of dry weather or other times of "crisis," all the women in the house had to pitch in to keep the plants alive, including the two servants, Jane's sisters-in-law, and Agnes, the Loudons' only child, once she was big enough to help.

Still, the worst of the routine at Porchester Terrace was not the feverish activity of the daylight hours but the demands of the night shift. Jane became her husband's writing hand, and every evening the two stayed up until midnight working on the next issue of *The Gardener's Magazine*, or on whatever book John had in hand. In 1832, the year Agnes was born, he began

his *Encyclopedia of Cottage, Farm and Villa Architecture*, and the pace increased. Jane wrote, "The labour that attended this work was immense; and for several months he and I used to sit up the greater part of every night, never having more than four hours' sleep, and drinking strong coffee to keep ourselves awake."

John also continued to travel, taking in the sights—palatial residences and gardens, smaller country houses, inns, factories, public buildings, cemeteries, and schools—and recording his observations in the pages of his magazine. The accounts of his tours included information about the trees, wildflowers, agricultural practices, and even the condition of the laborers' cottages, and provide a wonderful picture of the English countryside in the 19th century.

John Loudon's greatest work was his *Arboretum Britannicum*, a book that lists and describes all of the trees in Great Britain, both native and introduced, in great detail. According to Miles Hadfield in his *History of British Gardening*, this book alone would have been enough to immortalize John. It was produced in monthly numbers, with no financial backing except what the author could obtain from subscriptions. He was resolved that all of the drawings of the trees should be made from nature and that the work should be "perfect," in spite of the immense labor and expense involved. During the same period, he also started two new periodicals: *The Architectural Magazine* and *The Suburban Gardener*.

In spite of all of John's efforts, the *Arboretum Britannicum*, far from making money, left him deeply in debt. To add to this misfortune, John could no longer walk without assistance. Jane began to write books again, while her sisters-in-law took up wood engraving. The women hoped to be able to earn enough money so that John would not have to resume work as a landscape gardener. Notwithstanding Jane's pleas, John struggled on, visiting gardens

and taking on more assignments.

During these unfortunate times, Jane found her horticultural knowledge to be invaluable. In order to help maintain the property and help her husband over the years, she had learned much about plants and how to grow them. In the introduction to her book *Gardening for Ladies*, she notes the extent of her ignorance in the earlier years of her marriage: "When I married Mr. Loudon, it is scarcely possible to imagine any person more completely ignorant than I was, of every thing relating to plants and gardening; and, as may be easily imagined, I found every one about me so well acquainted with the subject, that I was soon heartily ashamed of my ignorance."

She had tried to increase her knowledge by reading gardening books, only to find that they didn't teach what an amateur needed to know. Learning from her husband had also proved difficult. "We both found unanticipated difficulties at every step," she wrote. "It is so difficult for a person, who has been acquainted with a subject all his life, to imagine the state of ignorance in those who know nothing of it, that a professional gardener has rarely patience to teach anything to an amateur." However, after reading, working with plants, and attending botany lectures at the Horticultural Society, little by little Jane had become a horticultural authority in her own right.

By the time Jane resumed writing books, then, she had acquired enough knowledge about plants to write about them. Early in 1840 she started working on *Gardening for Ladies* and had it finished by May. When it appeared in that same year, it was an immediate success and soon found a place in the homes of all of the well-to-do women who were interested in creating beautiful gardens on their properties. A few ladies' gardening books had already appeared, but they were neither as helpful nor as well written as Jane's. Jane, herself a relative newcomer in the field, knew exactly what other amateur gardeners needed

to know. Furthermore, instead of using the usual flowery and poetic language of her fellow Victorians, she wrote clearly and directly. The sun was the sun, not “that bright luminary”; a spade was a spade, and manure was manure. In her book, Jane tells her readers not only *how* to do things but *why* they should be done, from “stirring the soil” to grafting and budding, dividing, and pruning. (*Gardening for Ladies* is one of the few gardening books to have ever explained why it is best to move plants from a small pot into one that is only slightly larger, and why plants should be given shade after they are transplanted.) Her chapter on sowing seeds is of value for all modern gardeners. Her book also provides instructions on how to dress practically for garden work, what kind of light-weight tools to use, and how to make the necessary motions efficiently in the garden. In one section, she notes that when a lady has successfully dug a small garden herself, she “will not only have the satisfaction of seeing the garden created . . . by the labour of her own hands, but she will find her health and spirits wonderfully improved by the exercise, and by the reviving smell of the fresh earth.”

Also published in 1840 was the first volume of Jane Loudon’s magnum opus, *The Ladies’ Flower Garden*, a five-volume series dealing with annuals, biennials, bulbs, perennials, roses, shrubs, and hothouse plants. (It is still collected today, partly for its very fine color illustrations, which were drawn from nature on zinc.) John himself, a “perfectionist and ruthless critic of others,” wrote, “Though the production of a member of our family, we think it but justice to state that this is an elegant work, and one which will be found no less beautiful than it is useful.” He was proud, too, of his wife’s *Botany for Ladies*, published in 1842. John called it the best introduction to botany for women or men that had ever been written.

It is difficult to imagine how Jane managed to work on publications of

her own along with those of her husband.

Despite her heavy workload, however, her books came thick and fast following her debut as a horticultural writer. Two more appeared in 1841: *The Ladies’ Companion to the Flower Garden* and the second volume of *The Ladies’ Flower Garden* series. In the latter book, which deals with bulbous plants, she speaks of small gladiolas, “the colours of whose petals at sunset take a curiously shifting hue like that of shot silk when held up to the light.” She goes on to suggest that they be placed where the rays of the setting sun can illuminate them, and points out that they are “sweeter-smelling by far at dusk.”

John continued to take on one assignment after another, working like one possessed. By 1843 his condition had markedly deteriorated. He was working for new clients, laying out cemeteries and grounds, which he had to inspect from a wheelchair. In a race to beat death, he began working all day and dictating to Jane most of every night. One of his creditors began to harass him, threatening him with debtor’s prison. Jane wrote, “Nothing could be more awful than to watch him during the few weeks that yet remained of his life. His body was rapidly wasting away; but his mind remained in all its vigour, and he scarcely allowed himself any rest in his eagerness to complete the works that he had in hand.” Finally, one day he died on his feet while dictating to his wife.

After spending some months recuperating, both physically and emotionally, Jane slowly began to work again. However, the garden proved to be a tremendous burden to her. She felt obliged to keep it up for her husband’s sake, but couldn’t afford even a part-time gardener. Eventually, after heroic efforts, she had to get rid of all but the essentials. *Continued on page 32*



Botanical Prints

BY MARGARET PARKE

Several years ago I attended a garden club meeting in New Jersey to hear a talk on botanical prints by Oriel Kriz, a dealer in the New York City area.

Ms. Kriz was surrounded by sample prints from her collection, from charming drawings of herbs and flowers in delicate colors, to striking illustrations of fruits and vegetables featuring strong architectural lines. I was especially intrigued by a magnificent 17th-century engraving of *Poma amoris fructo luteo*, a tomato plant with orange-red fruit from Basilius Besler's *Hortus Eystettensis*, published in 1613. The engraving was made about the time the "love apple," which was thought to be poisonous, was introduced from the New World. According to Ms. Kriz, Besler's engravings are distinguished by their beauty, size, accurate botanical detail, and dramatic graphic quality, and are among the most highly prized of all antique botanical prints collected today.

I left the meeting carrying my first botanical print—an enchanting color engraving of a group of roses from Dr. Robert John Thornton's *Temple of Flora*, perhaps the most famous florilegium of the 19th century. (The plate shows a bird and

five fledglings in a nest amid a bouquet of roses; in the background is a storybook castle, with smoke curling from a tower.) Since then, I have spent many happy hours rummaging for prints at garage sales and old print shops, and admiring botanical art at posh galleries and museum exhibits.

Botanical prints are plant illustrations from early printed works—mechanical reproductions of one kind or another of an artist's original drawings. As "collectibles," they are riding the crest of popularity today. Sought for their historical or botanical associations, or simply for their enormous visual appeal, they are valued as works of art and can be quite costly.

Botanical illustrations began when cave-men first drew pictures of plants with sticks or stones, perhaps to describe tasty edibles to other members of their tribe. We know that the ancient Greeks and Romans studied plants for their curative powers, and wrote herbal manuscripts that were accompanied by drawings. None of these manuscripts survived, except for copies of *De Materia Medica*, written in the first century A.D. The original herbal was written by Dioscorides, a Greek doctor who traveled widely and wrote about 500 plants and their healing properties. His work served as the basis for future botanical studies and was the chief source for pharmaceutical information.

For the next 1,000 years, scribes copied and re-copied Dioscorides' work by hand

until the drawings became so inaccurate that they scarcely resembled their classical models, much less the actual plants. Although such illustrations are botanically inaccurate, many are graphically appealing and highly individualistic.

The new spirit of scientific inquiry that characterized the early Renaissance changed the course of botanical art. Artists such as Leonardo da Vinci and Albrecht Dürer began again to look to nature for inspiration, and worked from living plants or dried specimens.

The invention of the printing press made it possible for multiple copies of drawings to be widely disseminated for the first time. The earliest printed botanical pictures appeared in the mid-1480's, and were produced from woodcuts. (In this technique, the image is drawn in ink on a smooth block of wood, and the entire surface is cut away, except for the drawn lines, which are then inked and transferred to paper.) Although this crude process limits the rendering of fine details, many of these early woodcuts are remarkably charming, and are desirable collector's works because of their great age and rarity.

Most old prints were published as part of elaborate books on botany. To offset the heavy expense of producing these illustrated works, publishers often issued and sold sets of plates, sometimes a chapter at a time, instead of waiting for the entire work to be completed.

There were many worthy illustrated herbals printed in the 16th century, but none eclipse Otto Brunfels' *Herbarum Vi-*

Robert John Thornton's *Temple of Flora* contained many fine illustrations that are now coveted by collectors, including "Tulips" by Philip Reinagle. This print is a mezzotint, a type of engraving. The illustrations for this article are courtesy of the Hunt Institute for Botanical Documentation, Carnegie-Mellon University, Pittsburgh, Pennsylvania.



Tips for Amateur Collectors

How does one begin a collection of botanical prints? "Try to decide what direction you want your collection to take, and then begin to form it," suggests James White, Curator of Art at the Hunt Institute for Botanical Documentation in Pittsburgh. Does the work of one artist appeal to you? Are you wild about roses? Clematis? Leeks? Is tropical flora your thing? Evergreens? If you find that it is difficult to narrow the choices down, there is no harm in flitting, for example, from a fruit print by George Brookshaw to a Christmas rose from Elizabeth Blackwell's studies from the Chelsea Physick Garden. Your perspective and tastes usually change with time and exposure, and it's not uncommon to want to exchange or sell a quality print you've acquired early on.

Knowledge about which prints to buy comes from research and experience as you go along. As a collector, you will be rewarded for your efforts with continual stimulation and occasional delightful surprises.

Train your eye to recognize the best works by visiting museums and galleries that exhibit prints. If you're serious about collecting, it's also a good idea to get to know the dealers and to become familiar with what's available. One way to do this would be to visit the Hunt Institute, which houses a collection of rare books containing botanical plates, antique prints, and original botanical art. The Hunt Institute also stages international exhibits of botanical prints every five years. The catalogues from these shows give a good overall picture of what's happening in the field of 20th-



century botanical art and illustration. There are many contemporary botanical illustrators doing fine work that is worthy of collecting, and if aesthetics—not age or rarity—is your prime consideration, you should investigate this market.

If your appetite is whetted but you feel that owning fine prints is beyond the reach of your pocketbook, you might consider the prints from *The Botanical Magazine*. This spectacularly successful periodical was first published by William Curtis in London in 1787 for the new breed of passionate gardeners, and is still going strong. When it first appeared, it carried excellent hand-colored engravings. For economic reasons, these were gradually replaced by hand-colored lithographs, and finally in 1948,

by modern color prints. The magazine is still used as a reference tool in the plant sciences, and includes fine illustrations by such artists as Walter Hood Fitch, Matilda Smith, Otto Stapf, A. Kellert, B. M. Baggs, Stella Ross-Craig, and Lilian Snelling.

Prints can sometimes be found at reasonable prices in antique print shops and bookstores. Such prints offer a collector with a limited budget all the qualities associated with great botanical engravings. "The only thing lacking is size," according to New York dealer Oriel Kriz. Prices range from about \$25 for a recent print to slightly higher prices for older hand-colored prints.

Unfortunately, some dealers buy rare books and then take them apart in order to sell individual plates. Reputable dealers deplore this practice (called "book breaking") but concede that there is little anyone can do

to stop it.

The chances are good that the current popularity of prints will continue unabated, so if you should decide to sell your collection, your initial investment, at least, can be recovered. However, you should look for rips, repairs, and foxing (discolored spots from aging or from acidic materials used in framing) when considering a print, since such imperfections could diminish the ultimate resale value.

If you acquire a fine print, make sure it is properly framed, maintained, and displayed. "After all," Ms. Kriz says, "when you own a fine print, what you are holding is a record of human progress, and a responsibility goes along with that privilege."

vae Eicones (Images of Living Plants), printed in Strasbourg in 1530. The appearance of this work marks the true beginning of botanical illustration in Europe. Hans Weiditz, an associate of Dürer, made the woodcuts using live plants as models. His images, described as showing “refreshing accuracy and vigor,” set a standard that is unsurpassed.

Leonhard Fuchs seems to have been even more scrupulous in *De Historia Stirpium*, published in 1542 in Basel. Fuchs was a doctor whose services during the plague epidemic in 1529 earned him widespread respect and affection. (The American genus *Fuchsia*, which he never saw, was named after him.) He wrote in his preface: “As far as concerns the pictures themselves, each of which is positively delineated according to the features and likeness of the living plants, we have taken peculiar care that they should be most perfect; and we have devoted the greatest diligence to secure that every plant should be depicted with its own roots, stalks, leaves, flowers, seeds and fruits. Furthermore, we have purposely and deliberately avoided the obliteration of the natural form of the plants by shadows, and other less necessary things, by which the delineators sometimes try to win artistic glory: and we have not allowed the craftsmen so to indulge their whims as to cause the drawing not to correspond accurately to the truth.”

The work of Fuchs’ contemporary, Pierandrea Mattioli (1501-77), was not nearly as reliable. Mattioli’s famous *Commentarii in Sex Libros Pedacii Dioscoridis* (1544) was illustrated with 562 woodcuts, which showed more use of shading than did the works of Fuchs and Brunfels. Moreover, in one of his letters, Mattioli says that an artist whom he had employed lost the specimens to be illustrated, so the plants were drawn from memory!

During the 16th century, the voyages of discovery brought an influx of strange plants to Europe from all over the world. Botanists and illustrators often accompanied

explorers to study exotic plants, and botanical institutions and wealthy patrons subsidized many new plant introductions, including chocolate, pineapple, coffee, tobacco, and bananas. Tulips were seen by Europeans for the first time, and crown-imperials, horse chestnuts, mock oranges, hyacinths, and lilacs became popular subjects for artists. Plant breeders produced new colors and double forms of native European plants, such as *Convallaria*, *Anemone*, *Viola*, *Primula*, *Dianthus*, and *Centaurea*. Wealthy flower enthusiasts proudly displayed these new ornamentals in splendid pleasure gardens. Many hired artists

to record their favorite blooms, then had the drawings bound in volumes or reproduced in printed folios.

Early in the 17th century, another sort of botanical publication made its debut: the florilegium, or picture book of flowers. The most famous, Dr. Robert John



LEFT: Striking illustrations were produced for strictly botanical works, as well as for many books on gardening. This bouquet, containing poppies, bloodroot, *Meconopsis*, and *Argemone*, is a hand-colored, chalk-style lithograph from Jane Loudon’s *The Ladies’ Flower-Garden of Ornamental Perennials*, published in London in 1849. RIGHT: “*Amaryllis formosissima*,” a stipple engraving by Pierre-Joseph Redouté, from his *Les Liliacées*, published in Paris between 1802 and 1816.



I. *PVNICA* foliis lineari-lanceolatis, caule arborescente, flore majore. Mill. Gard. Dict. n. 1.
 II. *PVNICA* flore pleno majore. Inst. R. Hort. 636.
 III. *PVNICA* foliis linearibus, caule frutescente, flore minore. Mill. Gard. Dict. n. 2.

a. a. flor clausus, b. b. perianthium semiquinquiesidum, c. d. corolla, e. f. calice paratum, k. k. l. l. stamina calyci adnata, m. tale separatum magnitudo naturalis, n. aucta, o. ovarium, f. germen calyce reconditum, q. idem perpendiculae dissectum, p. omnium rudimenta, r. v. operculum germinis verticaliter dissectum, s. s. stylus cum stigmae capitato, t. t. ovaria fecundata diverse magnitudinis verticaliter dissecta, u. u. Punicæ nanæ floræ in situ diverso et magnitudinis naturalis.

Thornton's *Temple of Flora*, features flowers against backgrounds that were thought to be suitable to the origin of the plants. In fact, the settings are more romantic than representative of the plants' native habitats.

Other notable works in this genre include those by the French artist Nicolas Robert (1614-85). Not only did Robert create beautiful floral illustrations, he also made major contributions to books on plant histories. These books constitute a valuable record of plants that were in cultivation in the artist's day.

At approximately the same time the florilegium appeared on the scene, artists began to use two new techniques: engraving and etching. These methods aided scientific study because features of plants could be delineated more accurately than was possible with woodcuts. (In engraving, grooved lines are incised in a metal plate using a hand-pushed tool called a burin. In etching, a needle is used to scratch lines through a wax-like ground covering a plate, which is then subjected to an acid bath; the acid "bites" into the plate along the lines where the metal has been exposed. In both processes, ink is rubbed into the recessed lines and then transferred to paper under pressure.) Etchings and engravings can be refined by using closely spaced, hatched lines, or dots (stipple), for shading and tonal gradations.

By 1800, printing in color had been widely adopted, and finishing washes of color were done by hand. Color increased the aesthetic appeal of prints, which now had much of the character of the original watercolor paintings that were copied. J. W. Weinman's *Phytanthoza Iconographia* (1737-45) was among the first botanical works to include color printing. (Weinman's prints of aloes in decorative pots often turn up at exhibits and print sales.)

As printing techniques became more sophisticated, they were used in combination with each other. By the end of the 18th century, many artists combined several different techniques to create individual prints.

The widespread interest throughout Eu-

rope in new plants paved the way for the publication, in 1753, of the most renowned botanical publication of the 18th century, Carolus Linnaeus's *Species Plantarum*. The binomial system of classifying plants and animals introduced by Linnaeus was readily adopted, and publishers quickly re-issued earlier works to reflect the new names. As a result, many illustrations had two versions of the same title. (Almost 200 years later, Otto Stapf helped put an end to the confusion with his *Index Londinensis*, first published in 1929. This reference, available at botanical libraries, lists sources for most plant illustrations published after Linnaeus's book appeared.)

The "Golden Age" of plant illustration lasted from about 1700 through the third or fourth decade of the 19th century. Among the important figures of this era were the Bauer brothers, Ferdinand and Franz. Aubriet, Turpin, Pancrace Bessa, and William Baxter were also giants in the botanical art world.

One of the best-known botanical artists of the "Golden Age" was German-born George Dionysius Ehret, who worked in England. Ehret provided as many as 500 illustrations for J. W. Weinman's eight-volume *Phytanthoza Iconographia* (*Illustrated Record of Flowering Plants*), be-

gun in 1737. His *Plantae Selectae* was fashioned for the carriage trade, and the first letter of the title of each print was printed in gold leaf (now a way of verifying authenticity).

Another artist known for his "artistic vision, botanical accuracy and sheer quantity of output" was Pierre Joseph Redouté, whose exquisite flower paintings for *Les Roses* (1817-24), *Les Liliacées* (1802-16), and two splendid volumes on the flowers of Malmaison, are legendary. (The original 468 watercolors for *Les Liliacées* were sold at an auction in New York last year for a record \$5.5 million.) Redouté came from a long line of Belgian painters and arrived in France at the age of 23 to pursue his art. No doubt royal patronage, especially that of the Empress Josephine, helped him to become the most popular flower painter in the history of botanical art. He was also fortunate to have a brilliant team of stipple engravers and printers to translate his drawings into prints.

The death of both Redouté and Turpin in 1840 marks the end of the great age of botanical illustration. Works of considerable value to botany continued to be produced into the 20th century, but the state of the art in general was stifled by Victorian sentimentality, as well as novel color-printing processes and the advent of photography.

A few years before the two great botanical artists died, a new process, lithography, had begun to make its mark on botanical art. (Lithography, based on the antipathy between oil and water, allows an image to be drawn with a greasy crayon on a stone plate, and then wetted and inked.) Using this method, large editions of illustrations could be reproduced faster, easier, and cheaper than ever before. Fine gradations of tone could be achieved, and the prints were usually hand-colored.

From about 1830 onward, most botanical works—especially monographs (illustrated works devoted to a single group of plants, often a family or genus)—were printed as lithographs. (The prints of James Bateman's orchids in *Orchidaceae of Mexico and Guatemala* (1837-43) are examples of magnificent lithographs.) Today, botanical illustrations are usually reproduced using any one of a number of photomechanical processes that are now available. ♣

Margaret Parke, a resident of Bedford, New York, is an avid gardener, writer, and amateur collector of botanical prints.

LEFT: This hand-colored etching of *Punica* is from Christoph Jacob Trew's *Plantae selectae*, published in Nuremberg between 1750 and 1773. RIGHT: *Mespilus odoratissima*, commonly called sweet-scented hawthorn, depicted in a hand-colored engraving by J. Curtis, from *Curtis's Botanical Magazine*, 1822.





LIATRIS

BY STANLEY M. HARMON

It has been said that familiarity breeds contempt. Evidently, this is the reason Americans were slow to add such common native plants as black-eyed Susans, goldenrod, and spiderwort—which thrive all around us without effort on our part—to their perennial or wildflower gardens. Ironically, many of the cultivated varieties of the native plants that we grow today were hybridized in Europe and then exported back into this country before they became popular here. *Liatris*, one of the most attractive of all plants native to North America, also falls into this category. In fact, many Americans who are familiar with *Liatris* were introduced to the plant through the cut flower trade, because *L. spicata* is grown in Europe on a large scale and imported into the United States as cut flowers. Many of the popular garden cultivars of this species also were developed abroad.

Members of the genus *Liatris* are all erect perennial herbs that belong to the sunflower family, Compositae. Most species have closely spaced, alternate, grass-like leaves, and all have a simple or few-branched stem. The flower heads are borne along a spike or raceme. Although some white-flowered cultivars have been developed for the garden, *Liatris* most often bear showy, rose-purple flowers. These striking blossoms appear over a three- or four-week period, from midsummer to early fall, depending upon the species and the geographical location. Surprisingly, the flower heads at the top of the stem open first, followed by the heads located further down from the tip. (This characteristic makes *Liatris* an excellent cut flower, because the top of the spike can be removed as the older flowers fade.)

The basal foliage of all but a few species of *Liatris* is grass-like during the early stages of growth and is easily overlooked in the



LEFT: In a garden or meadow, *Liatris* are magnets for showy pollinators such as this tiger swallowtail butterfly. RIGHT: A clump of *Liatris spicata* growing at the U.S. Botanical Garden in Washington, D.C.

wild. As the plant develops, it becomes increasingly more attractive. Blooms appear unexpectedly in abandoned fields or along roadsides, to the surprise and delight of the unsuspecting wildflower lover.

All *Liatris* species are hardy and extremely drought-tolerant. Most prefer well-drained soil and do best in an open, sunny location. Generally, species grow from corms or have shallow, bulbous rootstocks that help the plant resist drought. Although a few species thrive in wet meadows, over-watering during the flowering period can be fatal for most *Liatris*, since the flower stalk and basal leaves are very susceptible to fungus attack. (One exception is *L. graminifolia*, a slender, highly variable species that occurs throughout much of the Atlantic coastal plain. It tolerates frequent watering during the flowering stage and is thus a good candidate

for culture where summers are often wet.) This problem can be avoided by planting *Liatris* in raised beds containing well-drained soil, or by planting at the crown of widely spaced rows that allow watering from the furrow without wetting the base of the plants.

While photographing *Liatris* in public gardens in the Washington, D.C., area, I have been gratified to learn that my own appreciation of these plants is shared by others, many of whom I suspect are unfamiliar with *Liatris* in the wild. These showy plants are indeed eye-catching, and fully deserve the common name blazing-star. Gay-feather, another familiar name often applied to these striking plants, also refers to the showy, feather-like flower spikes.

About 40 species of *Liatris* are found in scattered locations throughout the United States and Canada. (Eight species are found in West Virginia alone.) *Liatris* species have three somewhat overlapping natural ranges. Some species, such as *L. novae-angliae* (commonly called New England blazing-star, and sometimes listed as *L. borealis*), are found mostly in the Northeast and in other northern states east of the Mississippi River. Others, such as *L. microcephala* and *L. squarrosa*, are primarily found in the southern states. *L. ligulistylis* and *L. punctata* are western species that are usually found in states west of the Mississippi River. A few species of *Liatris* have very restricted ranges and have been included on the federal list of endangered species. These include *L. helleri*, an inhabitant of acid soils and granite ledges in the Blue Ridge Mountains of North Carolina; and *L. oblingerae* and *L. provincialis*, which have very restricted ranges in Florida.

According to The New York Botanical



Jessie Harris

ABOVE: As its common name suggests, New England blazing-star (*Liatris novae-angliae*, sometimes listed as *L. borealis*) is native to the northeast. It is also found in northern states east of the Mississippi River. RIGHT: There are a number of white-flowered cultivars of *Liatris* that are popular garden subjects. Pictured is *Liatris scarosa* 'Snow White', growing at the Chicago Botanic Garden.

Garden's *Wildflowers of the United States*, although the genus *Liatris* is easy to recognize, "the species have been—and may be—badly confused. The reason for this is their propensity for crossing in nature, with the formation of plants with intermediate combinations of characteristics. Moreover, the only valid means of identifying the species involves the hand magnifier: one must examine the pappus [the feathery bristles on the achene, or fruit] and even count the flowers in several flower heads."

L. spicata, commonly called dense blazing-star or spike gay-feather, ranges from Long Island, New York, west to Michigan, south to Louisiana, and east to Florida. Hardy to USDA Zone 4, it usually grows to a height of four or five feet, and has a spiked inflorescence of small, rose-purple, star-shaped flowers. A pair of twisted styles protrudes about one-half inch from the corolla, giving the flower spike a feathery appearance—hence the common name gay-feather. Cultivated forms of *L. spicata* include a white-flowered cultivar called 'White Spire' and a very popular dwarf cultivar called 'Kobold'.

My personal favorite, *L. scariosa*, occurs in dry fields and on shale barrens of the Appalachian Mountains, from southern Pennsylvania to Georgia and South Carolina. It is hardy to Zone 4, and bears large, hemispheric flower heads on one- to two-inch stems. The blooms appear from mid-August to late September. The leaves are broader and less grass-like than those of most other *Liatris*. Besides the typical rose-purple form, a white cultivar named 'Snow White' is available.

L. aspera is a tall, sturdy, drought-resistant species that is found growing in dry soil from Ontario to North Dakota and south to Florida and Texas. Probably hardy to Zone 3, it has been grown in gardens to a limited extent in this country and is especially recommended for cultivation in untended wildflower meadows. Likewise, *L. squarrosa*, commonly called colicroot blazing-star, thrives in poor soil and is an ideal candidate for untended plots. Found in dry, open woodlands from Delaware to South Dakota and south to Florida and Texas, it is hardy to Zone 4.

Liatris pycnostachya, commonly called Kansas gay-feather, is a popular garden plant. Native to moist prairies and wood-

lands from Indiana to South Dakota and south to Texas, Louisiana, and Florida, it reaches a height of five feet. The species is drought-resistant, but it is best grown in moist, well-drained soil. Although listed as hardy to Zone 3, north of Zone 5 a thick winter mulch is beneficial. The flower spikes are densely covered and very showy.

Liatris are often ignored here in their native land for a number of reasons. Probably the most important is that colonies of all but a few species occur in widely scattered locations throughout their natural range. *Liatris* cannot tolerate repeated disturbance such as mowing or grazing, and are rarely found in urban or suburban settings unless cultivated. They are usually uncommon even in rural areas. Another reason is that most *Liatris* bloom during the dog days of summer, when few of us visit the hot, open waste places where they seem to thrive. In the Mid-Atlantic states, they are perhaps most often viewed from the window of an air-conditioned car or from the shade of a nearby tree.

Growing these beauties in our gardens allows us to appreciate them (and the many interesting and attractive pollinators lured to their showy flowers) without undue discomfort during hot summers. Gardeners can find rootstocks and seeds of several species of *Liatris*—most notably *L. spicata*, *L. pycnostachya*, and *L. scariosa*—from both local and mail-order sources. (See "Sources" on page 34 for a list of mail-order companies that offer *Liatris*.)

Liatris can be propagated from seed or by division. In *Growing and Propagating Wild Flowers*, author Harry Phillips suggests the following easy sowing method: "When the nutlets are ripe, merely cut the flowering stalk and lay it down in an outdoor seedbed or in the cold frame and cover with a half inch or so of soil; look for seedlings the following spring." Seeds can also be sown in flats in late winter. Fill flats with a mixture of sandy loam and compost, and leave them in a sunny location. A medium temperature of approximately 70° F hastens germination, which should take two or three weeks. Thin the seedlings (which look like tufts of grass and are very slow-growing) as needed, and allow them to remain in the flat undisturbed until they are well rooted. Transplant to pots, if necessary, when the plants

To propagate by division, lift the plants in very early spring, before the first leaf buds break, and divide with a sharp knife or pruning shears.



Paul Kingsley

have outgrown their flat. (The roots are quite fragile; transplant with care.) Seedlings of a few species can be transplanted to the garden in early summer, but most will probably be too small to transplant before fall and will not bloom until the following summer. Some sources indicate that germination is improved if *Liatris* seed is nicked before sowing and then subjected to a three-month period of cold stratification (40° F).

To propagate by division, lift the plants in very early spring, before the first leaf buds break, and divide with a sharp knife or pruning shears. Re-plant the divided clumps and water thoroughly.

Several species of *Liatris* have been found to contain potentially useful medicinal substances ranging from anti-tumor agents to a substance that promotes healing of peptic ulcers. One such species is *L. squarrosa*, colicroot blazing-star. Like other *Liatris* species, it is a virtual magnet for pollinators. This lovely plant occurs abundantly to the west and south of Washington, D.C., on the Civil War battlefields of Bull Run, where it blooms on the anniversary dates of the battles. During the spring of 1986, a group of volunteers from the Virginia Wildflower Preservation Society rescued more than 40 of these plants from construction sites near Manassas, Virginia, and transferred them to the Wildflower Meadow at the American Horticultural Society's River Farm headquarters near Mount Vernon. The fact that most of them survived the driest spring and summer on record is a testament to the drought resistance of this species.

Hardiness and genetic diversity, not to mention many other fine attributes, make *Liatris* ideal for cultivation. Not only do the many species delight and charm us with their beauty, they seem to be a balm for our bodies as well as for our souls. Indeed, our horticultural friends in Europe have served us well by bringing to our attention these striking natives of our shores. ●

Stanley M. Harmon, a microbiologist for the Food and Drug Administration in Washington, D.C., has been an admirer of *Liatris* for many years. In addition to growing these showy plants in his own garden, he has been helping establish *Liatris* plantings in the Wildflower Meadow at River Farm.



Longue Vue

In the heart of the South lies a grand city estate that remains the "Great Showplace of New Orleans."

TEXT BY DORIS M. STONE
PHOTOGRAPHY BY ROGER W. STONE



FAR LEFT: The main fountain at Longue Vue's Spanish Court provides a spectacular view of the south facade of the house. ABOVE LEFT: The Whim House, the guest house at Longue Vue, sports a charming patio garden featuring yellow flowers. ABOVE RIGHT: A contemporary fountain designed by Lin Emery is one of six fountains found in small courtyards along the edges of the lawn leading to the house. This area is known as the Spanish Garden. LEFT: A tree-lined avenue of live oaks leads from the Entrance Court to the house.

Forty-three blocks from the French Quarter in New Orleans lies a magnificent garden reminiscent of the lavish country estate gardens of England. Known for its picturesque gardens, unique fountains, meticulously mown lawns, and pristine displays of carefully manicured plants, Longue Vue is a formal, eight-acre city estate garden that was once the home of Edith and Edgar Stern.

Mr. Stern was a wealthy businessman from a prominent New Orleans family; Mrs. Stern, from Chicago, was the heiress to the Sears, Roebuck fortune. The Sterns were both noted philanthropists and active patrons of the arts. Among Mrs. Stern's many accomplishments was the co-founding (with other parents) of two private schools—one, among the South's finest nursery schools, and the other, Louisiana's first college preparatory country day school.

The Stern family first built a house on the property in 1923, but by 1936 they had outgrown it and decided to replace it with a larger building. Completed in 1942, the Neo-Palladian mansion we see today was large enough for lavish indoor-outdoor social events and was better integrated with the gardens than was the former house.

Horticulture was a special interest of Mrs. Stern. For many years she was a member of the Garden Study Club of New Orleans and frequently served as chairman of its various committees. When the new house was built, she was determined to have the gardens extend the living quarters outdoors. For a long time, she had also wanted to display some of the more interesting wildflowers of her adopted state. To this end, she employed the landscape architect Ellen Biddle Shipman, who had

successfully designed the Sarah P. Duke Gardens in Durham, North Carolina.

Essentially, the estate as designed by Shipman consisted of a large main garden, which served as the south vista to the house; a walled kitchen garden containing vegetables and herbs; and a wildflower garden featuring some of Louisiana's native plants. Interconnecting these was a series of small garden "rooms" and patios, hidden away behind shrubbery. The main axis of Shipman's south garden ended in an Italian *tempietto* and a reflecting pool.

Since the design of the new residence incorporated many local historic details, Mrs. Stern eventually decided to remodel parts of the gardens to emphasize Louisiana's Spanish heritage. In 1966, William Platt, who had been the architect for the mansion and had learned much about landscape design from Ellen Shipman, ac-

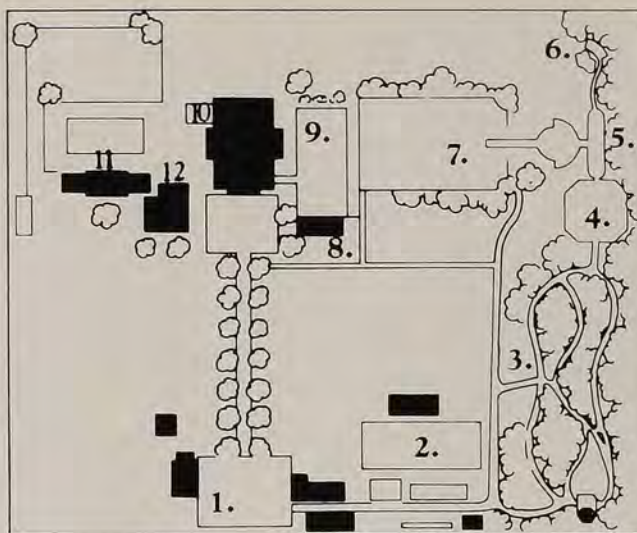
accompanied Mrs. Stern to the Iberian Peninsula to see the Spanish gardens firsthand. Inspired by the Generalife Gardens of the Alhambra in Granada, on their return they set about transforming the main garden at Longue Vue into what is now known as the Spanish Garden.

Today, Longue Vue's most distinctive feature is its Spanish-Moorish water garden. From the former reflecting pool, 10 pairs of tall water jets—visible from the house—now spout upwards in graceful arcs. Behind is a round pool, which was decorated at the time of my visit with Easter lilies and geraniums in pots, in the style of the Alhambra. The tempietto has been replaced by a curved Spanish loggia, which is laterally extended by two brick walls. This area, known as the Spanish Court, has permanent plantings of leadwort (*Plumbago auriculata*), *Cleyera japonica*, and lilies-of-the-Nile (*Agapanthus africanus*) against its south-facing walls. The more cold-tolerant sweet olive (*Osmanthus fragrans*) and false holly (*Osmanthus heterophyllus*) are in raised beds against the east and west walls. Decorative tender and seasonal perennials in containers include calamondin (*Citrofortunella mitis*), ixoras (*Ixora* spp.), various bulbs, geraniums, and chrysanthemums. Behind the walls of the Spanish Court are magnolias, southern pines, and oleanders.

The Spanish-Moorish motif continues as the visitor approaches the house. Flanking the lawn on both the east and west sides are small fountains, three on either side. Each is of a different design—some contemporary and some antique—and set in its own tiny "court," defined by low boxwood hedges. One fountain is the work of Lin Emery, who was commissioned by Mrs. Stern to create a "kinetic water sculpture." The "courts" are paved in black and beige Mexican pebbles, embedded on edge, and arranged in designs copied from Barcelona streets. Tubbed plants provide floral decoration.

From the house, the dynamic play of sunlight on the jets of the Spanish Court delights and fascinates the eye. Close at hand, the music and the soothing, cooling effects of the water predominate. The sensuous properties of moving water, an important element in the classic Persian or Arabian garden set in a desert environment, blend in nicely at Longue Vue, where the spring season is warm and the summers are hot.

Close to the mansion, the Spanish Garden gives way to a formal boxwood garden, called the Portico Garden. Low hedges of Japanese boxwood (*Buxus microphylla* var. *japonica*) outline beds containing



1. Entrance Court with oak avenue leading to house.
2. Nursery Area.
3. Wild Garden.
4. Walled Garden.
5. Canal Garden, inspired by gardens in Portugal.
6. Goldfish Pool.
7. Spanish Garden.
8. Yellow Garden.
9. Portico Garden.
10. Pan Garden, featuring a statue of Pan atop an Italian Renaissance fountain.
11. The Playhouse, a display area.
12. The Shop, formerly a garage, now a gift shop.

roses—'Peace' roses grown as standards and 'Summer Snow' floribunda roses—as well as 'Pink Perfection' camellias. A miniature parterre completes this small Dutch-English garden. Bisecting it is a central walk, which originates from the house, whose focal point is the distant Spanish Court. This splendid vista was intended to be seen to best advantage from the upper-floor drawing room, the room used by the Sterns when entertaining their most distinguished guests. Beyond the walls of the entire south garden are tall magnolias, pines, and crape myrtles, which effectively isolate the estate from its urban surroundings.

A charming little patio with a single-color theme—one of the first of the genre—is located west of the Portico Garden and adjacent to the Whim House, the small guest house close to the mansion. Mexican marble forms an elegant floor for the cast-iron furniture, and the centerpiece is a small fountain of contemporary design. All of the plants here have either yellow flowers or yellow variegated foliage; hence its name, the Yellow Garden. A banksia rose (*Rosa banksiae*) climbs over the French door of the Whim House. One column of the loggia is usually covered with butterfly vine (*Stigmaphyllon* sp.) and another with Carolina jessamine (*Gelsemium sempervirens*). (One year, apricot bougainvillea was used as a substitute.) In summer, the blooms of allamanda (*Allamanda cathartica*) continue the yellow theme. In the marginal beds, yellow lantana, gold-dust aucuba (*Aucuba japonica* 'Variegata'), and *Galphimia* (formerly *Thryallis*) are predominant. In season, tubs of yellow tulips and daffodils are brought out from the nursery.

Further away from the house is the Wildflower Garden. For many years Edith Stern belonged to a group of southern women devoted to gardening and the pres-

ervation and propagation of Louisiana native plants. Caroline Dorman, author and illustrator of *Flowers Native to the Deep South*, was a member of this group. In 1940 Dorman helped Mrs. Stern design this small wildflower garden, using as many native plants as possible. The most cherished of all Louisiana's wildflowers, the swamp irises—*Iris fulva*, *I. giganteaerulea*, and *I. brevicaulis*—were prominently displayed along the central walk of the Wildflower Garden. Now the area is too shady for them, so the collection has been moved to the Cutting Garden. Many other native flowers flourish in the shade of magnolias, southern pines, cypresses, native hollies, dogwoods, and red and live oaks. Shrubs here include the star or purple anise (*Illicium floridanum*), red buckeye (*Aesculus pavia*), oak leaf hydrangea (*Hydrangea quercifolia*), sweet shrub (*Calycanthus floridus*), and several species of wild azaleas, including *Rhododendron austrinum*, commonly called Florida flame azalea. Near the entrance is a small pool, and close by is a pigeonier—a duplicate of the one that once stood at Uncle Sam Plantation near Convent, Louisiana, and was eventually demolished to make way for a flood control levee.

East of the Wildflower Garden is the Walled Garden. This enclosure once featured vegetables and herbs. However, the area was eventually converted to a formal garden featuring flowers and shrubs, such as roses and azaleas. Surrounding the central fountain, constructed from an old sugar kettle, are summer-blooming Japanese iris and displays of seasonal annuals such as pansies, petunias, begonias, lantana, and *Evolvulus*.

Beyond the Walled Garden is the elongated Canal Garden. The long, narrow pool, edged with brick and decorated with large



plants grown in tubs, features a fountain at each end. Although its design was inspired by gardens in Portugal, it is reminiscent of the Alhambra and looks Moorish. This charming and exotic garden serves as a fitting vestibule to the Spanish Court, which lies immediately to the north and is entered through louvered doors.

In the days when Longue Vue was occupied by the Stern family, the visitor's first glimpse of the house was from the Entrance Court just off Bamboo Road. Visitors can still admire the tree-lined avenue of live oaks leading from the entrance to the front door of the house along the west facade. The branches of the oaks have been pruned and trained by cables to form

a perfect cathedral-like archway. Immediately in front of the entrance to the house is a small shady courtyard planted with sweet olives and magnolias. An imposing Victorian "Three Graces" fountain, made in New York around 1840 and discovered by Mr. Stern in an antique shop near his office, serves as the focal point.

Today, garden tours begin in the Entrance Court, which is surrounded by citrus, azaleas, holly fern, and loquat trees. The tour also provides a look at the Nursery and Cutting garden (which is a production rather than a display area) that supplies cut flowers for the house, as well as annuals, perennials, and flowering and foliage plants for use throughout the garden. This area also contains azaleas and orchids as well as a small herb garden.

Visitors can gain a better appreciation for the gardens if they first tour the house

and get a feel for the people who once lived there. The house has been left the way it was in the 1940's and '50's, the heyday of family life at Longue Vue. Mrs. Stern felt that it should serve as a museum to reflect a way of life that has almost completely disappeared from the American scene. Upon her death in 1980, Longue Vue was transferred to a private foundation of the Stern family. Today, the well-endowed Longue Vue Foundation, aided by a group of enthusiastic volunteers, is responsible for the administration of the house and gardens.

Thanks to the dedication and interest of Edith Stern and of all those who have worked so hard to maintain the estate, garden lovers can still enjoy the horticultural splendor of days gone by. ☉

The Portico Garden features roses surrounded by clipped boxwood hedges. It provides a spectacular view of the Spanish Garden.

Doris M. Stone is a garden writer living in New York City.

JANE LOUDON

Continued from page 17

Jane continued to work actively with publications. She saw her husband's last book through the press, and finished a book of her own, *The Lady's Country Companion: or How to Enjoy a Country Life Rationally*. Several years later, she wrote *British Wild Flowers. The Amateur Gardener's Calendar* appeared in 1847. (William Robinson so admired the book that he later re-edited it.) In 1848 Jane finished the last volume of *The Ladies' Flower Garden* series. The volume, which deals with ornamental greenhouse plants, appeared when the passion for greenhouses and plant exploration in England was at its peak.

Jane spent the remainder of her life living off a small government pension, supplemented by earnings from her books and subsequent editions of her husband's work (which she re-edited and re-issued). When money was scarce, she and her daughter Agnes would rent the house and go to the Continent, where the cost of living was cheaper.

For awhile Jane was editor of a new

weekly magazine launched by *Punch—The Ladies' Companion: At Home and Abroad*. Once again the house served as headquarters for a publication, and Jane was immersed in the work she loved. She was responsible for the entire layout, and contributed many general articles herself. She served as garden columnist, drama critic, and book reviewer, and attended opera and theater performances, concerts, and flower shows. However, even though the journal was well received, her editorship was terminated after less than a year. It was a terrible blow. She rented the house again and headed for Europe with Agnes, financially and emotionally drained.

When Jane was only 50, she became seriously ill. One day she sat alone by the fire and burned all her personal papers. For this reason, much of what we know about Jane Loudon's life comes from her daughter Agnes's diary. Not long afterwards, Jane died quietly.

One can only guess how Jane Loudon viewed her life as she lay on her sofa in her last days. In many ways, she had been

more fortunate in her marriage than most women of her time, because she and her husband had been companions. Furthermore, Jane had the good fortune to marry one of the few men around who believed in encouraging women to develop all of their intellectual and artistic capacities. He had not only encouraged her to branch out on her own, but he had also taken great pride in her accomplishments.

Perhaps looking back, she had no desire to take on such an arduous role again. But undoubtedly, she knew that she had helped a great man and that she herself had contributed much to the horticultural world. She was *the* authority on gardening for women all over Britain and America, and would be a source of inspiration for women gardeners to come. As Geoffrey Taylor said, she died "throwing the trowel" to Gertrude Jekyll, who was, in that year, furnishing her first garden at age eleven. ♣

Elisabeth Sheldon manages a small perennial nursery in Lansing, New York. A former painter and teacher, she currently writes and lectures on horticultural topics.

Jersey Village

G A R D E N E R

Premium ♦ Gardening ♦ Products

Write or call for our free color catalog and you will receive this: **FREE NIT-PICKER** (Regular value \$2.50)

The Nit-Picker is a multi-purpose tool for gardening both inside and out. It works extremely well in transplanting, seeding, and many other gardening tasks. You will appreciate its semi-polished stainless steel finish, and the years of use you will receive.



Our free color catalog has over 200 of the finest gardening tools and supplies available. All products are fully guaranteed.

Jersey Village Gardener

P.O. Box 40526, Dept. K-4 • Houston, TX 77240
713-466-3123

Name _____

Address _____

City _____ State/Zip _____

Please send me my FREE Catalog and Nit-Picker.

A Warm Southern Welcome Awaits
You at the 43rd Annual Meeting of the
American Horticultural Society



April 13-16, 1988
Atlanta, Georgia

Pronunciation Guide



Aconitum napellus
ak-oh-NY-tum nah-PELL-us

Aesculus pavia ESS-kue-lus PAY-vee-ah

Agapanthus africanus
ag-ah-PAN-thuss af-rih-KAN-us

Agave horrida
ah-GAV-ee HORE-id-ah

Allamanda cathartica
all-ah-MAND-ah cath-ARE-tih-kah

Anemone ah-NEM-oh-nee

Asclepias tuberosa
ass-KLEE-pee-us too-bur-OH-sah

Aucuba japonica
aw-KOO-bah jah-PON-ih-kah

Boltonia asteroides
bowl-TONE-ee-ah ass-ter-oh-EYE-deez

Brachychiton
brah-kee-KIE-ton

Buxus microphylla var. *japonica*
BUCK-sus my-crow-FILL-ah
jah-PON-ih-kah

Calycanthus floridus
kal-ih-CAN-thuss FLOOR-ih-dus

Campanula lactiflora
kam-PAN-yew-lah lack-tih-FLOR-ah

Centaurea sen-TAW-ree-ah

× *Citrofortunella mitis*
sit-row-for-tune-EL-ah MY-tis

Clematis paniculata
KLEM-ah-tiss/klem-AT-iss
pan-ick-yew-LAY-tah

Cleyera japonica CLAY-er-ah
jah-PON-ih-kah

Convallaria con-vah-LAIR-ee-ah

Crambe cordifolia
CRAM-be core-dih-FOE-lee-ah

Dianthus die-AN-thuss

Dictamnus albus dick-TAM-nus AL-bus

Fuchsia FEW-shah

Galium GAL-ee-um

Galphimia gal-FIM-ee-ah

Gelsemium sempervirens
jel-SEM-ee-um sem-per-VIE-renz

Hosta sieboldiana
HOSS-tah see-bold-ee-AY-nah

Hydrangea quercifolia
high-DRAN-gee-ah quer-sih-FOE-lee-ah

Illicium floridanum
ill-ISS-ee-um flor-ih-DAN-um

Iris brevicaulis EYE-riss brev-ih-CAW-liss

I. fulva i. FUL-vah

I. giganticaerulea
i. gy-gan-tih-see-RULE-ee-ah

Ixora icks-OR-ah

Liatrix aspera lie-AT-riss ASS-per-ah

L. borealis l. bore-ee-AL-iss

L. graminifolia l. grah-min-ih-FOE-lee-ah

L. helleri l. HELL-er-eye

L. ligulistylis l. lig-you-lih-STY-lis

L. microcephala l. my-crow-SEF-ah-lah

L. novae-angliae l. NOV-ee ANG-lee

L. oblongerae l. oh-lin-JER-ee

L. provincialis l. pro-vin-see-AL-iss

L. punctata l. punk-TAH-tah

L. pycnostachya l. pic-no-STAK-yah

L. scariosa l. scare-ee-OH-sah

L. spicata l. spee-CAT-ah

L. squarrosa l. square-ROW-sah

Lithops LITH-ops

Lycopodium ly-coe-POE-dee-um

Macleaya cordata
MACK-lee-yah core-DAY-tah

Malva moschata MAL-vah moe-SHAH-tah

Mammillaria mam-ill-AIR-ee-ah

Nymphaea NIM-fee-ah

Osmanthus fragrans
oz-MAN-thuss FRAY-grenz

O. heterophyllus o. het-er-oh-FILL-us

Pachypodium succulentum
pack-ee-POE-dee-um suck-you-LEN-tum

Phlox paniculata
FLOCKS pan-ick-yew-LAY-tah

Plumbago auriculata plume-BAY-go
aw-rick-you-LAY-tah

Primula PRIM-ew-lah

Pulmonaria pul-mon-AIR-ee-ah

Rhododendron austrinum
row-doe-DEN-dron au-STRY-num

Rosa banksiae ROW-sah BANK-see-ee

R. longicuspis r. lon-jee-CUS-pis

Salvia argentea
SAL-vee-ah arc-JEN-tee-ah

Sequoiadendron giganteum
see-quoy-ah-DEN-dron jy-GAN-tee-um

Stachys byzantina
STACK-iss biz-an-TEE-nah

Stigmaphyllon stig-mah-FILL-on

Thryallis thry-AL-liss

Utricularia uh-trick-you-LAIR-ee-ah

Verbascum ver-BASS-kum

Viola vie-OH-lah/vee-OH-lah

Xanthosoma zan-thoe-SOW-mah

Zamia ZAY-me-ah



**Buy where
the professionals buy!**

This year, use the Van Engelen Wholesale Catalog of Bulbs to add the highest quality of flowers to next spring's garden.

Now you, too, can buy where professional gardeners shop. Send for our free catalog featuring Tulips, Daffodils, Narcissi, Crocus, Hyacinths, Iris, Muscari and many other bulbs. You'll also find Indoor Paperwhites and Amaryllis.

SPECIAL OFFER: Mammoth Darwin Hybrids—as large as 6" across! Top size, multi-colored and 100% guaranteed to flower. 100 Bulbs delivered anywhere in the continental U.S. . . . Only \$15.95

- Please send me a Free Catalog.
- Please send me Mammoth Darwin Hybrids/100.
- Payment enclosed \$ _____
- Charge to:
- Master Card Visa
- Exp. Date _____
- Act. No. _____
- Name _____
- Address _____
- City _____
- State _____ Zip _____

Van Engelen Inc.

Stillbrook Farm
Maple Street, 307-S, Litchfield, CT 06759

SAGAPRESS CLASSICS

for gardeners
and landscape architects

Beatrix Farrand's
American Landscapes

by Diana Balmori, Diane Kostial
McGuire and Eleanor McPeck

Telling new portrait of a great American talent, our first "landscape gardener." After studying in Europe and at the Boston Arboretum, she was the sole woman among the founders of the American Society of Landscape Architects in 1899. This book won the Society's Award of Merit in 1986. Her living memorial is Dumbarton Oaks in Washington, DC. Photos, plans and her own writings illuminate her genius.

215 pp Paper, 15 color plates

AHS Member Price \$25.60

Daylilies by Arlow B. Stout

Reprint of a masterpiece by an American botanist, updated by Graham Stuart Thomas and Darrel Apps. Species, early hybrids, cultural and hybridizing notes, newly discovered color plates, photos -- the daylily reference, unique in its scope.

145 pp Hardcover, 12 color plates

AHS Member Price \$27.55

The English Flower Garden
by William Robinson

A masterwork reprinted, called the most important and influential in the language. Crusty and opinionated, Robinson prescribed perennials and natural effects, writing vigorously from experience. His dictionary of hardy plants is invaluable. Plant nomenclature is updated by Graham Stuart Thomas. Foreword by Henry Mitchell; introduction by Deborah Nevins. Original fine steel engravings.

720 pp Hardcover

AHS Member Price \$33.25

The Formal Garden in England
By Reginald Blomfield

Reprint of the classic handbook on formal design. His theme: the garden should logically extend the house, reflecting its geometry and its style. Garden history, knots, parterres, uses of grass, pleaching, hedges, mazes, with plans and illustrations, steel engraved, first published in 1892.

252 pp Hardcover

AHS Member Price \$23.75

The Peony by Alice Harding

A delightful and authoritative book, this overdue reprint covers history of the genus, mythology, seed setting, preparation of soil and a shrewd appraisal of varieties still grown and loved today by discerning gardeners.

253 pp Hardcover, 15 color plates

AHS Member Price \$25.65

Please add \$1.75 per book for postage and handling. Allow six weeks for delivery. Mail to: Robin Williams, AHS, Box 0105, Mount Vernon, VA 22121.

Sources

S.U.N.Y. GREENHOUSE

Self-guided tours of the S.U.N.Y. Greenhouse may be taken weekdays from 11:00 a.m. to 3:00 p.m. Visitors are encouraged to call or write before visiting the facility. For more information, write Teaching Greenhouse, State University of New York, Binghamton, New York 13901, or phone the facility at (607) 777-2502.

JANE LOUDON

Although Jane Loudon's books are no longer in print, her publications—and her husband's—are available at many botanical libraries and at public libraries. They are also occasionally available from antiquarian book dealers, especially those specializing in gardening books. For a list of garden book dealers, along with a copy of an article reviewing their catalogues, send \$1.00 to cover postage and handling to Gardener's Information Service, Garden Book Dealers List, American Horticultural Society, P.O. Box 0105, Mount Vernon, VA 22121.

LIATRIS

Liatris are available from the following mail-order companies.

Seeds

W. Atlee Burpee Co., Dept. AH, 300 Park Ave., Warminster, PA 18974, catalogue free.

The Country Garden, Dept. AH, Route 2, Box 455A, Crivitz, WI 54114, catalogue \$2.00.

J.W. Jung Seed Co., Dept. AH, Box P-119, Randolph, WI 53956, catalogue free.

Maver Nursery, Dept. AH, Route 2, Box 265 B, Asheville, NC 28805, catalogue free.

George W. Park Seed Company, Inc., Dept. AH, P.O. Box 31, Greenwood, SC 29647, catalogue free.

Pinetree Garden Seeds, Dept. AH, New Gloucester, ME 04260, catalogue free.

Thompson & Morgan, Dept. AH, P.O. Box 1308-AM, Jackson, NJ 08527, catalogue \$2.00.

Plants

Busse Gardens, Dept. AH, 635 East 7th Street, Route 2, Box 13, Cokato, MN 55321, catalogue \$1.00.

Carroll Gardens, Dept. AH, Box 310, 444 East Main Street, Westminster, MD 21157, catalogue \$2.00.

Lamb Nurseries, Dept. AH, E. 101 Sharp Ave., Spokane, WA 99202, catalogue \$1.00.

Tideland Gardens, Inc., Dept. AH, P.O. Box 549, Chestertown, MD 21620, catalogue free.

Van Bourgondien Brothers, Dept. AH, P.O. Box A, 245 Farmingdale Road, Route 109, Babylon, NY 11702, catalogue free.

André Viette Farm & Nursery, Dept. AH, Route 1, Box 16, Fishersville, VA 22939, catalogue \$1.50.

Wayside Gardens Company, Dept. AH, Hodges, SC 19695, catalogue \$1.00.

We-Du Nurseries, Dept. AH, Route 5, Box 724, Marion, NC 28752, catalogue 50¢.

LONGUE VUE

The Longue Vue House and Gardens are open from 10:00 a.m. to 4:30 p.m., Tuesday through Friday; 1:00 p.m. to 5:00 p.m. on Saturday and Sunday. The house and gardens are closed on Mondays and all major holidays. Admission is \$5.00 for adults, and \$3.00 for students and children. For more information, write or call Longue Vue House and Gardens, 7 Bamboo Road, New Orleans, LA 70124, (504) 488-5488.

BOTANICAL PRINTS

Botanical prints are available from antique print dealers, used book stores, and galleries. They are also available from a variety of mail-order sources, including *Florilegium*, which specializes in botanical art. To obtain a catalogue, send \$3.00 to Oriol Eaton Kriz, *Florilegium*, Box 157, Snedens Landing, Palisades, NY 10964, (914) 359-2926.

Books

There are many superb books that discuss botanical prints from all angles—history, science, art, biography—which enable the novice to sally forth with knowledge, courage, and enthusiasm. Some explain the various methods of printing used to reproduce illustrations and give basic guidelines for judging print quality, authentic-

ity, and appropriate framing.

Look for the following titles at your local library or a used book dealer.

Blunt, Wilfrid, & Stearn, W.T. *The Art of Botanical Illustration*. Collins, London, 1950.

Buchanan, Handasyde. *Nature Into Art*. Smith Publications, Mayflower Books, New York, 1979.

Calmann, Gerta. *Ehret, Flower Painter Extraordinary*. New York Graphic Society, Boston, 1977.

Dance, S. Peter. *The Art of Natural History*. Overlook Press, Woodstock, New York, 1980.

Dunthorne, Gordon. *Flower and Fruit Prints of the 18th and 19th Centuries*. Da Capo Press, New York, 1970.

Ivins, W.M. *How Prints Look*. Beacon Press, Inc., Boston, 1958.

Rix, Martyn. *The Art of the Plant World, The Great Botanical Illustrators and Their Work*. Overlook Press, Woodstock, New York, 1980.

Periodicals

Guild of Natural Science Illustrators, *GNSI Newsletter*, P.O. Box 652, Ben Franklin Station, Washington, DC 20044.

Print Collectors' Newsletter, PCN, Inc., 16 East 82nd St., New York, NY 10021.

Libraries

The following two libraries have especially fine collections of botanical works.

Hunt Institute for Botanical Documentation, Carnegie-Mellon University, Pittsburgh, PA 15213.

The National Agricultural Library, Technical Information Systems, U.S. Department of Agriculture, Science and Educational Administration, Beltsville, MD 20705.

BOERNER BOTANICAL GARDENS

The Boerner Botanical Gardens are open daily, mid-April through mid-November, from 8:00 a.m. to sunset. From April through mid-November, the gift shop and garden house are open daily from 8:00 a.m. until one-half hour before sunset; from 8:00 a.m. to 4:00 p.m. mid-November through March. The gift shop and garden house are closed weekends in January and February.

For information about tours call The Friends of the Boerner Botanical Gardens at (414) 529-1870. For general information, write or call Boerner Botanical Gardens, 5879 South 92nd Street, Hales Corners, WI 53130, (414) 425-1131.

Lilies



The largest U.S. grower of Oriental and Asiatic hybrids, invites you to curl-up with an exceptionally beautiful Fall 1987/Spring 1988 color catalog. Beauty begins in the bulb. Buy quality!

Jan de Graaff

Please send your stunning new catalog. I enclose \$2, deductible on my first catalog order.

Name _____

St. RFD _____

City _____ State _____ Zip _____

send to:

OREGON BULB FARMS

14071 N.E. Arndt Rd-H • Aurora, OR 97002

"Schultz-Instant"

ULTRA PURE CONCENTRATED ALL PURPOSE LIQUID PLANT FOOD

EASY DIRECTIONS

"7 drops per quart water
Every time you water,
Every thing you grow."

Available at your store or send:
\$1.85 for 5 1/2 oz., \$3.20 for 12 oz.,
\$4.70 for 28 oz., (Includes Mailing)



"Schultz-Instant"

ULTRA PURE CONCENTRATED ALL PURPOSE SOLUBLE FERTILIZER

EASY DIRECTIONS

"1/4 teasp. per gal. water
Every time you water,
Every thing you grow."

Available at your store or send:
\$3.20 for 1 lb., \$12.50 for 5 lb.,
\$46.00 for 25 lb., (Includes Mailing.)

© 1983 A. Y. Schultz, By the makers of Plant Shine
Mfg. by SCHULTZ CO., St. Louis, MO 63043 U.S.A.



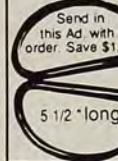
PACHYSANDRA

Ideal permanent evergreen ground cover plants. Thrive in most soils, in sun or shade. Grows to an even height of 8 inches. Plant 6 inches apart. Sturdy, well-rooted plants, postpaid: 50 — \$13.95; 100 — \$24.95; 500 — \$99.95; 1000 — \$175.00. Prompt shipments. Finest Quality Stock. Guaranteed to live or we'll replace free up to 1 year. Folder on request. (N.Y. residents please add sales tax.)

PEEKSKILL NURSERIES, Box H, Shrub Oak, N.Y. 10588

Chinese Garden Scissors

These beautiful, precision, scissors are made to last a lifetime. In production for over 300 years. For delicate flower work, or heavy pruning. Very Sharp. A hardworking beauty. Send \$6.00 ea. Mt Rushmore Supply Box 233 Brooklyn NY 11222-0233



AHS Travel Program

The American Horticultural Society is sponsoring an exciting program of horticultural explorations for the 1987 season. Plan to join fellow AHS members on one or more of these interesting and educational garden-related tours. Use the coupon below to request more information.

Kenya and East Africa (October 14-31). With its fertile green highlands, vast open plains, thick forests and semi-arid deserts, Kenya offers an incredible spectrum of botanic wonders. During our tour of this land of contrast we will spend a brief time in Nairobi, and then we'll be off on a horticultural safari, journeying north to the Aberdare National Park, a lush verdant region typical of an equatorial forest ecosystem. We will cross the equator en route to Samburu Game Reserve, a semi-arid landscape, and continue on to the multi-vegetational zones of Mt. Kenya. Here we will stop at the luxurious Mt. Kenya Safari Club. An exciting adventure follows with three full days of game viewing in the Masai Mara, Kenya's finest game reserve. We will conclude our safari in Lake Naivasha after touring

private estates and gardens.

This will be a most unusual trip encompassing a scope and variety rarely found in other itineraries for Kenya! Leader: Therese Sapielha, expert on wildlife and horticulture. Cost (exclusive of air fare): \$3,975.00.

YES! Please send me more information on the tours I have checked below.

Kenya and East Africa

Name _____

Address _____

City _____ State _____ Zip _____

MAIL TO: Elizabeth Smith, American Horticultural Society, PO Box 0105, Mount Vernon, VA 22121.

Classifieds



Greenhouse or Sunroom?

Make the right choice with Janco.

We're the only manufacturer to offer a complete range of greenhouses and Solariums to match every lifestyle, climate and budget.

So before you make your decision, send \$2.00 and receive our informative 48-page color catalog featuring over 100 greenhouses.

Solariums and accessories.



Mail to:

Janco Greenhouses, Dept. AM 6, 9390 Davis Ave.,
Laurel, MD 20707. (301) 498-5700

I've enclosed \$2.00 to cover first-class postage and handling of my 48-page color catalog.

Name _____

Address _____

City _____ State _____ Zip _____

Phone () _____

SUPPORT FROM SCOTLAND

For over 50 years, the Scottish War Blindeds have made a galvanized wire, garden plant support that is used in home and public gardens all over Britain -- even sold at the famous Wisley Garden Centre. Place this support over your plants early-on to allow them to grow up thru the five separated sections of the ring. The ring is supported by a set of 3 legs. Order the rings (4 sizes) and the leg-sets (3 sizes) separately.



RINGS:		SET OF 3 LEGS:	
12" Ring ...	\$1.95	18" High ...	\$1.85
15" Ring ...	\$2.40	24" High ...	\$2.50
18" Ring ...	\$2.85	36" High ...	\$4.15
22" Ring ...	\$3.40		

Walt Nicke

Box 667A
Hudson, NY 12534

FREE GARDEN TALK FREE

A CATALOG OF FINE PRODUCTS FOR INDOOR AND OUTDOOR GARDENERS
Famous English Garden Tools, Cape Cod Weeders, Swiss Pruners, Maine's Magic Weeders, Snail/Slug Traps, Danish Tools, English Thatched Birdhouses, and much, much more.

WALT NICKE BOX 667A, HUDSON, NY 12534

Shipping Charge: \$2.00

AFRICAN VIOLETS

We ship starter plants: Standards, Miniatures, Semi-mini's, Trailers, Species; Leaf Cuttings and Supplies. Send \$1.00 for 1987 descriptive catalog (\$2.00 overseas). ZACA VISTA NURSERY, Dept. AHS, 1190 Alamo Pintado Road, Solvang, CA 93463.

ALSTROEMERIA

LIGTU HYBRIDS. Mixed pinks, creams, corals and peach. Long-lived, tuberous-rooted perennials hardy to 0°. Shipped early September in 2" pots for GUARANTEED safe delivery and transplanting. Bloom following summer. 6 pots/\$18 postpaid. Order now, receive FREE color catalog. B&D LILIES, Dept. AH, 330 "P" Street, Port Townsend, WA 98368 (206) 385-1738. Catalog alone, \$1.00 (refundable).

AROID SOCIETY

Interested in Anthuriums, Dieffenbachias, Philodendrons, etc? Join the International Aroid Society: Monthly Newsletter, Quarterly Journals. Dues \$15, annually. Write: INTERNATIONAL AROID SOCIETY, PO Box 43-1853, Miami, FL 33143.

THE AVANT GARDENER

DIFFERENT, EXCITING, GREAT FUN TO READ—for the gardener who wants to get more out of gardening! Subscribe to THE AVANT GARDENER, the most useful, most quoted of all gardening publications. Every month this unique news service brings you the newest and most practical on-going information—new plants, products, techniques, with sources, plus feature articles, special issues. 18th year. Awarded Garden Club of America and Massachusetts Horticultural Society Medals for outstanding contributions to horticulture. Curious? Sample copy \$1. Serious? \$10 full year (reg. \$15). THE AVANT GARDENER, Box 489M, New York, NY 10028.

AZALEAS & RHODODENDRONS

FOR GARDENERS WHO CARE: Hardy azaleas and rhododendrons. Northern grown and acclimated. Big sizes! Big selection! Personal service! Two Year Catalog Subscription: \$2.00 (deductible). CARLSON'S GARDENS, Box 305-AHA687, South Salem, NY 10590.

BANANA PLANTS AND MORE

35 varieties, Plus Bonsai, Bougainvilleas, Bromeliads, Cacti, Citrus. Also Bamboo, Hibiscus, Papayas, Etc. Catalog \$1.00. Garden World, Dept. 32, 2503 Garfield, Laredo, TX 78043.

BONSAI

Bonsai Trees, Supplies. Catalog \$2.50 (deductible). We ship anywhere. Gifts. M/C. VISA. BONSAI CREATIONS, 2700 N. 29th Ave., #204 AH, Hollywood, FL 33020. (305) 962-6960.

MATSU-MOMIJI NURSERY—offering the finest in Bonsai, Maples, Pines. PO Box 11414,

Philadelphia, PA 19111, (215) 722-6286—catalog \$1.25.

BOOKS

DRIED BOUQUETS SO REAL THEY LOOK FRESH! Show-and-Tell books: Step-By-Step BOOK OF DRIED BOUQUETS, over 285 Photos: Williamsburg, Modern, Country, Victorian, Gifts. (\$9.95 ppd.). Step-By-Step BOOK OF PRESERVED FLOWERS, professional secrets for preserving 100 flowers, includes Microwave, (\$3.95 ppd.) BOTH BOOKS \$12.90 ppd. FREE NEWSLETTER, send stamp. ROBERTA MOFFITT, PO Box 3597, Wilmington, DE 19807.

OUT-OF-PRINT BOOKS: Bought and Sold: Horticulture, Botany, Landscaping, Herbology. Large Catalogue \$1.00. POMONA BOOKS, Rockton, Ontario, Canada L0R 1X0.

CACTUS/BROMELIAD/EPIPHYLLUM books. We offer 246 different. We're the world's largest mailorder firm. Send for FREE 14-page catalog: RAINBOW GARDENS BOOKSHOP, Box 721-AH67, La Habra, CA 90633-0721.

THE INDOOR CITRUS & RARE FRUIT SOCIETY has published a 32 page book list "Garden Books Around the World." It includes more than 100 book reviews, out-of-print and rare books, and books discounted to members. Easy to read. To receive your copy, send \$2.00 to the IC&RFS Book Department, 176 Coronado Avenue, Los Altos, CA 94022.

Out of Print and scarce gardening and botanical books. Catalogs issued regularly. Please write to WHEELBARROW BOOKS, 22, Brangwyn Ave., Brighton, Sussex, BN1 8XG, England.

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 Plant Manual, 5th Ed., 4,200 photos, \$37.50. Exotic House Plants, 1,200 photos, \$8.95. Circulars gladly sent. ROEHR'S, Box 125, E. Rutherford, NJ 07073.

BOTANICAL CRAFTS

BOTANICAL WREATH AND ARRANGEMENT SUPPLIES. Potpourri, herbs, spices, essential oils, craft books. 400 item catalogue \$1 (refundable). Quantity discounts. TOM THUMB WORKSHOPS-AH, Chincoteague, VA 23336-0332.

BOXWOOD

WANTED: Plants or cuttings of rare or unusual varieties and cultivars of boxwood. Identification should be authenticated if possible. Write with information to D. Taylor, 105 S. Princeton Avenue, Wenonah, NJ 08090.

BULB CATALOG—FREE

More than 400 flowerbulb varieties (including autumn blooming crocuses and colchicums) make our 1987 Flowerbulb Catalog and Planting Guide

a valuable reference for every flowerbulb enthusiast. Write for your free copy: MCCLURE & ZIMMERMAN, Quality Flowerbulb Brokers, 1422 W. Thorndale, Dept. AH, Chicago, IL 60660.

CACTI & SUCCULENTS

ORCHID CACTUS SPECIAL: 6 different young plants, 1987 plant/bookshop catalogs, shipped air delivered (\$23.95 value) ONLY: \$12.95. OR: Giant 1987 Plant/Bookshop Catalogs—38 pages of Orchid Cactus, Hoyas, Holiday Cactus, Rat-tails, Sansevierias, 100+ color photos, + 225 Cactus Books. Only \$1.00. RAINBOW GAR-DENS, Box 721-AH67, La Habra, CA 90633-0721.

LARGEST SELECTION of rare succulents in the east, including Euphorbias, Pachypodiums, and many caudiciforms. Send \$2.00 for our illustrated 1987 mail order catalog which includes a wealth of cultural information. All orders totally guaranteed! Visitors welcome by appointment. HIGHLAND SUCCULENTS, Eureka Star Route, Box 133 AH, Gallipolis, OH 45631, 614-256-1428.

Abbey Garden for the rare, exotic, unusual. World's largest selection under one roof. Cau-diciforms, Euphorbias, Haworthias, Lithops, Mesembs, Cacti and much more. Catalog: \$2.00 (refundable). ABBEY GARDEN, Box 1205 A, Carpinteria, CA 93013.

"CATALOG OF UNUSUAL SUCCULENTS" Discover the largest selection of weird and un-usual succulents—picture book catalog of suc-culent crests, variegates, living stones, and odd-balls. Send \$1.00 today. "CATALOG OF UNUSUAL SUCCULENTS," Dept. A-6, 553 Buena Creek Road, San Marcos, CA 92069.

Winter-Hardy Cactus to -20°. Many varieties. Send stamp for price list. INTERMOUNTAIN CACTUS, 2344 South Redwood Road, Salt Lake City, UT 84119.

CARNIVOROUS PLANTS

Carnivorous, woodland terrarium plants and supplies. Book, *The World of Carnivorous Plants*, \$8.95 postpaid. Catalog FREE. PETER PAULS NURSERIES, Canandaigua, NY 14424.

DAYLILIES

DAYLILIES GALORE! Beautiful named hy-brids. Quantity discounts. Send now for FREE informative catalog. LEE BRISTOL NURS-ERY, Box 5A, Gaylordsville, CT 06755.

DAYLILIES FOR THE COLLECTOR. Many colors tetraploids, diploids, miniatures. Spuria, Louisiana IRISES. Catalog \$1.00. CORDON BLEU FARMS, Box 2033, San Marcos, CA 92069.

DRIP IRRIGATION

DRIP IRRIGATION—ideal for flowers, vege-

tables. Save water, reduce disease, increase yields, durable. FREE information, MISER IRRIGA-TION, Box 94616 AH, Lincoln, NE 68509-4616.

EXOTIC PLANTS

HIBISCUS—JASMINES—RARE EXOTICS! 1,000 listings, conscientious service. New 1987 mail-order catalog \$2.00 (refundable). STALL-INGS NURSERY—910 Encinitas Blvd., Encin-itas, CA 92024.

FREE 24-HOUR HORTICULTURAL ANSWERS

The 24-Hour Horticultural Answer Man an-swers all horticultural questions free. 1-800-841-1105. In California: (415) 362-0660. Or write: H.A.M., 260 Bay, Suite 207, San Francisco, CA 94133.

FUCHSIA

Beautiful Fuchsia plants by mail. 125 varieties. Shipped in 3" pots. Catalog \$1.00 (refundable). G & G GARDENS, 6711 Tustin Rd., Salinas, CA 93907.

GARDEN ORNAMENTS

Bronze, Lead, and Stone including Topiary. 400 page catalog available \$8.00. Hard bound li-brary edition over 2,000 illustrations showing bird baths, benches, bronzes including tablets, cisterns, compasses, cupids, curbing, dolphins, eagles, elephants, finials, frogs, foxes, fruit bas-

New from Massachusetts

Three books by Ann Leighton

New in paperback

Early American Gardens "For Meate or Medicine"

"Anyone with an interest in the history of American gardens will be pleased to know that these two fine books are now available in paperback. *Early American Gardens* focuses on the use of plants in 17th-century New England. The author has unearthed fascinating information on the history of plant use in the New World, as well as gar-den design, nomenclature, the day-to-day use of plants in the home, and the use of plants in medicine and cooking. . . .

Paper \$14.95, AHS member price \$11.95

American Gardens of the Eighteenth Century "For Use or for Delight"

"*American Gardens of the Eighteenth Century* continues the history of gardening in America with chapters on 18th-century American vegetables and fruits, George Washington's Mount Vernon estate, natu-ralists and botanists that explored this country during the 18th century, and the development of plant catalogues and lists.

"Both books are copiously illustrated with black-and-white engravings, line drawings and garden plans. Indexes and extensive bibliographies are also provided."

—*American Horticulturist*

Paper \$14.95, AHS member price \$11.95

New in cloth and paperback

American Gardens of the Nineteenth Century "For Comfort and Affluence"

In fascinating detail, this third and final volume carries the story of American gar-dening up through the end of the nine-

teenth century. Readers interested in the restoration of period gardens will find the detailed appendix particularly useful.

Cloth \$35, AHS member price \$28
Paper \$14.95, AHS member price \$11.95



Available from
American Horticultural Society
Book Service Coordinator
P.O. Box 0105
Mount Vernon, VA 22121

Please add \$1.75 per book for postage and handling. Allow six weeks for delivery.

Published by
University of Massachusetts Press
Box 429
Amherst, MA 01004

CLASSIFIEDS

kets, gates and gate posts, Japanese lanterns, lead figures, lions and lion masks, mermaids, planters, St. Francis, weathervanes. KENNETH LYNCH & SONS, 78 Danbury Road, Wilton, CT 06897.

GARDENING GLOVES

GOATSKIN GLOVES. Tough, lightweight 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. \$8.50 postpaid. PUTNAM'S, Box 295C, Wilton, NH 03086.

GRAPE VINES

GRAPE PLANTS 40 SEEDLESS, DESSERT, AMERICAN and GRAFTED EUROPEAN WINE varieties. WINE MAKING SUPPLIES, BOOKS. New 1987 catalog FREE. SQUARE ROOT NURSERY, 4764 Deuel Rd., Dept. AM-7, Canandaigua, NY 14424. "THE GRAPE PEOPLE."

GREENHOUSE ACCESSORIES

COMPLETE MIST PROPAGATION SYSTEMS. Get phenomenal propagation results, indoors-outdoors. Completely automated. FREE BROCHURE. AQUAMONITOR, Dept. 4, Box 327, Huntington, NY 11743.

GREENHOUSE GROWING

GREENHOUSE SUPPLIES: Fans, Heaters, Shading, Misting, Watering, Propagation, Tools, Pots. Catalog \$2.00. CHARLEY'S GREENHOUSE, 1567-B Memorial Highway, Mt. Vernon, WA 98273.

HEATHS & HEATHERS

HARDY HEATHERS FOR ALL-YEAR GARDEN COLOR! Send SASE for descriptive mail-order list. Fast Service! HEATHER GROWERS, Box 850, Elma, WA 98541.

HERBAL GIFTS

"Gourmet's Artist" Herbal Gifts: posters, book marks for menu planning, hand woodburned items. Brochure \$1.00. PO Box 514 AH, Staten Island, NY 10310.

HERBS

Spearmint. Peppermint. Orange, Apple, Pineapple Mints; Oregano; Thyme; Marjoram;

Chives. Five, your choice, \$10.00 ppd. OWEN FARMS, Rte. 3, Curve-Nankipoo Rd., Ripley, TN 38063.

HIBISCUS—FLOWERS AS BIG AS DINNER PLATES

8" to 10" flowers—perennial plants will bloom this year—hardy to -20°. 3' to 5' plants. Red, pink and white flowers. Healthy plants in 2½" pots, with instructions. REBEL NURSERY, Box 998, Loxahatchee, FL 33470. (305) 798-8951. \$3 ea., plus \$1 p&h; 2 for \$5.50, plus \$1.50 p&h; 4 for \$10, plus \$2.00 p&h.

HORTLINE

Back in print: *Hortline*, the "when-to-how-to" horticulture newsletter! \$15.00/yr. for 12 monthly issues. USDA zones 4, 5, 6 and 7. Make checks payable to: TOM'S WORD HORTICULTURE CONSULTING, PO Box 5238, Charleston, WV 25361.

HOUSE PLANTS

ORCHIDS, GESNERIADS, BEGONIAS, CACTI & SUCCULENTS. Visitors welcome. 1986-87 catalog \$1.75. LAURAY OF SALISBURY, Rt. 41 (Undermountain Rd.), Salisbury, CT 06068 (203) 435-2263.

JASMINES! BEGONIAS! Exotics from the far corners of the world! Logee's 1986-88 profusely illustrated mail-order catalog features 2,000 rare indoor plants for your windowsill or greenhouse. Catalog-\$3.00. LOGEE'S GREENHOUSES, Dept. AH, 55 North Street, Danielson, CT 06239.

LOW-LIGHT INDOOR EXOTICS. Dwarf Lady Palms, Grape Ivy, Sago Palms, Ming Aralias. Catalog \$1. RHAPIS GARDENS, POD-287-AM, Gregory, TX 78359.

INDOOR-OUTDOOR GARDENING SUPPLIES

"FREE CATALOG" . . . "LOWEST PRICES" . . . "TOP QUALITY" . . . Plastic pots, hanging baskets, etc. . . 2 Stamps . . . Postage . . . PLANT COLLECTIBLES, 103E Kenview, Buffalo, NY 14217.

INDOOR-OUTDOOR GROWING SUPPLIES

FREE GROWING SUPPLIES CATALOG.

Wholesale Prices! Fast Service! Pots, flats, labels, fertilizer, tools, plant stands. FPI-H, 2242 Palmer, Schaumburg, IL 60173.

IRIS

SIBERIAN AND SPURIA IRIS. These easy to grow Iris form graceful and beautiful clumps ideally suited to the perennial border. Excellent as cut flowers! Free descriptive price list available upon request. CHEHALEM GARDENS, P.O. Box 693-AH, Newberg, OR 97132.

JASMINES

Rooted camellia cuttings. 3 assorted, 10 for \$8.00. 4 assorted Jasmines \$7.50. EDNA WELSH, Route 3, Box 1700, Madison, FL 32340.

KOI

Finest Quality Japanese Koi, 3" to 28", \$15.00 to \$1,000.00 each. Philadelphia area. Call: Weekdays: (215) 563-3336; Evenings/Weekends: (215) 667-7340.

MADONNA LILIES

MADONNA LILIES (*Lilium Candidum*). Most beloved of all lilies. Dazzling pure white flowers. Enchanting fragrance. June-flowering. Shipped only during August dormancy. Cultural Instructions. SPECIAL: 3 bulbs/\$7.95 postpaid. Order now, receive free color catalog of garden-tested, hybrid and species lilies. Catalog alone, \$1 (refundable). B&D LILIES, Dept AH, 330 "P" Street, Port Townsend, WA 98368 (206) 385-1738.

OLD-FASHIONED FLOWERS

Fine Seeds for Old-Fashioned Perennials. Fragrant flowers . . . cottage garden flowers . . . cutting flowers . . . period garden restoration source . . . catalog \$1.00. SELECT SEEDS, AH, 81 Stickney Hill Road, Union, CT 06076.

PEONIES

Including rare hybrids. Also DAYLILIES, JAPANESE IRIS, HOSTA. Catalog \$1.00, refundable with first order. CAPRICE FARM NURSERY, 15425 SW Pleasant Hill, Sherwood, OR 97140. (503) 625-7241.

PERENNIALS

PEONIES, TREE PEONIES AND DAFFODILS Grown in Michigan's North Country. Your assurance of Quality, hardiness and vigor. Send \$1.00 for our color catalog. REATH'S NURSERY, 100 Central Blvd., Vulcan, MI 49892.

Holiday Seeds, 4276 Durham Circle, Stone Mountain, Georgia 30083 offers seedling Hostas, Lilies, Iris (Bearded and Siberian), Daylilies, and variegated liriopie in any combination at \$37.50/50 ppd.

We offer a good selection of sturdy plants. Send \$1.00 for Plant List (refundable). CAMELOT NORTH, R2, Piquet Lakes, MN 56472.

Large Selection of Perennials for sun and shade. Tall, Medium and carpeting Sedums. Extensive collection of annual and perennial herbs. Catalog \$1.50. WRENWOOD, Rte. 4, P O Box 361, Berkeley Springs, WV 25411.

PLANT AND GARDEN PHOTOGRAPHY

HARPER HORTICULTURAL SLIDE LIBRARY (Pamela Harper), 219 Robanna Shores, Seaford, VA 23696. (804) 898-6453. Specializing in plant and garden pictures. New cata-



BUNDLES of BULBS

(301) 363-1371

THINK SPRING IN SPRING

WHEN YOUR NEEDS ARE SHOWING!

ORDER BEFORE JULY 8th FOR

BETTER BULBS • BETTER CHOICES • BETTER PRICES

wide variety of Springflowering Bulbs - Fall Planting

112 Green Spring Valley Road • Owings Mills, Maryland 21117

Horticultural
Catalogue
\$2.00

logue \$2.00. Lecture slides: 30 different sets for sale or rent. \$1.00 for lecture listings only.

PLANTS—CHOICE AND AFFORDABLE

Extensive Selection: ★ American Natives ★ Outstanding Ornamentals ★ Uncommon Conifers ★ Perennials ★ Potential Bonsai ★ Hardiest Eucalyptus ★ Wildlife Plants ★ Affordable containerized starter-plants. Informative catalog—\$2.00. FORESTFARM, 990 Tetherah, Williams, OR 97544.

PLANTS—SCARCE AND UNUSUAL

Distinctive plants for your garden and landscape. Scarce, unusual and many old favorites. Well established in 4" pots, ready for you to grow on. FREE catalog. APPALACHIAN GARDENS, Box 82, Waynesboro, PA 17268. (717) 762-4312.

PLUMERIAS! GINGERS! HIBISCUS! BOURGAINVILLEAS!

ALSO DAYLILIES, TROPICAL BULBS, BOOKS. A COLLECTOR'S DREAM CATALOG OF EASY-TO-GROW EXOTIC PLANTS—\$1.00. HANDBOOK OF PLUMERIA CULTURE—\$4.95. RELIABLE SERVICE, GROWING INSTRUCTIONS, SPECIALTY FERTILIZERS. SPECIAL OFFER: Plumeria cuttings, five different colors (our selection) \$25.00 (postpaid, USA). PLUMERIA PEOPLE, PO Box 820014, Houston, TX 77282-0014.

PRESSED FLOWERS

PRESSED FLOWER supplies, kits, instruction booklets. Free color brochure. BJG ASSOCIATES, Dept. AH, Box 463, Edgmont, PA 19028.

RARE PLANTS

RARE AND UNUSUAL PLANTS—otherwise commercially unavailable—for botanic collections, landscaping, home, office—130 Bamboo, including giant, medium-sized, dwarf, green and variegated, 90 cycads, 180 palms. 1,000 plant and gardening books. Three seasonal catalogs \$5. ENDANGERED SPECIES, PO Box 1830, Tustin, CA 92681-1830.

RARE TROPICALS

AROIDS, BROMELIADS, CYCADS, FERNS (especially Platyceriums), PALMS. Safe Delivery Guaranteed. List-stamp. JERRY HORNE, 10195 S.W. 70 Street, Miami, FL 33173.

RHODODENDRONS

RHODODENDRONS for landscape, woodland and rock gardens. Free descriptive listing. CARDINAL NURSERY, Rt. 1, Box 316M, State Road, NC 28676. (919) 874-2027.

RHODODENDRONS & AZALEAS

SPECIALIZING IN THE UNUSUAL. Dwarf Rhododendrons, Evergreen & Deciduous Azaleas, Dwarf Conifers, Companion Plants. Catalog \$1.00, refundable. THE CUMMINS GARDEN, 22 Robertsville Rd., Marlboro, NJ 07746. (201) 536-2591.

RHODODENDRONS AND AZALEAS—Select from 1,000 varieties with many new exciting introductions. Also Laurel, Andromeda, Holly, Conifers, Rare Plants and Trees. Mail-order catalog \$2.00. ROSLYN NURSERY, Dept. AH, Box 69, Roslyn, NY 11576. (516) 643-9347.

ROCK GARDEN PLANTS

Rare Alpines, Wildflowers, Dwarf Conifers, Groundcovers, Colorful Rock Plants, Hardy Rhododendron, Books. Catalog \$1. RICE CREEK GARDENS, 1315 66th Ave. NE, Minneapolis, MN 55432. (612) 574-1197.

ROSES

HARD TO FIND ROSES, old and new varieties including the HT Maid of Honour. List on request. HORTICO, INC., R.R. # 1, Waterdown, Ontario L0R 2H0 416/689-6984.

SEEDS

HUDSON'S WORLD-FAMOUS CATALOG, since 1911, offering thousands of unusual seeds from every continent. Fragrant Jasmines, elegant Angel's Trumpets, Baobab, Teosinte. Himalayan, African, Australian wildflowers. Rare culinary and medicinal herbs. American heirloom, European, Oriental and traditional Mexican Indian vegetables. Hundreds of exclusives. Information-packed catalog \$1.00. J. L. HUDSON, Seedsman, Box 1058-AT, Redwood City, CA 94064.

THE WORLD'S LARGEST and most famous seed catalog. Over 225 pages, 4,000 varieties, 1,000 color pictures. A major book of reference. The Encyclopedia of how and what to grow from seed. Vegetables, potted plants, exotics, perennials, alpines, rockery, latest and best annuals, trees, shrubs, bulbs from seed; includes rare items unobtainable elsewhere. Write for free copy, allowing three weeks, or enclose \$2 for first-class mail: THOMPSON & MORGAN, INC., Dept. AHC, PO Box 1308, Jackson, NJ 08527.

SHADE PLANTS

Hosta seedlings for economical ground cover—\$37.50/50 ppd. Larger quantities discounted. HOLIDAY SEEDS, 4276 Durham Circle, Stone Mountain, GA 30083. (404) 294-6594.

TETRAPLOID DAYLILIES

Over 450 hybrids; exotic new Tetraploid Introductions. Catalog \$1.00, deductible with order for plants. SEAWRIGHT GARDENS, 134 Indian Hill, Carlisle, MA 01741 (617) 369-2172. Visitors welcome!

UNUSUAL PLANTS

RARE SUCCULENTS, EUPHORBIAS, CAUDICIFORMS, SANSEVIERIAS, LOW LIGHT PLANTS, OTHER EXOTICS. Catalog and periodic newsletters \$1.50 deductible from first order. SINGERS', 17806 Plummer St., AH, Northridge, CA 91325.

VIDEOTAPES

INCREASE YOUR GARDENING KNOWLEDGE. Thirty outstanding gardening videotapes. Priced \$13.95 Up. Free Catalog 1-800-331-6304. California Call Collect (415) 558-8688. The Original Gardeners Video Catalog, PO Box 410777, Dept. 8-A, San Francisco, CA 94141.

WILDFLOWERS

Southeastern Wildflowers for the garden and naturalizing. All top quality nursery propagator plants. Catalog \$1.00 Refundable. NICHE GARDENS, Dept. A., Rte. 1, Box 290, Chapel Hill, NC 27514.

OXYGEN PLUS®

THE BEST PERFORMING PLANT FOOD YOU CAN BUY! WE'LL PROVE IT.



For greener, healthier, more vigorous houseplants, Oxygen Plus is the best-performing plant food you can buy. University tests prove it.

Mixed with water, Oxygen Plus releases critically-needed oxygen at the root level to protect against the #1 causes of houseplant failure—compacted soil and overwatering. Oxygen Plus delivers essential nutrients everytime you water—even if you overwater.

Oxygen Plus. There's simply nothing better for your plants. Let us prove it.

FREE TRIAL OFFER

Buy one 8 oz. bottle for the regular price of \$2.99 and we'll send the second bottle **FREE!**

Send order with a check or money order to Plant Research Laboratories, P.O. Box 3976, Laguna Hills, California 92654. For additional orders, please call 1 (800) 221-2589 (OUTSIDE CALIF.), (714) 721-0153 (INSIDE CALIF.), or instruct us on your personal stationery.

Name _____

Address _____

City _____ State _____ Zip _____

©1987, Plant Research Laboratories

HOR

Book Reviews

Taylor's Guide to Vegetables & Herbs.
Taylor's Guide to Shrubs.
Taylor's Guide to Houseplants.
Taylor's Guide to Ground Covers, Vines & Grasses.

Houghton Mifflin Company. Boston, Massachusetts. 1987. 460 pages; softcover, 14.95. AHS member price, \$13.45.

Gardeners will welcome the publication of the next four volumes of the *Taylor's Guide* series (see *American Horticulturist* October 1986 for a review of the first four volumes in the series). Like the first volumes, these books contain beautiful photographs of hundreds of species and cultivars of plants. Brief cultural notes accompany each photograph, and the photographs are linked to text descriptions in the back of the book that contain more extensive information on each plant. The text in three of the books—*Ground Covers, Vines & Grasses*; *Shrubs*; and *Houseplants*—contains descriptions of each genus, brief “how-to-grow” notes, and descriptions of two or three commonly grown species. *Vegetables & Herbs* includes descriptions, cultural information, and harvesting directions.

Unfortunately, *Houseplants* fails to provide the reader with a true picture of the vast array of plants available to the indoor gardener. Also, the plants are divided into groups that are not very helpful, such as “Small Foliage Plants,” “Bromeliads and Flowers,” “Lacy Leaves,” “Showy Foliage Plants,” and “Succulents and Others.”

The *Vegetables & Herbs* volume contains the excellent, color-coded plant charts featured in the first four volumes, but the other three books contain only black-and-white versions. Although these black-and-white charts still contain the same useful information on size, bloom, soil requirements, and use, they are not as easy to use as the color-coded versions. (Also, in two of the volumes these charts appear in the back of the book. It would have been helpful if all the volumes in the series were organized in exactly the same manner.)

All four of these new *Taylor's Guides* contain information on pests and diseases, a list of sources, and essays on getting started, basic botany, and garden de-



Taylor's Guide to Vegetables & Herbs will help gardeners produce bountiful harvests of succulent tomatoes. It provides information on nearly 200 other vegetables and herbs—both common and unusual.

sign. Despite their limitations, they contain a great deal of useful information, and would make good additions to any garden library.

Carnivorous Plants of the World.

James and Patricia Pietropaolo. Timber Press, Portland, Oregon. 1986. 206 pages; hardcover, \$27.95. AHS member price, \$24.75.

This is a book no carnivorous plant enthusiast can afford to be without. James and Patricia Pietropaolo are the proprietors of Peter Pauls Nursery in Canandaigua, New York, and have a wealth of experience with carnivorous plants. For 25 years they have grown and propagated these unusual gems of the botanical world at their nursery, and their precise and detailed cultural instructions and propagation information are the highlights of this fact-filled book.

The first half of the book is divided into chapters on the various types of carnivorous plants, including pitcher plants, sundews, butterworts, and bladderworts. Each chapter is then divided into sections on the individual genera in the group. The authors have included detailed information on each genus, including history, natural habitat, plant description, insect trapping mechanism, prey digestion, and descriptions of individual species. The cultural information for each genus includes specific recommendations for planting media, temperatures, dormancy, water, humidity, light, pests, and feeding. Propagation information includes directions for both sexual and asexual reproduction.

The second section of the book contains lengthy discussions of cultural practices for carnivorous plants as well as propagation and hybridization instructions. Source lists, a bibliography and an index complete the

text. *Carnivorous Plants of the World* is illustrated throughout with black-and-white drawings and also contains 16 pages of color plates.

The American Garden Guidebook: A Traveler's Guide to Extraordinary Beauty Along the Beaten Path.

Everitt L. Miller and Dr. Jay S. Cohen. M. Evans and Company. New York, New York. 1987. 244 pages; softcover, \$8.95. AHS member price, \$7.85.

This handy travel guide is just the thing for any gardener planning to vacation in the eastern half of the United States or Canada's eastern provinces this summer. Written by AHS President Everitt L. Miller and amateur garden enthusiast Jay S. Cohen, *The American Garden Guidebook* contains information about 339 gardens in 28 states and four Canadian provinces.

The entries are arranged by state, and each section begins with entries for one or two outstanding gardens (which the authors have termed "don't miss" gardens) in the state. The remainder of the gardens are organized in alphabetical order according to the city in which they occur. The authors also have provided handy maps locating the gardens in each state, to aid the traveler in making plans. Each entry includes a description of the garden, as well as information on special collections, location, hours, fees, tours, restaurants, shops, special activities, and accessibility for the handicapped. The entries for "don't miss" gardens include special tips on spectacular displays to plan to visit, or special services provided by the gardens.

The book concludes with lists of gardens with attractions for children, gardens with no entry fees, gardens with facilities for weddings and other events, and gardens that are particularly attractive in the winter.

Creating a Chinese Garden.

David H. Engel. Timber Press, Portland, Oregon. 1986. 159 pages; hardcover, \$38.95. AHS member price, \$34.12.

The Chinese garden is a fascinating combination of philosophy, horticulture, botany, art, architecture, and history. It is a complex art form that influenced the development of Japanese gardens centuries ago, and has recently had an increasing influence on Western gardens.

Creating a Chinese Garden combines discussions of the history and development of the traditional Chinese garden with a

practical "how-to" look at the individual elements that make up a Chinese-style garden. The book begins with a discussion of the origins of the classical Chinese garden, followed by a discussion of the similarities and differences between the Japanese and Chinese styles. (The earliest Chinese gardens date back 2,000 years, although most of the gardens that remain today in the care of Chinese cultural authorities date to the Ming and Qing dynasties.)

The chapter entitled "Planning and Practice" examines the major design elements that must be considered when planning a Chinese garden, including form and composition, vistas and "borrowed" landscape, and blending nature with art. "Garden Features and Materials" is an idea-filled chapter that includes discussions on the use of water, mountains, hills, rockery, architecture, and plants. The book concludes with an annotated plant list that includes botanical names, common names, and Chinese names of plants that would be appropriate for use in Europe and North America.

David Engel is an American landscape architect and a recognized authority on Oriental gardening. A graduate of the University of Michigan and Columbia University, David Engel also studied landscape gardening in Japan for several years. He is the author of *Japanese Gardens for Today* and *A Japanese Touch for Your Garden*.

Whether you want to visit Chinese gardens, create one of your own, or merely incorporate a few Chinese elements into your existing garden, this is an excellent book to select for guidance.

Private Gardens of England.

Penelope Hobhouse. Photographs by Hugh Palmer. Harmony Books (Crown Publishers), New York, New York. 1986. 223 pages; hardcover, \$40.00. AHS member price, \$30.00.

This is yet another sumptuous book celebrating outstanding private gardens in England. As with all books of this sort, it is lavishly illustrated with breathtaking color photographs of outstanding plant combinations, lovely perennial borders, striking vistas, and interesting architectural details. Also included are a great many black-and-white photographs that serve to give the reader a more complete "feel" for the garden.

Penelope Hobhouse's thoughtful text provides the reader with more than just another pretty picture book, however. The text on each garden contains information on the history and development of each of the 33 gardens featured. Since all but a few of the gardens are still private (the remainder are preserved by the British National Trust), Hobhouse has placed an emphasis on how each garden celebrates the personality and tastes of its owner. Hobhouse provides a "tour" of each garden, and discusses how the current owners have developed the design and plantings. Occasional cultural notes are also included.

Penelope Hobhouse is the author of *Color in Your Garden* and *The National Trust: A Book of Gardening*.

—Barbara W. Ellis

Barbara W. Ellis is Publications Director for the American Horticultural Society, and Editor of *American Horticulturist*.

Book Order Form

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

- TAYLOR'S GUIDES..... each \$13.45
- Houseplants HOUGH 05340
 - Ground Covers, Vines & Grasses HOUGH 05350
 - Vegetables & Herbs HOUGH 05360
 - Shrubs HOUGH 05370
 - The American Garden Guidebook\$7.85 EVANS 05410
 - Carnivorous Plants of the World.....\$24.75 ISBS 05380
 - Creating a Chinese Garden.....\$34.12 ISBS 05390
 - Private Gardens of England.....\$30.00 CROWN 05400

I would like to order _____ books. Please add \$1.75 per book for postage and handling. Virginia residents, also add 4½% sales tax. Please allow six weeks for delivery.

Enclosed is my check for \$_____.

Ship to: _____

Street: _____

City: _____

State: _____ Zip: _____

MAIL TO: Robin Williams, AHS, P.O. Box 0105, Mount Vernon, VA 22121.

Practical but Spectacular

Wisconsin—famous for its cheese, beer, and rolling hills—conjures up visions of practical, hard-working midwestern farmers intent on turning virgin prairie into productive cropland. It does not, for all its other virtues, bring to mind pictures of lavish public gardens full of color and fragrance. That image belongs to the East and South, where the aristocracy had the leisure time to make gardening an American art form.

Wisconsin, then, is not the place to see gardens. Or, at least that's what some people might think—until they see Boerner Botanical Gardens.

Part of the Milwaukee County Park system, Boerner is a botanical showplace that rivals its more famous eastern and southern counterparts. Yet Boerner is in keeping with Wisconsin's earthy essence, for throughout the gardens is the same nonsensical practicality that characterizes the entire dairy state. It is a resource for gardeners looking for landscaping ideas, information on plants suited to northern climates, or living examples of cultivars that they might otherwise only see in catalogues. Located in 660-acre Whitnall Park, the gardens are also a relaxing place where urban dwellers can escape the city.

Boerner's emphasis on the practical is no accident. In the 1920's, Alfred L. Boerner and Charles B. Whitnall envisioned public gardens and a surrounding arboretum that would be educational as well as beautiful. Whitnall, a park commissioner, decided to locate the gardens and arboretum on an old farm southwest of Milwaukee. In this way, he hoped to preserve the sense of openness that was missing in the city's tiny parks. During the following decade, Boerner, the county landscape architect, designed the gardens with the intent of combining aesthetics with usefulness.

The first collection, established in the 1930's, was the flowering crab apple collection, now one of the country's largest. The lilac collection followed, and has since been combined with a planting of tulips to provide a bright and fragrant spring display. A shady rock and wildflower gar-



den, complete with natural stone walls and a delicate waterfall flowing into quiet pools, was constructed shortly before World War II stalled the gardens' progress. Other collections were added, one by one, in the three decades after the war—the herb garden, the daylily collection, the perennial garden, the juniper collection, the All-America Selections trial gardens, and others. Boerner now boasts over 30 collections and ornamental gardens, all of which have been designed to provide an attractive "living catalogue" of plants.

Boerner's current director, William Radler, continues the tradition of keeping the gardens practical. "The nice thing about the gardens," he explains, "is that the average person can come here and make use of them." He credits his staff of six for preserving that philosophy: "The gardeners here are really old-time gardeners at

heart. A person of that nature can understand the problems the average person has with growing plants."

Radler, too, is an old-time gardener. Despite his all-encompassing responsibilities as director, he observes minute details in the evolving garden, from the quirks of the sprinkling system to an uneven spot under new sod. And, like all true gardeners, he knows when to worry, when to accept the whims of fate, and when to humbly admit he has erred. He recalls the time someone on a tour of the street tree collection, which is planted in islands in the parking lot, asked why it included trees not adapted to street use. "I fumbled with an answer and lost a little sleep over that one," he says wryly. "Now we call it the shade tree collection."

According to Radler, Boerner's rose collection is the best in the area. The roses



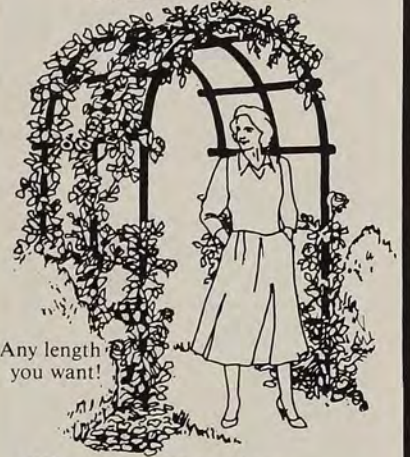
LEFT: A shady corner of the Annual Garden at Boerner Botanical Gardens. TOP: The rock garden displays a wide variety of alpines and other rock garden subjects. ABOVE: Each spring, the spectacular peony collection bursts into bloom.

luxuriate in the sun on the gardens' western border, where visitors can also enjoy a vista of native Wisconsin woodlands. As an official display garden for All-America Rose Selections winners, this colorful collection contains approximately 350 cultivars. In addition to the commonly grown hybrid tea roses, it includes grandifloras, floribundas, polyanthas, miniatures, hybrid perpetuals, and shrub roses. The garden also holds a ballot box, where visitors are invited to cast a vote for their favorite rose in each category. The top 10 are printed in the annual "List of Outstanding Bedding Roses," along with Boerner's recommended cultivars.

The list of recommended roses is evidence that Radler, like Boerner and Whitnall, believes strongly in education: "We try to show not just what people are buying, but what they should be interested in,"

Now there are over 120 practical gardening items in our

FREE GARDEN CATALOG



Any length you want!

Classic Garden Arches & Arbors

You can easily assemble a wide variety of structures with these strong English arches. Climbing roses, grapes, wisteria and clematis can grow on Gateways, Bowers, Tunnels or Lean-tos (against buildings). Sturdy steel tubing is weatherproofed with matte green bamboo-textured plastic. Explore the possibilities.

Chamber's English Planters

The Hayracks, Hanging or Wall Baskets and Planters are generously proportioned – and deep enough so they do not dry out quickly. Each piece is made from welded steel then thickly dipped in black plastic for protection and superb appearance.



Gro-Thru Plant Supports

Hold perennials or annuals invisibly, without tying or staking. These English supports hold not only the whole plant, but each individual stem as it grows through the 3" square mesh. Soon the natural green frame is concealed by foliage and the plant is held firmly for the season. Different sizes of heads can fit different lengths of legs to suit various plants. Galvanized under the green coating to last many years.



Call or write for OUR FREE CATALOG
Kinsman Company

River Road, Dept. 711
Point Pleasant, PA 18950
(215) 297-5613

FIRST & ONLY Greenhouse/Screenhouse Year-Round Combination!

UNIQUE!
ENERGY-SAVING
SUN-PORCH™
INSULATED
WINTER SUN SPACE CONVERTS
TO A SUMMER SCREEN ROOM!



1" THICK
DOUBLE-WALL
INSULATED
GLAZING

- Bronze aluminum
- Shatter-resistant glazing
- No foundations required
- Easy do-it-yourself assembly
- Ideal spa/hot tub room.

Send \$2 for Color Catalogues, Prices,
SENT FIRST CLASS MAIL.

Dealer Inquiries Welcome



VEGETABLE FACTORY, INC.
P.O. Box 2235, Dept. AH-87
New York, NY 10163

SHOW YOU LIKE TO GARDEN!



Choose green garden-gate or multi-colored vegetable design for any shirt or tote

100% cotton crew-neck shirt	S, M, L, XL	\$9.95
sky blue, pale peach, cloud white		
50/50 poly-cotton crew neck	S, M, L, XL	\$9.95
sky blue, lemon yellow, cloud white		
50/50 women's scoop-neck	S, M, L, XL	\$11.95
lilac, champagne, lemon yellow		
50/50 poly-cotton crew neck sweatshirt	S, M, L, XL	\$17.95
sky blue, cloud white		
Tote Bag - 15 x 12 x 4 in natural		\$11.95
Qty	Style	Size
		Color
		Design

Add \$1.50 per shirt/\$2.00 per sweatshirt or tote (CA res. add 6% tax). send check/Money Order/VISA or MASTERCARD to:

Print Name _____

Address _____

City/State/Zip _____

Card # _____ Expires: _____

■ THERE'S ALWAYS THE GARDEN ■

32 W. Anapamu #267-AH, Santa Barbara, CA 93101

PUBLIC GARDENS

he explains. An avid amateur rose hybridizer, he strives to breed roses that can withstand both the brutally cold winters and muggy, disease-promoting summers typical of Wisconsin. Stirred by his love for roses, he has written a pamphlet on shrub roses, based on Boerner's collection.

Boerner's peony collection is also splendid. Snaked along a grassy path near the entrance to the gardens, it contains over 170 cultivars, both new introductions and old classics. The range of colors and their combinations is breathtaking—double whites, salmons and corals with apricot centers, and every hue of red and pink. And the fragrance of the peonies is wonderfully overwhelming, even from the nearby parking lot. At first sniff, gardeners who have dismissed peonies as little more than vehicles for transporting tiny ants into the house are likely to vow to include them in their landscape. And they are also likely to use Boerner's collection as a reference when selecting cultivars.

Radler takes care to extend the peony season with early- and late-blooming cultivars, and avoids having similar colors in bloom at the same time. He evaluates the collection each year, selecting reliable and rain-tolerant cultivars to include in the gardens' publication, *Growing Peonies*. Eventually, he hopes to train volunteers to collect more extensive data.

In the late summer, the trial garden is the most brilliant area of the park. There, All-America Selections entries are evaluated for their performance. Visitors can wander through row after dazzling row of petunias, roses, dahlias, marigolds, and other common and exotic annuals and perennials. A key to the numbered identification tags in each plot helps visitors sort through the maze of cultivars.

If the trial garden is the brightest in late summer, then the herb garden is the most fragrant. A combination of both formal and informal planting arrangements, the garden invites visitors to gently rub the tip of a leaf, then enjoy its aroma. Detailed signs give information on the history and uses of the herbs. Special sections are reserved for plants used to dye fabrics and for medicinal herbs.

In addition to the gardens, Boerner offers educational programs and events. The Plant Doctor Clinic, offered twice each week, brings in plant experts from throughout southeastern Wisconsin to answer gardeners' questions. During the year, Boerner presents workshops and classes,

such as "Floral Arts Through the Centuries," "Working Wonders with Weeds and Wildflowers," and "Basic Home Landscaping." Periodic plant sales provide gardeners with the opportunity to discover cultivars they may not find readily at commercial retailers.

In keeping with the gardens' educational goals, Radler has re-written a series of pamphlets developed by John Voight, a previous director, including "Growing Tulips," "Growing Tuberous Begonias," "Growing Iris," and "Growing Shrubs." These pamphlets give cultural information and varietal recommendations geared to the short growing season and cold winters of southeastern Wisconsin.

Radler's dedication to Boerner as an educational garden extends beyond displaying an array of plants and providing programs and publications. Boerner's director also crusades for little-known plants and cultivars that do well in the area. One of his pets is the intermediate bearded iris, which he favors because it fills a gap in the bloom sequence.

"When I saw them out in the trial garden the first year, they looked like misfits," he recalls. "But after evaluating these 'misfits' for a few years, I realized that the intermediate bearded were blooming at a time when little else was. They bloomed with the crab apples, right after the tulips, and before the tall bearded, when we badly needed something in flower."

Radler faces a problem common to many educators—getting his ideas accepted. "I wish people would re-assess their values and not always go for the biggest and the brightest, but plan for a full season of interest. Since people buy the bigger, flashier things, the intermediates have taken a back seat in popularity." He continues, "It's a shame. For the intermediate iris, I'm probably the only big spokesman I know of."

The intermediate bearded iris is just one of many plants that have made it from the trial gardens into a permanent collection at Boerner. The introduction of new plants and the regular updating of the collections allow visitors to evaluate the new plants or simply to enjoy the changing displays. In this way, Radler and his "old-time gardeners" still carry on Boerner and Whinnall's dream of creating a botanical showplace that emphasizes education as well as beauty. ● —Erin Monica Hynes

Erin Monica Hynes, a native midwesterner, is a writer currently living in Louisiana.

MARLATE

The Leader in

Marlate Methoxychlor Insecticide effectively controls a diversified range of insects which infests fruits, vegetables, and ornamentals in all gardens and greenhouses. It has the lowest toxicity rating of the major insecticides on the market today.

THE LOWEST TOXICITY AVAILABLE

The Toxicity Graph below compares Marlate with other major insecticides. The graph is measured in milligrams and is divided into four toxicity classes (Class I—Poison; Class II—Warning; Class III and Class IV—Caution) as stated by the Association of American Pesticide Control Officials, Inc. (AAPCO). The number appearing at the top of each bar represents the Acute Oral LD 50 rating of each insecticide as given in the Farm Chemicals Handbook 1985. The Acute Oral LD 50 is the determination of toxicity of each insecticide. The lower the LD 50 number in milligrams, the more poisonous the chemical.

Clearly illustrated, Marlate soars to the top of the graph registering 6000 milligrams—the lowest mammalian toxicity rating of all the major insecticides.

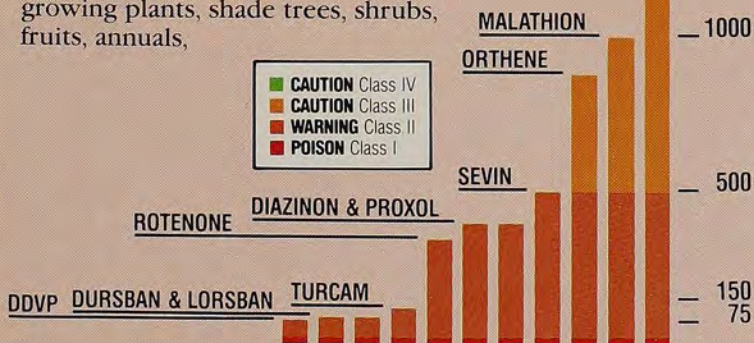
It is 40 times less toxic than Dursban (Lorsban), 15 times less toxic than Diazinon, 12 times less toxic than Sevin, and six times less toxic than Malathion. Continued exposure to Malathion and Sevin can affect the cholinesterase (a body enzyme necessary for proper nerve function) levels in the blood.

BIO-DEGRADABLE

Marlate's bio-degradable formulation will not harm the environment and is non-accumulative in the food chain. It can be applied repeatedly without harm to the ecosystem.

VERSATILE AND EFFECTIVE

Marlate is non-phytotoxic to most growing plants, shade trees, shrubs, fruits, annuals,



ACUTE ORAL
LD 50 RATING
IN MILLIGRAMS

Low Toxicity

perennials, and delicate ornamentals. It can be utilized on such sensitive vegetables as tomatoes, beans, and squash which may be injured by other insecticides. Garden lovers will feel comfortable and rest assured using Marlate in a garden and backyard that is enjoyed by children and pets.

Its contact action controls over 300 varieties of insects including cabbageworms, Japanese beetles, leafhoppers, tent caterpillars, flower thrips, and gypsy moths.

Marlate Methoxychlor Insecticide is a product you can depend on. Study the evidence and decide for yourself.

Time Tested
MARLATE
Methoxychlor
Insecticide

Manufactured by
 KINCAID ENTERPRISES, INC.
P.O. Box 671
Nitro, WV 25143

For more information on Marlate and a list of distributors near you please fill out the coupon below and mail it today.

Please send me more information on Marlate and the nearest distributor in my vicinity. AH687

NAME _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

I am interested in controlling the following insects in my
 flower vegetable garden

NET WT. 1 LB.

® MARLATE is a registered trademark of KINCAID ENT., INC.



Country Casual

Designer and Direct Importer of
Authentic Classic English Solid Teakwood
Garden Seats and Site Furnishings



A Country Casual Original...

Chippendale II is specifically designed to withstand the rigors of everyday use in public, commercial or residential settings.

Crafted with elegance and durability, the 18th century lattice back is constructed from solid lengths of mortise and tenoned teak.

Call or write for more information
24-page catalogue \$2.00

See us in *LAfile '86* and *Sweets '86* 2.12 COU

Country Casual—CAH
17317 Germantown Rd.
Germantown, Md. 20874-2999
(301) 540-0040

Metro D.C. 428-3434

Prompt Shipment
from our own large Maryland inventory



ENSURE
AUTHENTICITY
SPECIFY
MADE IN
ENGLAND