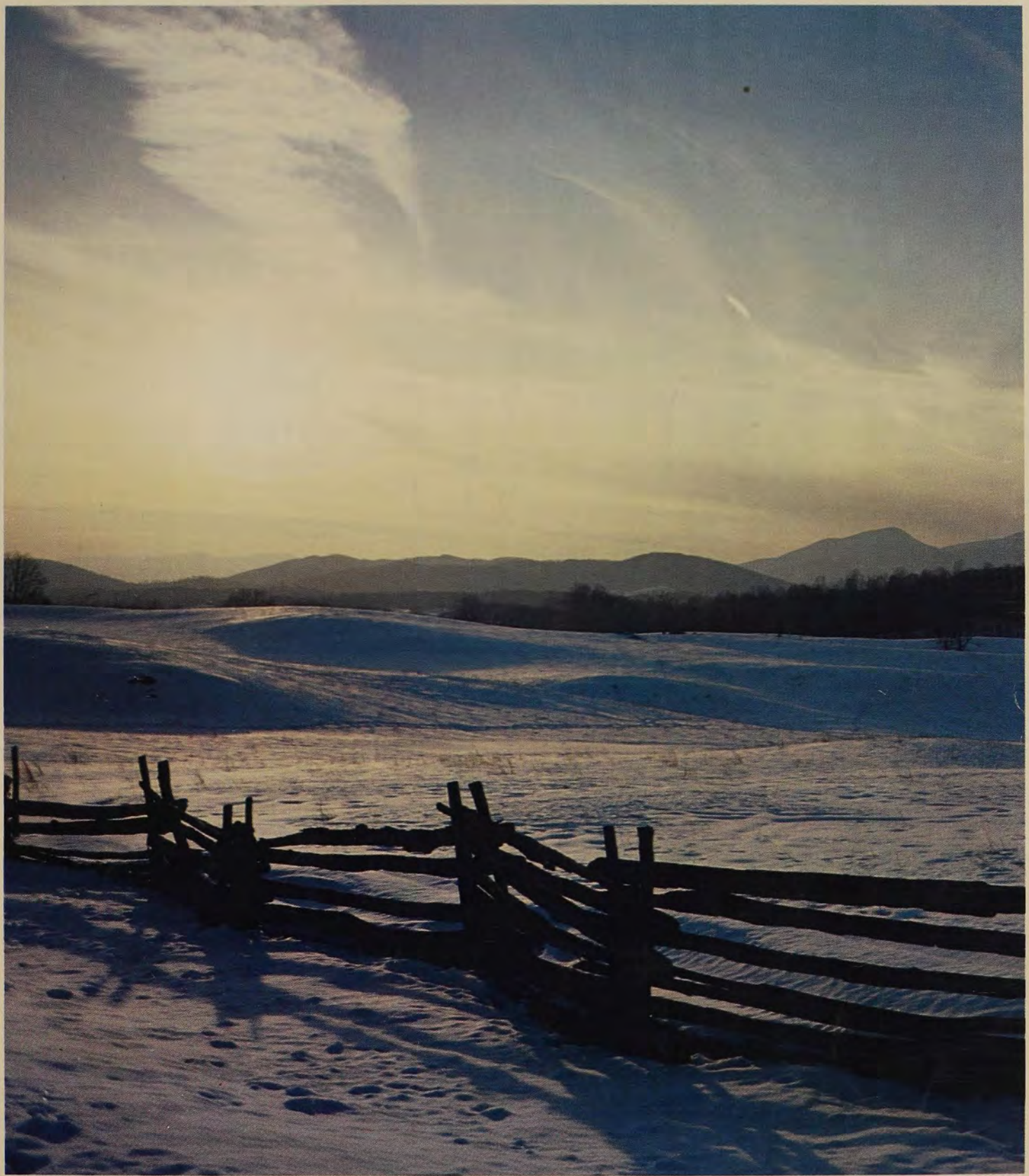
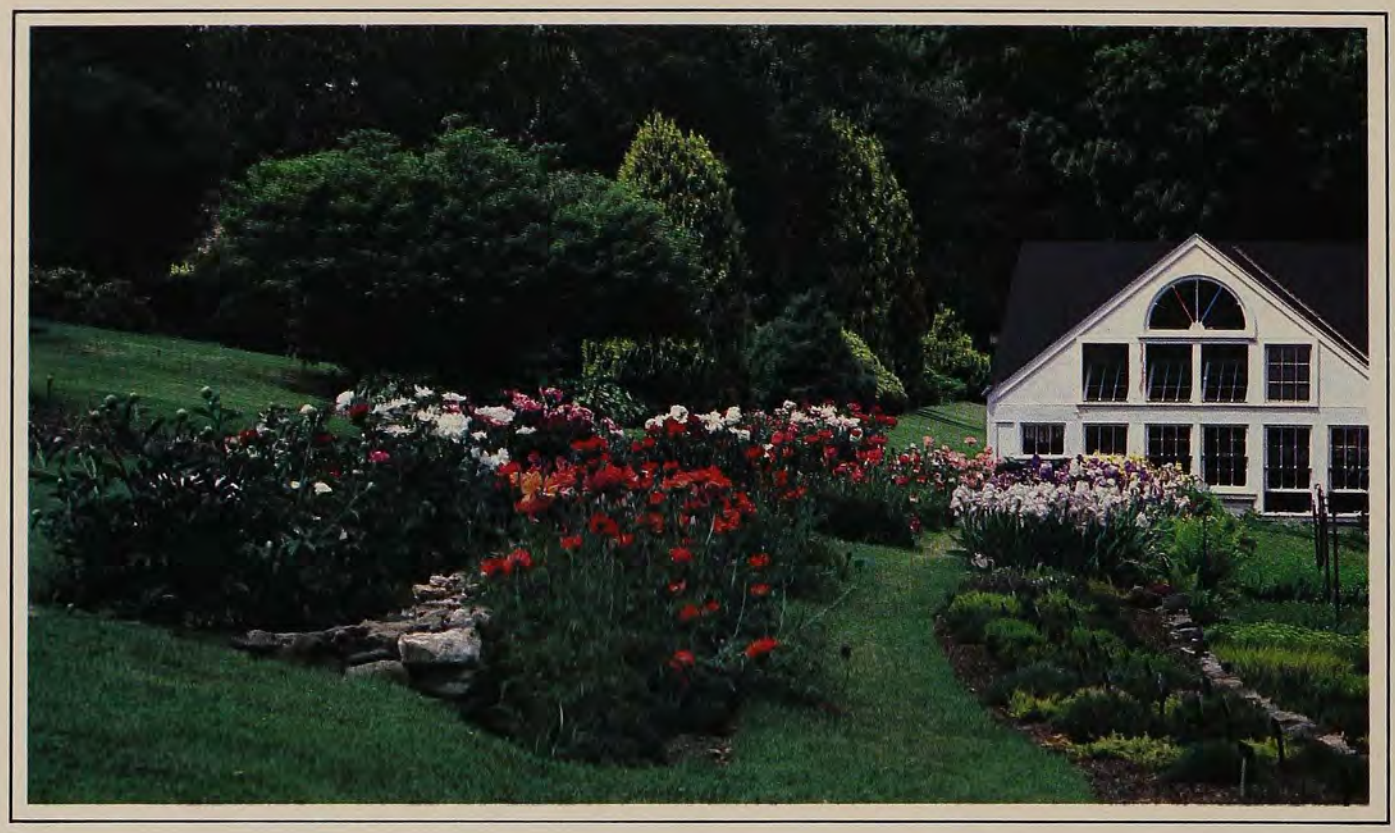
AMERICAN HORTICULTURIST

FEBRUARY 1983





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AMERICAN HORTICULTURIST

VOLUME 62 NUMBER 2

This month we are pleased to introduce to you 25 "new" plants for the garden. Among them are *Rhododendron macgregoriae* X *R. lochae* (left); *Chrysopsis villosa* 'Golden Sunshine' (top); and *Astrantia* 'Margery Fish'.

ON THE COVER: Winter scene in rural Virginia. Photograph by Hollen Johnson.

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GUEST EDITORIAL

AHS PROGRAMS: LOOKING AHEAD

As your new director of horticultural education, I have been spending the past two months "getting my bearings" in the job. Shifting from one plant-growing zone to another is always an expansive experience for me, and this September's move meant leaving black-eyed Susan and goldenrod in the fields and meadows around Philadelphia to find the Virginia meadow behind my new abode carpeted with masses of golden groundsel. As fall proceeded, the striking scarlets of sweet gum and rich yellows of oak and tulip tree against the blue sky and the dark Potomac seemed more individual and crisper—in fact, I'm becoming a confirmed Virginian already.

I have not spent all of my working hours gazing out the window, or on lunch breaks by the river, however. Plans for our Spring Symposium (March 19-22) take us to the gracious walled gardens of Charleston and its nearby romantic plantations on the Ashley and Cooper Rivers. We will examine these Carolina lowlands in their historic context, learning about the adaptation of city gardens to historic restoration, and of rice plantations to more contemporary horticultural attractions. There will be plenty of time to explore Charleston's galleries, antique shops and historic houses on your own, or to become involved in discussions over breakfast with horticulturists on a variety of gardening topics of your choice. Many of the plants grown in the Carolina coastal area, both native and introduced, can be grown in other parts of the country. We will make it a point to sort those out for your interest.

Plans are also well under way for the Fall Annual Congress in Philadelphia next September 14-18. Many exciting things have been happening in the garden world of the Delaware Valley during the past few years, and we will look with a fresh view at some private gardens turned public (Longwood and the Morris Arboretum), as well as a number of very special private gardens.

It may seem to some of you that in 1983 AHS is concentrating on the East Coast. Never fear—we are headed West, South and North in '84-'86. We are eager to hear from you about superior gardens in your own part of the country.

One aspect of my job is to help you find each other and coordinate your enthusiasm into regional groups in the years to come, so that regional seminars, workshops and even conferences can be put together in less garden-endowed areas. If you are enthusiastic about organizing such a regional group and can dedicate some time, energy and friends' volunteer efforts, please let me hear from you. The Society is as strong as its membership makes it. We of the staff of AHS recognize that there are many more ways in which we may be of help to the amateur gardener. I hope to enrich your membership benefits by bringing expanded programs to many areas of the country on a more financially reasonable basis than our large meetings have been in the past. To do this is going to take money, time and in-put from you, our members. I am looking forward to hearing from you and meeting you in the months and years ahead.

Elizabeth D. Hume

Elizabeth D. Hume
Director, Education

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ARISTOLOCHIA

Climbing nimbly over the embankment to my front door is a curious, heart-leaved vine whose inconspicuous flowers appear in late summer. I would scarcely notice the vine since there is plenty to arrest my eye at that time of year were it not *Aristolochia*. Although the blossom is seemingly insignificant, closer inspection reveals a very complex structure. It exhibits the same strange form present throughout Aristolochiaceae—a long tube leading to a plump pouch. *Aristolochia* flowers are often likened to a bird's gracefully bent neck and bill, causing it to acquire such nicknames as the pelican flower or swan flower.

The blossom's unique shape is not purely accidental; it is absolutely necessary for the plant's survival. Aristolochias are not self-pollinated. Flies are lured into its "parlor" by a fetid odor many species exude and the fleshy, carrion-like coloration of the flowers. Once an insect has gained entry into the tube, it easily slides down the flower's hairy throat, for all hairs point downward. After it has pollinated the receptive stigma, the fly prepares to take its leave only to find itself imprisoned. The hairs that facilitated the fly's entry now point sharply toward it like so many brandished swords. The insect has no choice but to stay the night. It is hardly a pleasant sojourn, and the fly struggles pitifully. *Aristolochia* plays the proper host, however, and will not allow its guest to go hungry, obligingly nourishing the fly with nectar oozing from small nectaries in its chamber.

On the second day the anthers ripen in the fly's chamber and shed their pollen on the struggling insect. This pollen is to be carried to another flower. With their purpose accomplished the flowers begin to wither. As the formerly sharp tube hairs wilt they no longer block the insect's escape route through the tube. The fly is free. Apparently it is none the worse for having spent the night imprisoned and none the wiser either, for it willingly brings its pollen to another *Aristolochia* flower where it will once again be obliged to linger overnight.

If this saga suggests the incredible, the flower's appearance is even more so. In her effort to invent flowers that would attract flies, Nature created some very beautiful artwork. Although the North American species are relatively small and dull colored, many of the tropical *Aristolochia* species are unusually striking, displaying bright colors and intricate markings.

Tovah Martin

Geoffrey K. Martin

Aristolochia gigantea, above, and *A. fimbriata,* top, are two South American species that make interesting house plants.

There are 450 species of *Aristolochia* distributed throughout the tropics and subtropics. The largest distribution is in Brazil and the island of Hispaniola. North America claims only four native species: *A. serpentaria, A. californica, A. tomentosa* and *A. durior*. The best known of these is *A. serpentaria,* famed for its use in folk medicine.

Aristolochias have been used medicinally since ancient times. The plant's name was derived from the Greek *Aristolocheia: aristos* meaning best and *locheia* meaning birth. At a time when a plant's virtues were thought to be revealed in its physical form, aristolochia's leaf shape was perceived to resemble the uterus and thus the plant was believed efficacious in childbirth. Dioscorides mentions that the dried roots in wine would bring away both birth and afterbirth. It is known that consuming the roots can cause abortion.

Since Graeco-Roman times *Aristolochia* has been employed in connection with cancers. Research into the use of aristolochic acid as a cancer drug has continued into modern medicine. In 1908, Rho Chi, the honorary pharmaceutical society in the United States, was known as the Aristolochic Society. Unfortunately, the plant failed to exhibit any appreciable results as

a cancer cure, and testing was abandoned in favor of more promising leads.

As with many plants *Aristolochia* was credited by the original herbalists with numerous medicinal powers. Among its many presumed virtues the plant was said to cure rheumatism, ulcers and fevers, especially typhoid. People found other uses for the vine as well. Peter Treveris wrote in *The Grete Herball*, dated 1526, that the smoke of *Aristolochia* "maketh the patient merry marvelously" and "dryveth all devylsshnesse and trouble out of the house."

A warning is imperative here—*Aristolochia* is known to be poisonous if consumed in quantity. It causes violent irritation to the gastro-intestinal tract and kidneys and also affects the respiratory system. The results can be as severe as paralysis or even coma and death. A popular cure for gout known as Portland powder and made with *Aristolochia* in combination with gentian and centaury was once popular. The mixture was prescribed to be drunk every morning for three months. Patients often experienced diminished symptoms and continued to use the mixture, only to die eventually from the damage done to their stomach.

Aristolochia serpentaria, the native North American vine, gained its name by virtue of its use as a medicine. The American Indians taught the new settlers few of their herbal cures. They did divulge one secret, however—their practice of applying *A. serpentaria* to rattlesnake bites. Thus the plant gained both its botanical and common names, its nickname being Virginia snakeroot. In Appalachia the vine is still used for this purpose, although the benefits are unsubstantiated.

A. durior, the vine in my garden, was first introduced by John Bartram. We have this ardent Quaker and botanist to thank for introducing the scores of native American plants he collected and traded with his correspondent and fellow plant enthusiast, John Collinson of Britain. A vigorous vine, *A. durior* can easily envelope a wall or hide a porch from passers-by. Naturalized throughout New England, this vine should tolerate the cold, although it suffers when exposed to alternating periods of freezing and thawing. After a particularly rough winter my vine will make a slow, lethargic journey up the embankment, barely reaching the porch by summer's end. In a milder year the vine more enthusiastically scampers up the hill, nearly every node baring its curious flower.

Those who wish to cultivate a hardy aristolochia outdoors should have little difficulty. Furnishing the thirsty roots with sufficient water can prove a problem, however. Although aristolochias are heavy drinkers, they prefer not to sit in water. A well drained spot similar to the one my snakeroot enjoys is the ideal situation. The broad foliage on the aristolochia vine is subject to wilting in full summer sun. Therefore, select a spot with morning sun but afternoon shade. In fall, protect the vines with a thick layer of mulch to shelter them from winter's punishments.

Few aristolochias are commonly cultivated as ornamentals. The fault lies partly in the unpleasant odor that some species emit. Such species as the exotic *A. grandiflora* var. *sturtevantii,* with its huge, crumpled flowers, each dangling a three-foot-long tail, understandably may never come into cultivation because of their stench. The flower of *A. ringens* is adorned by two six-inch limbs that resemble a gaping duck's bill. Unfortunately, it too smells like spoiled meat. However, there are aristolochias that do not suffer from this failing, using their brightly colored limbs rather than their aroma to lure insects. The only reason they aren't available is because growers or buyers don't know they exist. They are certainly worthy of cultivation.

Aristolochia is well suited as a house plant; it grows rapidly and blooms freely. The vines prefer full sun—a south window would be ideal. Temperatures should range between 55-65° F at night. A large trellis into which spare ends are tied will help contain the vine.

Aristolochia grows in spring and summer. A few species go completely dormant in winter, but the rootstock lives and in spring growth resumes. As the days lengthen in late winter, begin to water dormant vines and apply fertilizer as growth escalates. Increase the dosage slowly to once every two weeks in spring and summer. By midspring new growth should be rampant. As the vine grows, be careful not to rip the tendrils from objects onto which they grab for this would discourage bud formation. Instead, guide the vine onto its own trellis before it reaches elsewhere.

A. gigantea is the most popular member of the genus for indoor cultivation. Nicknamed "the Dutchman's pipe," its huge pouch flutes into an intricately patterned flower often reaching six inches in width. Fortunately, *A. gigantea* does not find it necessary to advertise its pollen chamber with fetid odors. Instead the tube is marked with bright yellow, which contrasts with the deep maroon and white of the outer limb. Although a rampant grower, a specimen of *A. gigantea* easily can be kept within reasonable limits by winding the vine around a large trellis. This will also create a compact display of flowers and buds.

A. elegans is a smaller version of *A. gigantea.* Flowers are one-third the size and are nestled among equally scaled down heart-shaped leaves. Each flower is marked with similar maroon and cream markings accented by a yellow throat. The flower of *A. elegans* is more cupped when open than that of *A. gigantea.*

A. peruviana is also a notable species for indoor growers. This plant blooms for only one week during the summer with a large cluster of flowers opening many at a time. Each blossom is a masterpiece in markings of copper brown and bright yellow. The massive effect of a cluster of such flowers opening in unison is awesome.

A. fimbriata, a subtropical species, is the least presumptuous in appearance of all *Aristolochia* cultivated indoors. The flowers are only one inch in size, and the color is an inconspicuous light brown and pale green. Crowning the tip of the flower are numerous tendrils standing out as if in shock. When the blossom dies the tendrils quickly fold inward toward the throat. Interestingly, it is this modest species' flower that is immortalized in the famous glass flower exhibit of the Ware Collection in the Peabody Museum in Cambridge, Massachusetts. Magnified in size many times, the flower demonstrates the strange pollination sequence unique to this family. A huge glass fly acts as pollinator. *A. fimbriata*, like many other members of the family, can easily be grown from seed. When the fruit is ripe, collect and store it until the following spring. Seed sown in the spring will bloom the same year. This is the best method of reproducing species that go dormant, such as *A. peruviana, A. ringens,* and *A. fimbriata.*

A. elegans and *A. gigantea* will propagate easily from stem cuttings taken in spring and summer. The stem may be cut into many small segments, each containing at least one leaf node. Root them in clean, sharp sand at a temperature of 65° F.

—Tovah Martin

Tovah Martin is the begonia specialist at Logee's Greenhouses in Danielson, Connecticut. She is also a freelance writer and photographer.

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HORTICULTURAL EXPLORATIONS

Savill Gardens, in Windsor Great Park

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

ENGLAND AND CHELSEA (May 5-19)

It is generally conceded that the British are the keenest gardeners in the world. We see this in both the large public gardens we visit like Wisley and in the private homes as well, where you have a chance to discuss gardening with the owners such as Rosemary Verey of Barnsley House. Visit the Chelsea Flower Show. Also there is an autumn departure, September 8-22.

GERMANY AND IGA '83 (May 26-June 9)

The intensity of horticultural interest in Germany is demonstrated in their great parks, public and private gardens, fine nurseries and a total of 39 botanic gardens. Our itinerary will include a fraction of these as well as numerous other cultural and historical features. A highlight will be IGA '83, the International Horticultural Exhibition in Munich that will surpass Floriade in Amsterdam. Since our Floriade Tour sold out in 1982, we have planned a fall departure for September 6-20.

Other horticultural explorations available in 1983 are: China (March 31-April 18), Bermuda (April 30-May 7), Spring Japan (April 28-May 18), Canadian Rockies (July 16-30), South Africa (Sept. 9-30), Fall New England (Oct. 3-17), Fall Orient (Nov. 1-24).

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

BOOK REVIEWS

ORIENTAL GARDENS

THE CLASSICAL GARDENS OF CHINA—HISTORY AND DESIGN TECHNIQUES.
Yang Hongxun. Van Nostrand Reinhold Company, New York, New York. 1982. 128 pages; hardcover, $29.95. AHS discount price, $23.75 including postage and handling.

JAPANESE GARDENS—DESIGN AND MEANING.
Mitchell Bring and Josse Wayembergh. McGraw-Hill Book Company. New York, New York. 1981. 214 pages; hardcover, $27.50. AHS discount price, $23.25 including postage and handling.

A GUIDE TO THE GARDENS OF KYOTO.
Marc Treib and Ron Herman. Shufunotomo Company. Tokyo. 1980. 202 pages; softcover, $9.95. AHS discount price, $9.70 including postage and handling

These three books, all written by architects, provide an easily understood introduction to the gardens of the Orient and the design principles behind them.

The Classical Gardens of China has been translated from the Chinese and deals with the 3,000-year-old tradition of formal Chinese gardens as well as their influence on Japanese and Western gardens. The fine photographs illustrate the principles discussed and also show details of extant gardens that can be visited today.

Japanese Gardens approaches the subject by analyzing in detail 10 outstanding gardens and then discusses the origins of these garden design concepts—both the effects of Chinese influence and the culture and landscape of Japan. Two final chapters on Principles of Design and Construction Details round out the subject. Extensive garden plans add significantly to the value of the many excellent photographs.

A Guide to the Gardens of Kyoto is far more than the title indicates. Not only is the specific development of gardens within the city of Kyoto covered, but the historical development of Japanese garden design from 4,000 BC to the present is also discussed. Since Kyoto is "the garden city of Japan," an analysis of its gardens will illustrate the development of gardening in Japan.

If you are planning a trip to the Orient, these three books can serve to make such a trip a remarkable educational and aesthetic experience. If you have to stay home, you can still be inspired by the gardening excellence of the Far East.

SOUTH AFRICA

PROTEAS FOR PLEASURE
5th Edition. Sima Eliovson. Macmillian South Africa. Johannesburg. 1979. 227 pages; hardcover, $19.95. AHS discount price, $18.45 including postage and handling.

SHRUBS, TREES AND CLIMBERS FOR SOUTHERN AFRICA.
9th Edition. Sima Eliovson. Macmillan South Africa. Johannesburg. 1981. 270 pages; hardcover, $32.50. AHS discount price, $29.25 including postage and handling.

WILD FLOWERS OF SOUTHERN AFRICA
6th Edition. Sima Eliovson. Macmillan South Africa. Johannesburg. 1980. 310 pages; hardcover, $32.50. AHS discount price, $29.25 including postage and handling.

Long the outstanding garden writer of South Africa, Sima Eliovson is well known wherever the plants of South Africa are grown. And since the plants of that part of the world are so exotic and colorful, they are grown nearly everywhere. In the sun belt areas where a more favorable climate encourages the use of South African plants in the landscape, these three books, written for South African gardeners, can serve directly as garden guides for a most outstanding flora. For those of us who must garden in harsher climates, many of these plants can be grown in the greenhouse or on the windowsill. *Proteas for Pleasure* and *Wildflowers of Southern Africa* both deal exclusively with South African natives and thus serve not only as gardening books but also as excellent guides to one of the world's richest floras. *Shrubs, Trees and Climbers* is directed more at gardening in South Africa and thus discusses a selection of plants from all over the world as well as the more outstanding South Africa natives.

If you garden in the South or West, these three books can significantly expand your horizons. If you are traveling to South Africa then you will want to know more about the wonders you are going to see. Either way, South African flora is most remarkable.

ARBORICULTURE—CARE OF TREES, SHRUBS AND VINES IN THE LANDSCAPE.
Richard W. Harris. Prentice-Hall, Inc. Englewood Cliffs, New Jersey. 1983. 688 pages; hardcover, $34.95. AHS discount price, $32.95 including postage and handling.

This is a college textbook on how to grow and care for trees in the landscape. Following discussions of the value of trees to man and how trees grow, four chapters are devoted to planting and transplanting, and the final 10 chapters are devoted to caring for established trees. If you want to know how a professional would solve your tree problems, reading this book is a good way to learn.

THE NEW CONCISE BRITISH FLORA.
4th Edition. W. Keble Martin. Exbury Press. London. 1982. 247 pages; hardcover, $25.00. AHS discount price, $21.25 including postage and handling.

This latest, amplified and corrected edition is recommended for two reasons. Visitors to the British Isles will find it an invaluable aid to the identification of wildflowers. And with its excellent color photos and concise descriptions of almost 1,400 species of native or naturalized plants, it should serve as a model for anyone preparing a popular flora for any other country. Plants are grouped together by plant family, and the side-by-side illustrations of related species greatly simplifies identification.

USEFUL WILD PLANTS IN AUSTRALIA.
Alan B. Cribb and Joan W. Cribb. Collins. Sydney and London. 1981. 269 pages; hardcover, $17.50. AHS discount price, $16.25 including postage and handling.

This book contains information on more than 450 Australian plant species useful to man. The plants are grouped by type of use, which varies from essential oils and tannins to fish poisons and tuber trees. The uses of wild plants on the other side of the earth may not seem a fitting subject for American gardeners, but many of the plants discussed are grown in our gardens, and a knowledge of their potential economic value can make your own garden all the more interesting.

THE NEW YORK BOTANICAL GARDEN ILLUSTRATED ENCYCLOPEDIA OF HORTICULTURE.
Thomas H. Everett. Garland Publishing, Inc. New York, New York. 1982. 3,601 pages (10 volumes); hardcover, $525.00.

The tenth and last volume of this monumental work has now been published. Thus has been completed the most authoritative and extensive gardening encyclopedia written in the last 25 years and the first real encyclopedia published in America since the beginning of this century. This series is a "must" for any serious gardener.

—Gilbert S. Daniels

Dr. Gilbert S. Daniels is the Immediate Past President of the American Horticultural Society.

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THE DOGBANE FAMILY

An insignificant roadside weed with inconspicuous, although fragrant flowers,has given both its common name and its botanical name to the family to which it belongs. It is the common dogbane, botanically *Apocynum*, family Apocynaceae. With its small, pinkish blossoms and undistinguished foliage, common dogbane seems far removed from the numerous elegantly ornamental members of the family and from those illustrious in medicine.

The name dogbane—does any plant have a less appealing name?—appears to have evolved from a long prevailing belief that this plant was injurious to dogs. In any case, Linnaeus chose two Greek words meaning "dog away" to construct the botanical name *Apocynum* for a common North American plant.

The dogbane family is of worldwide distribution, being most abundant in the tropics. Trees, shrubs, vines and herbs of economic as well as ornamental value are among the 150 genera. Sap of all parts of the plants is a latex or milky juice. Sweet and harmless, or bitter and more or less poisonous, this latex is of commercial importance in some species as the base of a type of rubber—and of bubble gum. Several species produce edible fruits, others are known as timber trees. The folklore associated with some species has brought them prominence as their natural healing properties have been examined and incorporated in certain modern clinical trials and treatments.

Decorative members of this family are well-known shrubs and vines of warm climates and greenhouse culture, adding fragrance and color wherever they are found.

In the dogbane family, leaves are simple, usually opposite, but sometimes alternate or in whorls on the stem. Flowers are, with few exceptions, borne in clusters at the ends of branches; they have five fused sepals and five petals united below into a tube with free petal lobes, creating funnelform or salverform blossoms. Fruits are paired, either fleshy and non-splitting or dry and splitting.

The most useful genus for gardens in temperate climates is *Vinca*. Because of the popularity of *Vinca minor* through the centuries, this native of the Old World has acquired a long list of common names, among them running myrtle and periwinkle. The latter is such a favorite that Apocynaceae is listed frequently as the periwinkle family. *Vinca* is still known, popularly, by its Latin name, which means a long, tough shoot, as applied to the trailing evergreen subshrub nature of the plant.

Nerium oleander

Illustration by Kathleen Crawford

The genus *Vinca* is somewhat unusual in the family because of its solitary flowers. *V. minor* is the common creeping myrtle,. hardy in much of the United States, thriving in the shade and of inestimable value as a groundcover. *V. major*, blue buttons, being less hardy, is popular as a greenhouse pot plant.

Madagascar periwinkle or rose periwin-

kle is an example of the confusion that arises in use of common names and changes in botanical classification. Rose periwinkle, formerly *Vinca rosea*, is now *Catharanthus roseus*. From its origins in the Old World tropics this tender species has become naturalized throughout the tropics. As a bedding plant or in pots in northern gardens, it is an everblooming annual with showy flowers of white or pink.

Folklore and witch doctor tales are associated with many plants in the dogbane family. In modern medicine we have become accustomed to the use of some of the products or derivatives of chemical experimentation initiated because of a curiosity about the healing power of plants. Exhaustive study has been made of the folk medicine uses of vincas, including rose periwinkle. It is *V. rosea* that produces a drug now used in cancer treatment; the vinca connection appears as the syllable *vin* in the name of a life-saving pharmaceutical. The success with *Vinca* in producing extracts for clinical trials definitely started a trend in botanical screening programs at the National Institutes of Health. The fact that vinca alkaloids are chemically unique has had a far-reaching effect upon basic medical research. Other species besides the rose periwinkle have been found to furnish efficacious products.

Rauvolfia, (sometimes spelled *Rauwolfia*) has been used as a folk remedy in India for at least 30 centuries. It was used as an antidote for snake bite, for its calming effect on lunacy, and for soothing fretful babies. It was first mentioned in a medical treatise dating from about 1000 B.C. and was introduced to Europe in 1563 in a book on Hindu medicine.

Rauvolfia species are found growing naturally throughout the tropics with the exception of Australia; widely separated primitive peoples have used this genus in an identical fashion, almost universally acclaiming it as an antidote for snake bite and poisoning, and in treatment of maniacal forms of insanity. All parts of the plant have been used, internally and externally, to cure—and sometimes to kill.

In modern medicine, *Rauvolfia serpentina*, *R. vomitoria* and *R. canescens* are important sources of drugs that rank high among prescriptions written for natural products. From research on *Rauvolfia* came the first understanding of the biochemical basis for mental illness and mental health, and to help the sufferer, a drug—reserpine. This plant long familiar to Oriental med-

icine, has achieved respectability in Western medicine.

Strophanthus, the corkscrew flower, is a vigorous scandent shrub, that is, it leans rather than climbs on a support. In Africa, various species of *Strophanthus* have long been used for arrow poisons, and it is in Africa that intensive exploration and collection has been conducted to acquire the species to which healing powers have been attributed. Some of these have recently been accepted as useful drugs in Western medicine. The seeds of several species yield an important cardiac drug. *S. sarmentosus* is a source of commercial cortisone, and the drug strophanthin comes from *S. hispidus*.

Cultivars of *Nerium oleander* include sweet scented and double-flowered types. But beware! All parts of this favorite decorative plant are poisonous if ingested.

Dr. David Livingstone, the missionary-explorer, noted in his journal in 1861: "We observed natives hunting with poisoned arrows. The poison is called 'Kombe' and it is obtained from a species of *Strophanthus*. It is very virulent, but Kombe may turn out to be a valuable remedy."

Among the 60 *Strophantus* species grown experimentally for their medicinal potential by the U. S. Department of Agriculture, the only one that showed promise as an ornamental was *S. preussii*, a sprawling, viney shrub. The corkscrew flower appellation refers to the tips of the flower petals that stream down a foot or more, like a beard, or like ribbon streamers at a party, and they last a long time. The flowers, borne in clusters, are white with reddish-brown stripes in the throat, with the color repeated in the streamers. Also promising as an ornamental is *S. dichotomus*, a large evergreen shrub or climber; its flowers, too, are curious, the petal lobes developing into narrow, twisted, purple appendages three inches long.

Thevetia peruviana, yellow oleander, a 30-foot evergreen tree, is widely planted as an ornamental in Hawaii and south Florida. Its terminal clusters of orange to yellow, fragrant, bell-shaped flowers mature to irregularly shaped fruit resembling small apples. Each contains one nutlike seed. All parts of this plant are poisonous to animals and man. But the seed contains a digitalis-like substance and from it is manufactured the drug thevetin, a remedy in heart disease. The name *Thevetia* honors Andre Thevet (1502-1592), a French monk who travelled in Brazil and Guyana.

Cerbera, of which there are six species native to Madagascar, tropical Asia, Australia and the Pacific islands, is sometimes planted as an ornamental in warm regions. It is the source of cerberin, a drug that has digitalis-like action on the heart; the active principle is probably identical with thevetine.

In the genus *Nerium*, two species of erect evergreen shrubs occur, one native to the Mediterranean region and the other to the slopes of the Himalayas. *N. oleander*, rose bay, with dull, dark-green leaves mostly in whorls of three, is an ornamental five- to seven-foot bush or tree grown outdoors in warm climates as a hedge or background tree or in tubs for terrace and patio gardens and greenhouse culture elsewhere. Flowers at the tips of branches may be white, yellowish, rose-pink, red or purple. Cultivars include sweet scented and double-flowered types. But beware! All parts of this favorite decorative plant are poisonous if ingested. Its milky juice contains lethal amounts of chemicals similar to those in other species from which useful drugs have been derived. From lovely to lethal, how close the line in the dogbane family!

As mentioned in their descriptions, most of these dogbanes from which beneficial drugs are obtained have ornamental value as well. In addition, the family is blessed with a large number of other handsome flowering plants which lend themselves to various garden and conservatory uses, among them *Allamanda*, *Carissa*, *Mandevilla* and *Beaumontia*.

Allamanda is named in honor of Dr. J. N. S. Allamand of Leyden, Holland, who sent seeds of this plant to Linnaeus from his travels in the tropics. *Allamanda* is the best loved and most widely planted of evergreen flowering plants in warm gardens. It can be a shrub, scandent against walls and fences, a canopy or hedge, blooming in profusion, its glossy foliage and gorgeous yellow cupped flowers always on parade. Most of the cultivated forms appear to be varieties of *A. cathartica*.

Common allamanda or golden trumpet is a Brazilian species with flowers two inches deep and three inches across in clusters at branch tips; the bright-yellow petals have

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velvety texture. True to family heritage, allamanda leaves contain a medicinal ingredient, this one used in small doses as a cathartic.

A. cathartica cultivars such as 'Hendersoni' and 'Stancils' differ from one another in size of blossom and intensity of yellow color. 'Hendersoni' bears the largest flowers. 'Williamsi' has a light fragrance not found in other allamandas. *A. neriifolia*, bush allamanda, is the only species that sets seed—prickly, bur-like capsules prized for dry arrangements. *A. violacea* bears two-inch purple flowers in pairs.

A plant called confederate jasmine should not be confused with other jasmines grown in our southern states. It is not a jasmine.

Beaumontia grandiflora, herald's trumpet, is the best known of eight species of woody vines, the beaumontias. Its large, funnel-form flowers, five to seven inches long, seem like huge goblets; three to nine of these white fragrant beauties in a cluster are awe-inspiring. This species is hardy to U. S. Zone 10, or can be grown under glass.

Carissa grandiflora, natal plum, has become popular as a pot plant for indoor culture. It comes from the Old World tropics. As a much-branched, spiny shrub or small tree, it has many uses outdoors as a hedge or barrier plant, and it does well in coastal areas. The delicate, starry, fragrant flowers are white or pinkish, and the fruit is a bright-red, plum-like berry, tart and edible—altogether a decorative and useful plant.

In 1841 a woody vine with large pink flowers was introduced to horticulture from the Organ Mountains of Brazil by the Veitch Nursery in England. Named *Dipladenia amoena*, its popularity as a greenhouse plant in England and America waxed and waned through the years. Doubt about its correct identification was finally resolved in 1955 when Dr. Robert E. Woodson, Jr., an authority on the dogbane family, identified it as *Mandevilla splendens*. About 50 species of *Mandevilla* are scattered from Mexico to Argentina. The genus name honors H. J. Mandeville, British minister at Buenos Aires about 1839.

Mandevilla is characterized by flowers that are funnelform to tubular in clusters of 20 blossoms, one to four blooming at a time, hanging from leaf axils. *M. laxa*, with fragrant white to cream flowers is known as Chilean jasmine (*M. suaveolens*). *M. splendens* is distinguished in that its flowers grow larger from day to day and change color from pink to rose-purple. The popular, bright-pink 'Alice DuPont' is probably a backcross of two hybrids, *M.* x *amabilis* and *M.* x *splendens*.

Frangipani, used so liberally in Hawaii for leis to celebrate special occasions and persons, is a Mexican native, *Plumeria rubra*. It has been much cultivated in tropical climes especially for its fragrance. The abundant milky sap may be irritating, but it is not poisonous. *P. rubra* is red flowered; however, numerous forms of *rubra* produce white, yellow and tricolored flowers. The plant bears the name of Charles Plumier (1646-1706), a French botanist who collected in America.

A plant called confederate jasmine, or star jasmine, should not be confused with other jasmines grown in our southern states. It is not a jasmine. Furthermore, the word confederate applied to it refers to the Federation of Malay States where this tropical genus, *Trachelospermum*, originates. It is a weaver in and out of trellises and arbors, not really climbing. It is often grown as a greenhouse ornament. Outdoors in mild climates it is hardy over a broad area and may be hardy in protected places as far north as Washington, D. C. The leathery, glossy, dark-green leaves make a handsome background for the star-shaped, one-inch white flowers that come in April and May. Borne in clusters, the individual flowers open in succession over an extended period.

The dogbanes weave enchantment or exert their bewitching powers in different forms and with varying intensity. Bane is a word that means curse or poison. Within this family have been found remedies or antidotes for other curses of mankind. The men who have explored for *Rauvolfia* and related plants in tropical lands agree that in this same family there are at least a hundred species about which little is known except their names, and that in that reservoir there must be something more of possible value in medicine. At the same time, within the dogbanes are splendors of color, fragrance and profusion of flowers that minister to us in other ways.

—Jane Steffey

Jane Steffey is the Society's horticultural advisor.

New Plants for '83

BY THE STAFF OF AMERICAN HORTICULTURIST

Happily for avid gardeners, hybridizers and plantsmen are constantly developing and introducing new plants for us to try in our gardens. Our list was selected from among hundreds of annuals, perennials, trees, shrubs and house plants submitted by nurseries all over the country. This year, in addition to the new plants American growers have developed, you will also find species and cultivars that have been available in other parts of the world for some time but are new to North America. Here are the plants we would like to make room for in our gardens. . . .

(1) ***Delphinium*** **'Blue Springs'**: (photo on previous page) This new dwarf Pacific type introduction, which will grow to a height of 2½ feet, comes in shades of blue and lavender and has good flower form. It should be sown early for best results.

(2) ***Kochia*** **'Acapulco Silver'**: A refreshing change from the usual fare in the All-America Selections inventory is this cultivar with ornamental impact in the summer *and* fall. Silver-tipped foliage turns red in autumn and accounts for the common name of this plant, Mexican firebush. This shrub-like annual grows quickly to four feet in height and will make a nice temporary hedge.

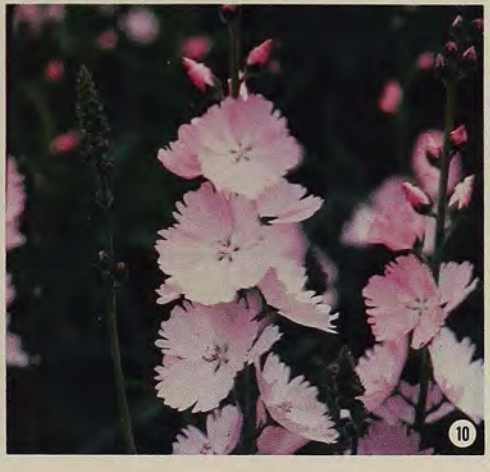
(3) ***Iris sibirica*** **'Little White'**: This charming plant is a true dwarf Siberian iris, becoming no more than 12 to 14 inches high. It will tolerate light shade but prefers full sun. Its grower, Andre Viette Farm and Nursery, even recommends it as a ground cover.

(4) ***Hemerocallis*** **'Bountiful Valley'**: Another contribution from Andre Viette, this daylily isn't new in color, but Viette asserts "it is one of the finest landscape varieties we have ever produced." 'Bountiful Valley' puts on a tremendous show of lemon-yellow flowers with many blooms per scape in mid to late season.

(5) ***Aster*** **'Pot 'n Patio'**: Burpee introduces this new mix as "the first aster that blooms when days are short without the need for additional lighting to extend day length." 'Pot 'n Patio' is a dwarf aster that will produce blooms in winter on bushy, mound-shaped plants 2½ to 3 months after sowing seed. Plants are about 6 inches tall, and the semi-double flowers are about 2½ inches across. 'Pot 'n Patio' also makes an excellent summer bedding plant. In frost free areas grow it outdoors from winter to early spring.

(6) ***Pelargonium*** **'Stardust'**: Flowers and zoned foliage on this hybrid geranium form a star shape, hence its name. The seed will be offered as a mixture in scarlet, rose, pink, salmon, white and bicolors.

(7) ***Hosta sieboldiana*** **'Big Daddy'**: This cultivar from Klehm Nursery is very large—excellent for background planting. It has an espe-



cially strong blue cast to its leaves, which are heavily puckered, and produces white flowers just above the foliage in July and August. USDA Zone 4.

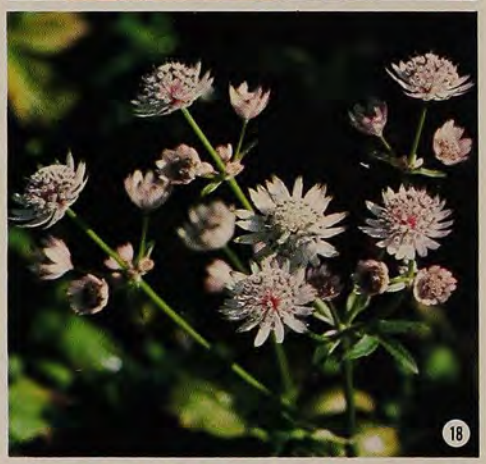
(8) ***Rhododendron*** **'Wedding Bouquet':** Girard Nurseries developed this award-winning deciduous azalea in 1972, and it was first shown in 1977. Flowers develop into very tight trusses 5 to 5½ inches across. Buds are pink or light rose before opening, then become white-bordered with pink centers upon blooming. Each almost perfectly ball-shaped truss contains from 25 to 35 florets. The medium-green foliage holds up well until winter. USDA Zone 5.

(9) ***Impatiens*** **'Sweet Sue':** Park Seed introduces this cultivar as the first New Guinea strain available to the home gardener from seed. 'Sweet Sue' is suitable for pot, container or hanging basket. Sun-tolerant and neat in habit, this cultivar produces three-inch-wide, flaming-orange flowers.

(10) ***Sidalcea*** **'Elsie Heugh':** Though familiar to European gardeners, this hybrid perennial is rarely found in American gardens. 'Elsie Heugh' is the palest of all sidalceas. Shell-pink flowers with fringed petals bloom from mid to late summer in partial shade. The plant prefers a well-drained spot in the garden and will bloom longer if spent flowers are removed. Divide the plants every three to four years. USDA Zones 5-9.

(11) ***Cornus kousa*** **'Gold Star':** Wayside Gardens is the only nursery that will be offering this new variegated dogwood from Japan. Coral-red stems contrast with foliage containing a broad, central, golden-yellow band in the spring and summer. Flowers are abundant and are followed by attractive fruit. This dogwood has a pleasing growth habit and prefers ample moisture in a well-drained location. It can withstand full sun in the North. USDA Zones 5-9.

(12) ***Zinnia*** **'Short Stuff':** As its name implies, this introduction is a dwarf hybrid, which grows to eight inches and is ideal for pot culture as well as for use in the garden. Seed will be sold as a mix—white, orange, red, yellow, coral, light pink—or by individual color.



(13) ***Coronilla valentina***: Another plant known to European gardeners but rare in this country, this dwarf shrub boasts beautiful glaucous-gray foliage and bears fragrant, bright-yellow, pea-like flowers over a long blooming season. Offered by Siskiyou Rare Plant Nursery, *C. valentina* has reached a height of two feet in their gardens. It can be kept to 12 inches if given a fairly hard spring or late summer pruning. Hardy to USDA Zone 5 at least.

(14) ***Rhododendron macgregoriae* X *R. lochae***: Another Greer Gardens' listing, this tropical Vireya cross is very floriferous and has good growth habit. Glossy-green foliage sets off the attractive trusses, each of which have up to 15 blooms.

(15) ***Rosa* 'Sun Flare'**: This rose is a 1982 AARS winner, the first clear-yellow floribunda to receive this distinction in 25 years. It has compact, bushy growth and glossy, bright-green foliage. The abundantly-borne flowers are three inches across and appear in clusters of three to 12 throughout the growing season. 'Sun Flare' was developed by Bill Warriner, who has produced many other AARS winners.

(16) ***Thunbergia myorensis***: This floriferous vine, a native of India, becomes a huge specimen requiring trellising. Suitable as a house plant in most parts of the U.S., it will blossom as a young plant and at maturity will produce five-foot-long chains of copper and yellow blooms. From Logee's Greenhouses.

(17) ***Chrysopsis villosa* 'Golden Sunshine'**: White Flower Farm is proud of several "new" introductions this year; we chose two as special favorites. This daisy is a vigorous and long-blooming one, growing three to four feet high and producing bright-yellow blossoms.

(18) ***Astrantia* 'Margery Fish'**: The second White Flower Farm introduction, this pink and white cultivar grows 24 inches high and is an excellent cut flower.

(19) ***Brassica* 'Dynasty'**: Ornamental cabbages are becoming more popular. To satisfy demand, 'Dynasty' was developed and will be available as seed from many mail-order companies. It comes in pink, white and red and is ideal in beds, borders or containers. Look but

don't taste—'Dynasty' is not for eating.

(20) **'Hot Bed' ornamental pepper:** 'Hot Bed', available as a started plant or as seed, comes in three types—slim, round and cone. Fruits change color as the plant matures—from cream to yellow to orange and finally bright red.

(21) ***Osteospermum ecklonis*** (sold as *Dimorphotheca ecklonis*): Logee's Greenhouses nominates an African daisy for eventual house plant stardom. This species, in shocking plum, will produce three-inch blossoms in winter. It prefers a cool location.

(22) ***Rhododendron*** **'Windsor Sunbeam':** This azalea from Carlson's is the newest of the Windsor hybrids to be made available to American gardeners. It is a darker yellow than 'Windsor Buttercup' but has the same good shape and exceptionally heavy flowering capabilities.

(23) ***Petunia*** **'Summer Madness':** Available only as a started plant from garden centers, this cultivar promises to attract buyers because it is a very hardy multiflora and flowers like "madness" throughout the summer.

(24) ***Catharanthus roseus*** **'Morning Mist'** (formerly *Vinca rosea*): Vincas have become favorite bedding plants in many parts of the country because of their heat, insect and disease tolerance. 'Morning Mist' is no exception. What distinguishes it from other cultivars is that it's the first in a new series of azalea-type, spreading vincas. It will reach 12 to 15 inches in height, and its low, mounding habit makes it suitable for hanging baskets and containers as well. From Denholm Seeds.

(25) ***Rhododendron aurigeranum*:** This Vireya rhododendron is not new, but it's relatively unknown to most gardeners. As a tropical species, it is tender and cannot be grown outdoors in most parts of the United States—but this allows it to be grown as a house plant instead. *R. aurigeranum* produces showy, tubular flowers of orange-yellow that become pure yellow after opening. Eight to 12 flowers appear on each truss. Greer Gardens sells this species and provides excellent cultural information in their catalog.

Fantasy Plants

Illustration by Barbara Gibson

Gardeners are supposed to be patient people, but it's difficult to be anything but impatient when one considers the time it takes to introduce a new plant to the market. Years of research come first, then years of growing enough plants to satisfy customer demand follow. And sometimes, to be honest, the breakthroughs seem pitifully small. One year we are introduced to red zinnias; the next year we are introduced to dwarf red zinnias. We gardeners expect so much. Still, if we didn't dream, if we didn't have such insatiable appetites for the new and different, think how limited our garden inventory would be.

Wishful thinking is the stuff of which new discoveries are made. With that maxim in mind, we invited some knowledgeable horticulturists and gardeners we know to engage in a little fantasizing. What follows are their wish lists for tomorrow (some more far-fetched than others). Plant breeders, take note!

• It would be nice if all the "holiday cactus" got together—Christmas, Easter, Thanksgiving, the in-between and the confused—to produce a cactus that simply bloomed repeatedly throughout the year.

• A house plant, similar to *Aloe barbadensis* (formerly *A. vera*) would more than earn its keep if it contained an adhesive gel or liquid in its leaves useful in minor gluing jobs around the house.

• A true breakthrough in rose breeding is sorely needed that would introduce a special toxin in the plant's physiology. This natural compound would be distasteful to rose chafers and Japanese beetles. Any Coleopteron foolish enough to persist in its meal of rose petals would be poisoned.

• What this country needs is a delphinium with a backbone so it won't need staking.

• . . . a summer-blooming forsythia with blue flowers and good growth habit, for those who tire of gushing yellow in spring.

• . . .a hemerocallis that sheds its spent flowers right after bloom and doesn't need daily deadheading to look its best.

• . . .a cutleaf, everblooming, fruitless catalpa with winter character.

• Prior to 1950, hardly anyone in this country had heard of zucchini, so we have come a long way. But much more lies just ahead. With genetic engineering on the horizon nothing seems impossible. I hope for early attention to the development of more perennial food crops that need not be replanted every year. Rhubarb and asparagus are the classic present examples, but how about perennial tomatoes, peppers, cole crops, sweet corn, beans, grains? Dont' be surprised if some of these come along. Think of the savings in labor and energy!

• Anyone who has grown *Ficus benjamina* realizes the fickle nature of the plant. Do something out of the ordinary and it automatically drops its leaves. Wouldn't it be convenient if there were a variety of weeping fig that actually shed water (cried) from its leaves at precisely the time it required watering? The leaf drop problem would have one less cause, and think of the convenience!

• I think the most useful contribution plant breeders could make would be to increase the cold-hardiness of woody ornamentals across the board. Imagine the market for evergreen azaleas that were realiably hardy to -10°F and also possessed attractive flowers and growth habits! Although breakthroughs are no doubt in the offing, such plants are not widely available yet. Increased cold-hardiness would also extend the usefulness of crape myrtles, camellias, ligustrums and southern magnolias, plants that can be tricky to grow even in Zone 7.

• Effective fall color is always a welcome addition to woody ornamentals. I'd like to see fall color developed in plants that don't presently have it—*Deutzia, Forsythia*, lilac, *Weigela*, mockorange and flowering crab. Fall color could be improved in flowering cherry, Eastern and Chinese redbud, *Koelruteria paniculata* and *Metasequoia*.

• A color break in hosta is long overdue. Shades of purple seem within reach of types like 'Hadspen Blue'. If margins and stripes of pink, silver or red were added to the existing shades of green, yellow and white, hostas would not only be indispensable but also irresistible.

• I'd like to see more true blue flower colors developed in woody ornamentals. Real blue must be the scarcest color in the world of horticulture; except for lilacs, hydrangeas, *Vitex*, *Buddleia*, and *Caryopteris*, it's hardly ever found in woody plants. Many wholesale growers claim that their plants have blue flowers, but when you see them in person, they are almost invariably lavender. We need a true blue rhododendron, azalea, crape myrtle and rose.

• In spite of all the advances made in bush beans, it is still a backbreaking job to harvest them. Old backs give up after a row or two. Young backs grow old before their time. What the gardener needs is a bush whose beans are *all* ready to harvest at once, at which time the leaves drop off and the entire plant may either be pulled or cut.

• The tomato variety 'Stakeless' developed some years ago by the University of Delaware—a cross, I believe, between the tomato and the eggplant—should be the takeoff for a race of garden tomatoes that really need no staking.

• I would like to see a sweetpea grow and bloom in Zone 7 and southward, during the summer, with no problems from heat prostration. The model for its performance could be the perennial sweetpea, *Lathyrus latifolius*.

• We need a white garden geranium—one with the same vigor as the reds, with the same dark zoning, and with double florets that either fall off the head as they fade, are *completely* hidden by the newer florets or don't turn brown.

• Short-season areas need a pepper that is as quick as a tomato from sowing to transplanting. Starting the slowpokes a month earlier is not the perfect solution. Plants growing for long periods under artificial conditions take longer to adjust to the outdoors when they are finally set out. By the time they really get going the nights have turned cool again. And that sets them back again!

• The time is ripe for a florist-style carnation that is a true garden perennial. It would have to be as neat and persistent as *Dianthus plumarius*, commonly called the cottage pink, but with larger, non-splitting flowers, with one terminal bud per stem.

• Some folks like the bluish spikes of flowers that develop on coleus, but most agree they detract from the beauty of the foliage. It is an unending nuisance to pinch off the spikes, which seem to multiply with each nipping. Such frustrated coleus is apt to grow scraggly. On the other hand, a coleus that kicked the blooming habit would be a thing of colorful beauty always.

• Pansies have long been a breeder's paradise, but I think we've seen enough new "faces." It is time for a novelty here—fully double pansies, in all the colors associated with this flower, but without the faces, would give gardeners cause to stare back!

Our thanks to the following people, who all made imaginative contributions to this article: Rachel Snyder, Mary Ann and Frederick McGourty, Anthony J. De Blasi, Steve Bender and Robert E. Lyons.

The Tradescant Trust

BY JOSEPHINE ROBERTSON

Barbara W. Ellis

Hollen Johnson/Michael Selig

Hollen Johnson/Michael Selig

Friends told Rosemary Nicholson it was an impossible dream. Where would all the money come from to save the old church in whose graveyard slept two great plant explorers of the 17th century, the John Tradescants, father and son? St. Mary's at Lambeth, a fine old stone church with a square tower, stripped, vandalized and no longer used for worship, was slated for demolition in three months—November 1967—but Rosemary pictured this place where a church had stood for a thousand years transformed into a garden center and museum, with a flowering churchyard honoring the memory of two men whose plant introductions had contributed so much to English gardens.

Today St. Mary's, at the end of Lambeth Bridge, stands refurbished with a charming 17th-century garden around the plant hunters' tomb. This is a place that garden lovers from many countries are visiting in increasing numbers. It is also the headquarters of the Tradescant Trust, of which Rosemary Nicholson is Director.

The story of the birth of the Tradescant Trust began when the Nicholsons were following a hobby in their walks around London. They had read Mea Allan's book, *The Tradescants,* and set out to visit the places where father and son had lived and worked. The Nicholsons knew the Tradescants' burial place was behind their parish church in Lambeth, adjacent to Lambeth Palace, headquarters of the Archbishop of Canterbury, but they did not expect to find a ravaged structure covered with graffiti, nor to have to dig through trash and litter to find the tomb. Beautifully sculpted of stone, the tomb bears a long, quaint epitaph giving some of the Tradescants' history as royal gardeners who *transplanted now themselves, sleep here and when angels shall with their trumpets waken men . . . these hence shall rise and change this Garden for a Paradise.* Nearby is another handsome monument to Admiral Bligh, of *Bounty* fame, also a distinguished Lambeth resident.

Rosemary Nicholson is a woman of charm, determination and optimism. When confronted with the deplorable condition of St. Mary's, she went to the Church Commissioners and asked for a stay of execution to allow time to organize a Charitable Trust and launch an appeal for funds. The Commissioners were skeptical but agreed to delay demolition a few more months. The site had become such a hangout for junkies and alcoholics that the Archbishop referred to it as "a running sore."

However, when news of the project appeared in the London *Times*, the project appealed to garden lovers, historians, scholars and people with ties to Lambeth, including Charlie Chaplin, who had once lived there. Prince Charles sent a contribution and, from the first, the Queen Mother was generous in her support. Sparked by the Nicholsons' enthusiasm the idea caught on. To raise funds well-known musicians donated their talents, famous gardens were opened for benefits and foundations and trusts were gradually persuaded to contribute.

The goal was £250,000, but as anyone knows who has been involved with restoring an old house, one problem leads to another. Strip the walls and the masonry is found crumbling. Redecorate and some ancient pipe bursts, leaving a trail of rust. In the case of St. Mary's, the church roof had to be replaced, and unforeseen weakness in the tower, which had been a landmark on the Thames across from the Parliament Buildings for 600 years, required costly repairs. Now even more unsightly with scaffolding, piles of stones, ladders and construction supplies, the garden's transformation was disappointingly slow. Much had to be done inside on walls and windows first. Not surprisingly, the original goal—equivalent to half a million dollars—had to be revised and a final figure has yet to be determined. One future necessity will be a renovation of the ancient plumbing, a project which, if not glamorous, Rosemary, with her usual persuasiveness, hopes will "elicit enthusiastic support."

Who were the Tradescants? We have a link with them in our gardens with the familiar three-petaled spiderwort, *Tradescantia virginiana.* The father (1570?-1637) worked on the estates of several noble patrons. One of these was Robert Cecil, First Earl of Salisbury, Chief Secretary and adviser to Queen Elizabeth I. At that time Cecil was creating a great estate with a splendid mansion at Hatfield, 21 miles north of London.

Because his wealthy employers were all eager for plant novelties, Tradescant was sent on many adventurous voyages to the Continent, Russia and Africa. Archaic spelling and nomenclature have made

ABOVE: The church garden, now restored, contains plants appropriate to this setting—many of them introductions of the Tradescants themselves.

BELOW LEFT: *Tradescantia virginiana,* spiderwort, is a member of a genus named in honor of the Tradescants, who contributed many plants to Western gardens.

BELOW RIGHT: The design of the garden is that of a 17th-century knot garden. Among the plants included are roses that would have been available to gardeners at that time.

identification of his introductions difficult, but, according to the late Mea Allan, they included, among many others, the "debble Epatega" or *Hepatica americana*; two varieties of "Martygon," Turk's-cap lily (*Lilium martagon*); and *Lysimachia vulgaris*, golden loosestrife, which he found in Russia. From the Mediterranean she believes he brought back the lilac; the Italian musk rose; *Gladiolus byzantinus*; two new rock roses, *Cistus psilosepalus* and *C. monspeliensis*; and the Russian olive, *Elaeagnus angustifolia*. He also brought the ancestors of two well loved garden staples, *Papaver rhoeas*, from which came the Shirley poppies, and the "sea-stocke Gilloflower," *Matthiola incana*, developed much later into the ten-weeks stocks. The *Dictionary of Scientific Biography* credits him with the introduction of the first larch tree.

So highly was Tradescant regarded by the Cecils that his likeness, bearing a rake and basket, may be found carved in the newel post of the stairway at Hatfield. This quaint figure, standing between two hemispheres (a design taken from the rear window of the church), forms the logo of the Trust. Tradescant was later appointed gardener to Charles I and Queen Henrietta Maria, but eventually he retired to his home in Lambeth to tend his own great garden, plant one of the earliest "physic gardens" and display curios from his travels in what he called "The Ark." His catalogue of plants, expanded later by his son, is one of the rarest and most treasured documents in garden history. His collection of oddities, ultimately acquired by Elias Ashmole, formed the nucleus of the Ashmolean Museum in Oxford and may still be seen there.

The Younger John (1605-1662?) inherited a royal appointment but did most of his exploring in Virginia where his father had invested in a land claim. He brought back many new plants from his three voyages and became a close friend of Captain John Smith of the Jamestown Colony, who willed him his library. Among the younger John's verified introductions are *Acer rubrum*, red maple; *Platanus occidentalis*, our sycamore or buttonwood; *Celtis occidentalis*, hackberry; *Liriodendron tulipifera*, tulip tree; *Lonicera sempervirens*, trumpet honeysuckle; *Yucca filamentosa*, Spanish bayonet; *Sarracenia purpurea*, pitcher plant; *Staphylea trifolia*, bladdernut; *Taxodium distichum*, southern cypress. Probably attributable to him are *Robinia pseudoacacia*, black locust, and *Rhus toxicodendron*, poison ivy.

The original plan for the garden was to use only those plants and trees traceable to the Tradescants, but sketchy records and identification made this plan difficult. Furthermore, since the authenticated items did not blend into a compact, harmonious plan, the Trust decided to create a 17th-century knot garden using the Tradescants' introductions and other plants of the period with significant trees along the border.

"Isn't it strange," reflects Rosemary, "how events come full circle after three centuries?" The present Lady Salisbury, now president of the Trust, designed the Tradescant memorial garden, and it was the elder Tradescant who had much to do with establishing the beautiful gardens at her home, Hatfield. Lady Salisbury, a charming woman and a knowledgeable, practical gardener herself, is deeply interested in plant history. Through her appeals, more than 40 nurseries have contributed suitable flowers, shrubs and roses, and she has given many items from her own gardens. Architect John Drake, who has been working with her, showed me one of these—an old-fashioned pale-lavender pansy or "heartsease," from which beautiful violas and pansies have been bred.

The churchyard is not a large area and it soon became obvious that grass could not survive the footsteps of many visitors. Weathered brick walks have been laid and, wherever encountered, ancient stone coffin tops have been incorporated. The knot garden is in the center and all other areas around the walks have been planted appropriately.

Yew and santolina outline the pattern of the knot garden and are used for other borders. Virginia creeper grows on a high stone wall. Decorative benches and a wall fountain complete the picture. Because of heavy traffic on the street side, one border is being hedged with yew and the other with a "tapestry" of variegated hollies.

Before the area was fenced John Drake came in one morning and noticed a black plastic bag in the corner. When he picked it up he found a man sleeping under it. "I don't mind your sleeping in the churchyard," Drake told the vagrant civilly, "but I *do* mind your sleeping on our new tulip tree!"

Among the great variety of well labelled plants are, of course, *Tradescantia virginiana* in both blue and white, two varieties of *Acanthus, Artemisia, Daphne, Penstemon* and many kinds of mint, monarda and low growing roses.

A memorable benefit for the Trust took place at Hatfield when Lady Salisbury held a garden party there "in the presence of the Queen Mother." It was a beautiful June day with the roses fragrant and the formal and sunken gardens in full bloom. Troubadours with lutes roamed the vast lawns. Hatfield House, an Elizabethan mansion full of treasures, was open to the thousand visitors. For two hours the Queen Mother, now in her eighties, escorted by Lady Salisbury and Rosemary Nicholson, strolled around, greeting those who were introduced to her with her characteristic warm friendliness. Toward the end of the afternoon refreshments were served in an even more venerable building on the grounds, the "old palace," where the Princess Elizabeth (I) had spent much of her youth. Much of this old palace had fallen into ruins, but a part has been restored as a most impressive banqueting hall.

Because of unforeseen financial problems the Trust has not yet developed its goal of becoming a museum, but this will come. The interior of the church, with its fresh ivory walls, graceful arches and colorful windows, is used constantly for exhibits, lectures, musical and dramatic programs. All are benefits and all create interest in the Trust. This past summer I enjoyed an evening of 16th-century music by the Myriell Consort of five voices and harpsichord. The shadowed old church made a perfect setting.

Misfortune struck during the Christmas holidays of 1981 when vandals smashed three of the fine windows. Restoration is costly, estimated to be £18,000, since the insurance companies now require the installation of vandalproof polycarbonate sheeting. This sum has not yet been raised completely, but contributions have come from many sympathetic friends of the Trust. One steady source of income is the gift stall, which offers a delightful assortment of books, cards, potpourri, garden related bags, aprons and other novelties.

One may become a Friend of the Trust for £5 (about $10). Friends enjoy the always heartening newsletters and receive the schedule of interesting events. The mailing address is Tradescant Trust, 7 the Little Boltons, London SW10, LJ. The church and garden, a pleasant walk across Lambeth Bridge from the Parliament buildings, are open from 11:00 a.m. to 3:00 p.m. on weekdays and from 10:30 a.m. to 5:00 p.m. on Sundays.

Rosemary concluded one of her newsletters, telling of successes and setbacks, by quoting the words of Captain John Smith, writing from the Jamestown Colony in 1616: *Adam and Eve did first begine this innocent worke to plant the earthe to remained to posterities, but not without labour, trouble and industrie.*

Josephine Robertson is a writer who lives in Boulder, Colorado. She became one of the first American Friends of the Trust.

Hollen Johnson/Michael Selig

St. Lambeth's garden is now a pleasant spot for repose and meditation. Benches have been placed where visitors can enjoy the view. All of the plants for the newly restored garden were donated by British nurserymen and Friends of the Trust.

A Favorite Honeysuckle

TEXT AND PHOTOGRAPHY BY PAMELA HARPER

The origin of *Lonicera heckrottii* is uncertain, but it is thought to be a hybrid between trumpet honeysuckle (*L. sempervirens*) and *L. americana*, which is itself a hybrid between the European *L. caprifolium* and *L. etrusca* from the Mediterranean. Commercial baptism with the name goldflame (or sometimes the daft pink goldflame) may have increased its popularity, but not to the extent it merits, for though hardy to USDA Zone 6 and adaptable, it is seldom seen in gardens. I can suggest several reasons for this neglect, none of them valid objections.

First, the rampant Hall's honeysuckle (*L. japonica* 'Halliana') has put such a blot on the family escutcheon that gardeners and nurserymen in areas where this plant has gone wild are wary of all honeysuckles. Then, American gardening is much influenced by English books, and *L. heckrottii* is not as fine a plant in England as it is in those areas of the United States where summers are long and warm and rainfall relatively high. In my experience goldflame likes warmth and sun around its head, but cool, moist soil for its roots, the very opposite of conditions in England where rainfall, though unpleasantly frequent, is usually too light to penetrate deeply into the soil.

A third reason why this honeysuckle has not achieved star status may be that few gardeners have found just the right way to grow it: it is neither a twining vine nor a shrub, but a scandent plant, which means that it sprawls and thus needs something over which to drape its leafy limbs. Climbing roses are the best known example of a scandent shrub; they make long, more or less upright stems, but cannot support themselves by twining, by clinging tendrils or by adhesive discs, as do most climbing plants. Scandent shrubs are a bit more difficult to place in the garden than either shrubs or vines, and are likely to be ungainly if left to their own devices.

I have grown *L. heckrottii* for four years now and have found it to be not only a star performer among the honeysuckles, but also one of the prettiest, healthiest and most long-flowering plants in my garden. One year out of the four it was badly infested with aphids, which made the plant unsightly but did no permanent damage. Aphids are easily controlled by spraying if you so choose. Though vigorous, it is not, like Hall's, uncontrollable. The one I grow as a bush spreads by root suckers just enough to provide a couple of plants for friends each year. Trailing branches do not root where they touch the ground. The plant I have grown as a vine has not spread at all at the base. *Hortus* says the fruits are red, but my plants have never fruited. This may be a loss, the shining red and orange fruits of the trumpet honeysuckle parent being very decorative, but it also means there are no seedlings to weed out.

Flowering begins at iris time, the dusky-pink color combining beautifully with the assorted blues and whites of Siberian irises, and with such gray foliaged plants as lavender cotton (*Santolina chamaecyparissus*) and Jerusalem sage (*Phlomis fruticosa*) or, for the colder Northeast, such artemisias as 'Silver Mound'. Through May and June is it an almost solid sheet of pink, continuing to bloom, less abundantly, until hard frost. As I write, in mid-November, there are still flowers to be seen.

The commercial name goldflame has led to confusion. *Hilliers' Manual of Trees and Shrubs*, usually so accurate, lists 'Goldflame' as a cultivar of *L. heckrottii* and describes the flowers as "brilliant orange outside, golden yellow within." This is incorrect. Goldflame is just a commercial name, and a poorly chosen one for *L. heckrottii*; there is no trace of orange in the flowers. The popular name is probably too well established to be abandoned now.

Although deciduous, goldflame honeysuckle holds its glossy green oval leaves until hard frost, and it reclothes itself in early spring. Some of the leaves are turned sideways to display silvery undersides.

Continued on page 39

Goldflame may have increased in popularity, but not to the extent it merits.

Stamp Gardens

TEXT AND PHOTOGRAPHY BY CLAIRE SAWYERS

By moonlight I see the strange yet majestic silhouette of a distant giant saguaro in an Arizona canyon. On a nearby specimen I can see a cluster of fruits and white flowers, probably just opened since saguaros are nocturnal bloomers. I'm tempted to pluck a fruit prematurely to taste this Indian food, but I can't because this saguaro blooms beyond my reach on a postage stamp.

The plants in my stamp garden may be forever beyond my grasp, but tending this garden brings other consolations. One moment I can enjoy the giant saguaro cactus flower, Arizona's state flower and an appropriate topic for the 1962 stamp commemorating the state's 50th anniversary; with the turn of a page I can be off admiring my Indonesian orchids or South African proteas, both of which also remain in full bloom year-round.

Flowers and plants adorn literally thousands of stamps, the rose probably being the most popular. The roses in my garden come from around the world: Hungary, Poland, Ajman, Fujiera, New Zealand. . . . Stylized drawings, reproductions of Redouté's detailed illustrations and colorful catalogue-style photographs are all used on stamps to show the world's admiration of the rose.

Like gardeners, postage stamp collectors must decide how to arrange and group their plants. Stamps of plants in the same family or genus may be grouped together. However, a plant's true identity is often difficult to determine, so grouping them according to country may be easier. All countries print their name on their stamps (with the exception of England, in which case the reigning monarch is shown).

I have traveled around the world collecting plants by collecting stamps, and I started in my own backyard. Although America cannot boast a large number of plant stamps like several European countries can, it isn't difficult to find treasured natives on stamps. Four native species, the Franklin tree (*Franklinia alatamaha*); Douglas fir (*Pseudotsuga menziesii*); showy lady's slipper (*Cypripedium reginae*); and ocotillo (*Fouquiera splendens*) represent the four "corners" of the United States on a set issued to commemorate the 11th International Botanical Congress held in 1969. Four favorite native trees have also been celebrated on stamps: the gray birch (*Betula populifolia*), the giant sequoia (*Sequoiadendron giganteum*), the white oak (*Quercus alba*) and white pine (*Pinus strobus*). Not only is each tree's majestic stature depicted, but a close-up of the leaves and fruits is also shown in the lower corner of each stamp. State flowers such as the Kansas sunflower and Mississippi magnolia also commemorate statehood anniversaries, and all 50 state flowers, accompanied by state birds, were recently issued in a colorful commemorative pane.

Stamp "gardens" are everblooming and know no geographical boundaries. Plants from Africa (left) and Israel (right) "grow" happily together.

The U. S. Postal Service even tried to soften a 1981 rate incrase by decorating its 18¢ stamps with flowers: camellia, rose, dahlia and lily. The American Camellia Society had pushed for years to have a stamp showing its flower. Finally, with the backing of then President Jimmy Carter, the Postmaster General considered the Society's wishes, and three other flowers joined the camellia to form the pink block.

The American Camellia Society may agree that it's easier to collect flower stamps than to get a favorite flower depicted on one, but American stamps are still created based on ideas submitted to the Postmaster General by interested citizens. Once an idea is accepted, artists are chosen to design a stamp for the Postal Service. For the 50 State Bird and Flower Commemorative

Stamps, for example, a father and son team—Arthur and Alan Singer—painted all 50 stamps. Each painting, originally four by eight inches, was then reduced to stamp size, which accounts for the clarity of detail on each one.

Once one has cultivated native plants, it's fun to seek out fascinating plants from exotic lands. Some countries have been tending gardens on postage stamps longer than others, but it seems every country has plants to add. Germany and Switzerland released plants on stamps back in the late 1930's and early '40's, and for years Switzerland has annually issued a series portraying wildflowers. Other countries, witnessing the success of Switzerland's plant "charity stamps," which were used to raise funds, followed suit by adapting the flower motif to reflect their own favorite flora.

There is a horticultural wealth of stamps for Eastern European countries, especially Czechoslovakia, Poland, Romania and Hungary. Wildflowers, medicinal plants, fruit trees, ornamental favorites and herbs compose their stamp gardens. Even arid countries with a sparser native flora have issued stamps adorned with plants. The United Arab Emirates have flowering garden plants on sets of stamps, and Israeli stamps, commemorating anniversaries of statehood, "say it with flowers"—the sand lily, evening primrose, anemone, narcissus and cyclamen. Agronomic and horticultural crops—barley, wheat, grapes, figs and oranges—have also been chosen for stamp subjects in Israel.

I find plant (stamp) collecting from Africa to be most interesting. Tropical fruit trees such as the gingerbread palm, monkey-bread tree and soapberry tree or desert palm have become members of my garden, compliments of Mauritania. These stamps, depicting colorful fruit, teased me until I investigated why they might have been selected to decorate the mail. I learned, for example, that the monkey-bread fruit's pulp and seeds are edible and are consumed in Mauritania as a food seasoner, appetizer and cold drink. The stamp also sheds light on why the tree is sometimes referred to as the dead-rat tree. The fruit, covered with hair, hangs from the tree on a long, tail-like stem.

Other African stamps depict plants whose by-products are familiar. One stamp from Rwanda features *Chrysanthemum coccineum*, which is grown to make the organic insecticide pyrethrum. Half of the stamp shows a plantation with workers harvesting the plant, the other half is a close-up of the flower.

One African tree I collected from Uganda seemed especially peculiar. Ball-like swellings emerged from the twigs and two thorns from the swellings made the tree look like it was infested with horned slugs. The tree, *Acacia drepanolobium*, is commonly called black-galled acacia or whistling thorn. I learned the horned slugs are caused by ants, and when the wind blows through the ant hole in the galls, they whistle, hence the common name whistling thorn.

Despite all the tropical wonders from Africa, no garden is complete without the treasured plants of the Far East. Rhododendrons from Bhutan, bamboo from Korea, and Sakura (cherries), chrysanthemums, maples and pines from Japan .

It is clear that my kind of plant collecting doesn't require a great deal of space or an expensive greenhouse, nor must one deal with customs and quarantine inspectors. Instead, one can "travel" around the world collecting exotic plants, learning where and how they grow, how man uses and appreciates them as well as picking up some language, geography and history.

If you're interested in this low-maintenance, inexpensive way to garden and have year-round bloom, you can start at your local post office. There a bulletin board will advertise upcoming commemoratives, and a publication entitled "Stamps and Stories," available at most branches, will introduce you to stamps. Many offices also sell topical starter collections, including one on flowers (for kids). Also check your local hobby shop for stamps and catalogues, or watch the newspaper for area stamp shows. At shows ask a lot of questions. While thumbing through notebooks filled with plant stamps at a philatelic fair in Chicago, I came across an unfamiliar set from Nagaland. As a novice collector, I questioned the vendor about Nagaland. It isn't an independent country, he said, so he surmised that the stamps were for local post. Why then, I asked, did half of them have "Air Mail" printed in one corner? He told me some are created especially for collectors and those from Nagaland were probably just that.

Once you're under way, you'll no doubt collect a plant that puzzles you and doesn't seem to be listed or described in any of your horticultural books. Don't despair. The American Topical Association has a Biology Unit that is devoted to studying biological stamps. They publish catalogues of their work. Look for additional information in stamp catalogues and references on stamp collecting, which are generally well-thumbed books in public libraries (*Scott's Stamp Catalogues* and *Topical Stamp Collecting* by M. W. Martin).

My own experience suggests that if plant identification is your pleasure, stamp collecting may help gratify your urge—and without the need to leave the comfort of your favorite easy chair.

Claire Sawyers is a student at the University of Delaware's Longwood Program in Ornamental Horticulture.

Michael Selig

Moss & Lichen Gardens

BY MICHAEL B. TRIMBLE

When the oceans receded many millions of years ago, the lichens and mosses were among the first plants to establish themselves on the barren surfaces of the newly exposed land masses. Using their ability to dissolve rock into minerals, they were able to acquire the nutrients they needed for survival. Over the millenia, as they grew, reproduced and died, their organic remains were added to the bits of minerals they had liberated, and soil as we know it began to slowly cover the Earth. Their tenacity as true terrestrial pioneers has earned them the respect of naturalists and botanists. Unfortunately their horticultural possibilities have been largely ignored by most gardeners. The ability of mosses and lichens to survive under conditions that are inhospitable to most of our cultivated plant species should inspire even the most skeptical gardener.

Mosses and lichens were not created equal in a botanical sense. There are significant differences between them. The plant kingdom itself is divided by taxonomists into two sub-kingdoms, the *Thallophyta* and the *Embryophyta*, and it is at this very first,

The presence of moss and lichen needn't be a sign that a gardener is derelict in his duties. When given the right conditions, mosses and lichens create lovely gardens in themselves, as this one photographed in the Lake District of England demonstrates.

and most fundamental split in the plant kingdom that the lichens and mosses part company. Botanists draw two major distinctions between these sub-kingdoms, one distinction being structural and the other reproductive. Thallophytes are plants which lack distinct leaf, stem, root and vascular tissues. Embryophytes are plants for which the specialization of distinct tissues to perform the differing tasks required by a living organism is a principal identifying characteristic, although here too you will encounter considerable variation in the sophistication of that specialization from species to species.

LICHENS

As thallophytes, the lichens are considered to be botanically more primitive than the mosses. Lichens are classified according to the characteristics of their fungal bodies, which contain individual algae plants within certain areas of their fungal thallus. They are really an apparently symbiotic relationship between two *distinct* plant species, one being a fungus and the other being an alga. The fungal partner's contributions to this relationship include a means to take up moisture and minerals, physical support and an ability to withstand a wide range of climatic conditions. The algae make use of these factors in contributing the ability to photosynthesize, providing food for both themselves and their fungal partners. In nature, the algae species often found in lichens are also frequently encountered as independent organisms. The lichen fungi, however, have apparently lost the ability to survive independently, and they are rarely encountered without their algal compatriots.

For descriptive purposes lichens are normally identified as being either *crustose*, *foliose* or *fruiticose* in form. The crustose lichens are the rock and weed clingers whose minute, crust-like bodies are found forming colonies that appear to be little more than an out-growth of the surface upon which they grow. Crustose lichens can vary in color from greens and grays to browns, oranges, reds and black. The color of any individual colony will often change in shade depending upon its moisture content. The variety of crustose lichens is seemingly endless, which makes species designations difficult even for the expert. Recognizing a lichen as being crustose is all that you should ask of yourself.

The more leaf-like, often rosette-forming foliose lichens can be found growing upon rocks, live or dead wood, and on occasion in shallow pockets of soil. Foliose lichens can usually be removed from their perch without great difficulty, in sharp contrast to the crustose lichens. The *Parmelia* genus, which includes the boulder lichen, *P. conspera*, the puffed shield lichen, *P. physodes* and the wrinkled shield lichen, *P. caparata*, is one of the most frequently found and easily identified foliose lichens. The shield lichens are found growing upon the bark of tree trunks and branches; the boulder lichen is a rock dweller.

The fruiticose lichens are the splended goblet and coral-like members of the lichen clan. The genus *Cladonia* is the best known of the fruiticose lichens and includes the reindeer lichen, *Cladonia rangiferina*, and the red-topped British soldier lichen, *Cladonia cristatella*. The fruiticose lichens are usually found growing in shallow soil pockets as well as clinging to rocky surfaces.

BRINGING LICHENS INTO THE GARDEN

There are a number of effective means for incorporating lichens into the design of a home garden. The easiest method is to bring a lichen colony and the rock or log upon which it is growing into the garden. The use of stone in native and natural-type garden designs is very popular, especially among wildflower gardeners, so a well planned, lichen-encrusted rock grouping could enhance the design. Transplant soil-dwelling lichens as small 'sods' provided that you have an area in your garden where full sun or shade conspire with nutritionally poor, shallow soil to thwart your attempts to successfully cultivate most of the desirable higher plant species. A gently sloping hillside from which rocks naturally protrude, creating a series of natural soil pockets, is an ideal site for a lichen garden as long as the soil is not rich enough to offer desirable accommodations to the more aggressive grasses and broad-leaved weeds. You can also create an environment suitable for lichens. An artificially created rocky slope or rock garden will provide them with excellent topography.

To prepare the soil for a lichen planting, the dont's are just as important as the do's. Don't add fertilizer or any organic matter. Don't remove any of the existing rocks (you may well wish to add rocks). Do remove any existing non-lichen vegetation (except mosses), and if possible, lightly work the soil. When gathering lichens from the wild, remove only a small portion of a colony to bring home, permitting the remainder to continue growing in place undisturbed. In setting your lichen sods, keep in mind that lichens do not possess true roots, but rhizines which function as attachment appendages, holding a lichen to its rock, log or pocket of soil. When lichens become dormant they shrivel and tend to curl in upon themselves, often pulling their rhizines free from their footing. Rock and wood dwelling lichen rhizines penetrate their sub-strata and are not easily pulled from their footings. The rhizines of soil dwelling lichens also penetrate their substratum but easily come loose in shallow soil or when the lichen goes dormant. Pockets of soil are therefore excellent sites in which to place the soil dwelling lichens because the sides of each pocket, in conjunction with the surrounding rocks, will provide the lichens with physical protection.

While you oversee the care of your newly planted lichen garden, keep in mind that their ability to withstand drought, heat, cold and neglect are traits reflected in their very slow rate of growth. An occasional light watering during dry spells will help to promote continued growth, but quick results will not be forthcoming, and lichen lovers must learn to be patient gardeners.

To be properly appreciated, the lichen planting should be accessible to close-up viewing. Lichens' diversity of colors, shapes and textures can be used to best advantage in gardens whose dimensions and layouts draw viewers in among the plantings. In natural settings, lichens and mosses often grow together, a co-habitation of hairycap mosses and various members of the *Cladonia* lichen clan being a common sight among the rocky terrain of New England. After an early morning spring rain, such combinations take on an iridescent quality in which the clarity of color is unsurpassed. Mosses and lichens can be easily combined in the home garden by either selecting sods containing both, or by combining soil dwelling species of each that prefer similar growing conditions (not all moss species will tolerate the drier conditions prefered by the lichens). Study the moss-lichen combinations that grow naturally in your area. If you can provide the growing conditions under which these combinations thrive naturally, you should be able to replicate those happy combinations in your own garden.

Since lichens are a symbiotic relationship between two distinct plant species, they cannot reproduce themselves sexually. However, they do reproduce asexually with methods that will aid in your garden's development. Lichens have developed the ability to produce small bodies consisting of both algae cells and fungal

hyphae, which are known as either *soredia* or *isidia*, depending upon which portion of the lichen thallus produced them. These small bodies break off from the lichen that created them, and when they encounter favorable growing conditions, they "germinate" and develop into a new lichen.

When lichens become dry and dormant they crumble easily, and the bits and pieces are easily carried away by wind, water and passing animals. If these bits come upon a suitable area they will resume active growth when adequate moisture becomes available. Use this method of reproduction to help establish lichens in your garden. Prepare your lichen soil in advance, and then collect and air dry a piece of a lichen colony. Once dry, crumble and liberally spread the pieces over pre-moistened soil. Keep the area moist and new lichens should soon begin to develop.

MOSSES

The mosses belong to the sub-kingdom *Embryophyta*, whose two divisions, *Bryophyta* and *Tracheophyta*, include most of the Earth's green land plant species. A major distinction between these two divisions is the lack of distinct vascular tissues and true roots among the bryophytes. The bryophytes are grouped into three classes: the liverworts, *Hepticae*; the hornworts, *Anthocerotae*; and the mosses, *Musci*, the latter class consisting of as many as 14,000 species.

Unlike the thallophytes, mosses do possess primitive leaves and stems, and in contrast to the lichens, they have developed an effective means of sexually reproducing themselves, displaying a very pronounced alternation of generations, which is a trait shared by all embryophytes. Unfortunately, the mosses' reproductive cycle is dependent upon the presence of abundant moisture to complete the process of gamete fusion, which has hampered their ability to compete with higher plants whose reproductive systems are better adapted to terrestrial life. On the other hand, mosses do share with the lichens the ability to suspend their growth processes for extended periods when adverse growing conditions prevail. There are species of moss adapted to almost every possible growing situation. Among the species most likely to be encountered in the Northeast are many which lend themselves readily to home cultivation. The wire rock moss, *Medwigia ciliata*, is a rock dweller in shady spots, identifiable by the lighter tips of each plant that contrast with the darker green of the plant's lower portions. The well known pin cushion moss, *Leucobryum glaucum*, produces the familiar greenish-white tufts often found at the base of trees or in rocky clefts. The common beard moss, *Grimmia apocarpa*, can be found forming olive-drab tufts upon rocky surfaces in damp, shady spots. The best known eastern moss is the common hairycap, *Polytrichum commune*. The hairycaps thrive in shady, damp areas but can also be found mingling with the lichens in rocky ground. Another beautiful soil dweller is the common fern moss, *Thudium delicatulum*, whose fern-like branches are a welcome addition to any garden. A good all-purpose, soil dwelling moss is the cord moss, *Funaria hygrometrica*, which forms light-green blankets wherever it can get a foothold. There are many other mosses in the wild that are also excellently suited to culture in the moss garden.

GARDENING WITH MOSSES

If the growing conditions are right, notably moist and shady with a soil possessing a decidedly acidic character (pH of 6.0 or less), mosses will invite themselves into your garden. Many gardeners assume their presence indicates a failure to provide their gardens with horticulturally acceptable growing conditions. However, the *Ericaceae* in many instances prefer a soil with a low pH and a spot in the shade which remains moist, and who would accuse a gardener whose rhododendrons are thriving with failing to provide them with proper care? The horticultural merits of any given soil depend as much upon what you intend to grow there as upon the characteristics of the soil itself. Moss is indicative of growing conditions suited to some plants and not to others. Lawn grasses and mosses will usually not co-exist happily. However, if your soil is usually moist, and your trees cast extensive shade, and you appreciate the soft and luxuriant greens of a mossy expanse, why not enjoy what your piece of land is best suited to grow? Establishing a moss lawn is really quite simple. Acidify the soil (using dusting sulphur or a similiar material) and most grasses will die out, the weeds will thin out, and when adequate moisture is available, mosses—already present but hidden by their grass neighbors—will fill out and take over. In time you should have a mossy green lawn that will satisfy all but the most fanatical of the bluegrass fraternity. Many mosses will combine to make up your lawn. The most desirable is the common hairycap, which can be encouraged by means of transplants, spores and the spreading of powdered moss bits over the lawn area.

Transplant the soil dwelling mosses any time of the year, although spring and fall, with their cooler and often moister days, usually prove best. Prepare the transplanting site by removing all competing vegetation and lightly work the soil to loosen it.

When collecting moss to transplant, remember that mosses do spread rapidly when happy. Remove only a small portion of a soil dwelling colony with the soil adhering to its base. Dip the lower half of the moss sod into water to expose a portion of the rhizoids that anchor them to their growing site. Place the sod on pre-moistened soil and press *firmly* to establish good soil to sod contact and to avoid drying out. Keep the moss moist until new growth and a light pull indicate it has firmly anchored itself to its new home.

To bring mosses into the garden by drying and powdering a small portion of a moss colony (as Bonsai practitioners do to grow the moss that helps to protect the roots of their trees), prepare your soil just as you would for moss transplanting, moisten it and then spread the powdered bits of moss over the surface. Keep the soil moist until the moss is up and growing. Mosses also spread naturally by spores, and a happy moss colony will spore freely.

Lichens and mosses need and want no fertilizer, require no insect and disease control, never need mowing, and they require no winter protection in their native regions under most circumstances. A light pine needle mulch, removed when spring arrives, will help to protect plantings in areas exposed to excessive winter wind and sun. These small plants are excellent choices for low maintenance garden projects. Their maintenance requirements will usually come down to occasional weeding.

Once begun, a lichen and moss garden will often encourage a gardener to discover the further advantages of using native plants. In spots where mosses thrive, ferns and many wildflowers will also grow. Don't be surprised if the areas of your garden given over to native plantings grow in size and prominence as a result.

Michael Trimble is a landscape gardener and insatiable plant collector. He lives in Rhinebeck, New York.

A Catalogue Review

Illustration by Elizabeth Ayella

Years ago when I first became a serious gardener, I visited the local nurseries every spring and dutifully purchased the old garden standbys: daisies, phlox, peonies and daylilies, topping off the floral groceries with a scattering of marigolds, petunias and bedding begonias. Then, like every pretender to the garden throne, I became bored with steady doses of flagrant color and the hugeness of scale that seems to be the *raison d'etre* of the meganurseries in the United States—if bold and big is good, then bolder and bigger is better.

I attempted to expand my collections by buying plants through the mail. Soon the catalogs began to arrive—rife with color pictures of daisies, phlox, peonies and more daylilies than it seemed the world could possibly hold—and my garden stayed just about the same.

Now desperate, I joined a number of smaller garden societies both here and abroad and began to write away for the catalogs listed in tiny ads in the rear of their bulletins and journals. I shunned the advertisements in the general garden magazines whenever they were half a page or more and only wrote to the firms that appeared in the classified sections. Suddenly I discovered the other end of the nursery spectrum: not the supermarket giants but the "mom-and-pop's"—small businesses that sold thousands of lesser-known plants described in small, well-written catalogs. These nurseries were not grandiose and vulgar but quietly restrained. They wrapped their cargoes with extreme care, shipped by U.P.S., answered their mail without computers and opened up to me a new garden world.

The following nurseries are only a few of the fine organizations that I have dealt with while growing and writing about my garden.

Alpenglow Gardens is located in British Columbia, Canada. They drive plant orders to Blaine, Washington, where they are shipped throughout the United States by Air Parcel Post. Their catalog is small, but the number of hardy alpine plants, perennials and choice shrubs represents an extremely personal selection. They are the only nursery I've found that stocks *Juncus effusus* 'Spiralis', a cultivar of the rush family that forms its leaves in a tight, corkscrew spiral. If you are one of those gardeners who have tried to grow the fabled blue poppy of Tibet from seed, and failed, Alpenglow also has *Meconopsis betonicifolia* or its more common cousin, the yellow Welsh poppy, *M. cambrica*.

The Banana Tree features the largest selection of banana plants that anyone could wish for, excellent outdoors in Florida or, for those in colder climates, perfect for a house plant. This nursery also sells seed for many strange tropical plants and lists 16 types of Chinese vegetables for the garden—from Dai Gai Choi (India mustard) to Dow Gauk (the asparagus bean). The catalog gives plenty of tips on growing.

Kurt Bluemel, Inc. is the largest grower and supplier of ornamental grasses, sedges and rushes in the country. For those gardeners who have tired of blue fescue (*Festuca ovina* var. *glauca*), why not try bear skin grass (*Festuca* 'Piccarlit') or zebra grass (*Miscanthus sinensis* 'Zebrinus'), a six- to seven-foot tropical statement of striped leaves topped with silver plumes every autumn, or one of the more decorative sedges, Gray's sedge (*Carex grayi*), a plant that enjoys partial shade and a spot at the water's edge?

The Cummins Garden lists dwarf rhododendron hybrids that start at the category dwarf (groundcover to 18 inches) and proceed up the scale to tall (60 inches and up). In addition, the owner, Betty Cummins, keeps over 35 varieties of dwarf evergreens—including the beautiful *Juniperus squamata* 'Blue Star' with elegant steel-blue foliage—and a large number of companion plants, scaled to be grown with evergreens. For a sparkle of color in your spring garden, try the American wildflower, Quaker ladies, *Hedyotis caerulea* (formerly *Houstonia caerula*), a tiny plant with pale-blue flowers and a bright-yellow eye. She also stocks many varieties that aren't listed in the catalog.

Endangered Species is a labor of love operated in California by Hermine and Roger Stover. Although many endangered plants are offered for sale, their catalogs list hundreds of others—from house plants with variegated leaves to well over 100 species of the wax plant, *Hoya*, that are not. The selection is large and Hermine continually tries to enlarge the varieties available. The bamboo collection includes a few that are hardy in northern climates and will spark interest for years to come. The catalog is well-illustrated, and the $4.00 cost includes a number of newsletters and special price lists of specialized plant collections. If you always thought that the mother-in-law's tongue (*Sansevieria trifasciata*) was a one plant act, you are in for a surprise.

Far North Gardens is run by Karen and Doug Smith, who stock a phenomenal variety of seeds from house plants to herbs and wildflowers to strange perennials. It's important to read their collector's seed list with care or you are bound to miss what could be a great garden discovery. Far North sells rare flower seed—rare because it is extremely difficult to find many of these varieties in everyday commerce. Included are the stunning double bloodroot (*Sanguinaria canadensis* 'Multiplex'), a wildflower that resembles a small double waterlily, and the Barnhaven primrose collection (started by Florence Bellis in Gresham, Oregon), a series of primrose transplants and seeds that cover every color in the rainbow. A unique flower in this collection is that most beautiful Victorian jewel, the goldlaced polyanthus (*Primula vulgaris* 'Gold Lace'). Of all the flowers in my spring garden, this particular plant generates the most response from viewers.

Greer Gardens is operated by Harold and Nancy Greer, who issue a 72-page catalog that includes a bewildering selection of rhododendrons and azaleas and a limited collection of some of the most beautiful maple cultivars to be found anywhere. Catalog information is accurate and includes a carefully prepared description that gives a plant's parentage, its height in 10 years, an accurate hardiness rating and a quality scale from one to five.

Look for their new tropical rhododendrons from New Guinea and Borneo, the Vireyas (see "New Introductions for 1983" on page 18 for two of them). Plants must be brought indoors before the first frost and will have their heaviest flowering during fall and early winter. Over 15 species are described and offered.

Holbrook Farm and Nursery is operated by Allen W. Bush and publishes both a spring and a fall catalog. These include a number of interesting native American wildflowers with full cultural instructions; a good selection of bulbs for naturalizing; and, to me, the best of the forsythia world, *Forsythia viridissima* 'Bronxensis', a dwarf, compact plant that keeps its height to about two feet.

If you always thought that the cardinal flower was beyond your grasp, try *Lobelia cardinalis* as they suggest it be grown—in good garden loam, forgetting the extremely wet conditions that are usually prescribed.

International Growers Exchange, Inc. is a bit larger in scope than the other firms described herein, but their catalog, "The Wide, Wide World of Bulbs and Plants," with its picture of a blooming *Amorphophallus rivieri*, a plant not for the squeamish, is exactly what it appears to be, a potpourri of the botanical world.

A vast selection of orchids, African violets and general house plants share pages with tree peonies (*Paeonia suffruticosa*, offered for very reasonable prices) and other herbs and perennials.

The hardy bulb listing includes over 20 species of *Fritillaria*, those uncommonly beautiful spring bulbs.

The perennial section includes six varieties of sweet violets (*Viola odorata*), five types of *Yucca*, and that interesting and little-known knapweed, *Centaurea macrocephala*, with its heavily perfumed, bright-yellow, thistle-like flower.

Lamb Nurseries of Spokane, Washington carries a large selection of hardy perennials and alpine plants, and their catalog is one of the few I've seen that takes the trouble to give a pronunciation guide to the Latin names of the plants described. Among the featured items are six varieties of rock cress (*Aubrieta*), including a variegated form with gray-green leaves edged with silvery-white, and for the fans of larger floral displays, 15 types of the giant football mums, 12 of the cushion type (or azaleamums), the charming spoon chrysanthemums and selected garden varieties.

Lamb's also continues to stock one of the most charming garden show-stoppers I've ever grown, the hardy calceolaria or slipperwort, *Calceolaria* 'John Innes'. Feature this plant in your garden border, and you will always have a friend begging for a plant when you divide. It's hardy, with mulching, in Zone 5.

Las Pilitas Nursery is operated by the Wilsons and features an interesting collection of plants native to California. Now, what, you may ask, does this mean to a denizen of New York or Vermont? Well, remember California is a big state and runs the climate zone gambit from a torrid 10 to a frigid 5, and since one of the thrills in gardening is experimentation, this catalog might be an interesting place to begin. They feature—among hundreds of native plants—12 varieties of the bear-berry. (*Arctostaphylos*), nine types of penstemons, and the golden-eyed relative of blue-eyed grass, *Sisyrinchium californicum*, a delightful plant that makes it through our winters of -20°F.

Milaeger's Gardens takes us north to Wisconsin where the Milaeger family has been in the garden business for over 20 years. Among their new plant offerings are the old-fashioned hollyhock (*Alcea rosea*), with double flowers in pastel colors; goat's beard (*Aruncus dioicus*), a plant that resembles a giant astilbe with long ivory plumes of flowers on branches two to three feet high; and the hard-to-find Russian sage (*Perovskia atroplicifolia*), a very hardy late bloomer with a sage-like odor to the leaves.

In addition, Milaeger's is the only place I've ever found that stocks Swedish garden clogs for *both* men and women, and in five styles. For those with an old-fashioned bent to garden design, gazing globes of a 12-inch diameter are available in four colors: gold, silver, blue or green.

Plants of the Southwest deals with seeds instead of plants, but their unusual selection of native grasses, wildflowers, trees and shrubs—plus a section on ancient vegetables that you can grow—makes it a welcome addition to the job of expanding a garden's scope.

The catalog is a mine of information on seed germination, growing tips and plant culture and includes a fine section on using plants for dyeing cloth.

In fact, the information on changing your lawn to buffalo grass (*Buchloe dactyloides*) so it need only be mowed three times a year is worth the investment of $1.00. Be sure to order the pumpkin seeds of the cultivar 'Lady Godiva': seeds have no shells and are truly delicious when oven-roasted right from the vegetable garden.

Rocknoll Nursery is a small nursery, the end result of garden friends who met to found the original Ohio Rock Garden Society some 50 years ago. The plant selection is, again, very personal, and reflects the large rock and perennial garden at the Saur home in Hillsboro, Ohio.

Among my favorites are the truly dwarf daylily, *Hemerocallis* 'Good Fairy of Oz', with its deep-pink flowers that bloom on plants with leaves under one-foot high, and the dwarf blue-grass daisy, *Coreopsis auriculata* 'Nana', with six- to eight-inch tufts of bright-orange flowers found years ago in the hills behind Maysville, Kentucky.

Rocknoll also features eight interesting varieties of coral bell, including the low-growing, bright-red type, *Heuchera* 'Spitfire'.

Sandy Mush Herb Nursery produces a handsome catalog that lists both common and uncommon herbs, plus a number of alpines and garden perennials. Look for the Egyptian topping onion (*Allium cepa*, proliferum group), a plant that can double as a vegetable and a garden ornamental, with it's tiny bulbs set atop tall onion leaves. Or try setting up a garden spot featuring a few of their 35 kinds of thyme from the pine-scented Broussonetii thyme (*Thymus broussonetii*) or camphor thyme (*T. camphoratus*), to the unclassified Dot Wells' creeping thyme found in an old garden in Asheville, North Carolina.

David B. Sindt is now entering his eighth year as a dealer with the most extensive commercial listing of *Iris pumila* (93 varieties), all three to five inches tall and blooming before all the bearded irises.

Mr. Sindt emphasizes that his plants are excellent for the rock garden as they are truly dwarf and not to be confused with the larger types listed by most other nurseries. He also notes that these marvelous flowers do not do too well where winters are mild.

Siskiyou Rare Plant Nursery is owned by J. Cobb Colley and Baldassare Mineo. It has been well-known with adventuresome gardeners for years. They specialize in alpines, hardy ferns and Pacific northwest native plants, giving quite reliable culture notes so gardeners who are far north will know what to order. Look particularly for their listings of over 20 kinds of *Campanula* or the seven species of garden cyclamen, usually hardy to Zone 7 (will grow well in pots for those in colder climates). For primrose fanciers, Siskiyou grows 10 of the very best. They also stock those small charmers of early spring, the drabas. Try either the small three-inch by six-inch clumps of white flowers, *Draba dedeana*, or the larger yellow species, *D. bruniifolia* subsp. *olympica* in well-drained soil around the front of the garden border. They bloom in very early spring.

Stonecrop Nurseries is located in upstate New York on the Hudson River—but at an elevation of 1,000 feet—which puts it right in the middle of U.S.D.A. Zone 5. Their collection of plants is, like most of the other firms in this article, an extremely personal one. The nursery can only ship between February 1 and March 30, so orders must be in early.

Among the plants offered are that most beautiful (and hardy) Japanese painted fern, *Athyrium goeringianum* 'Pictum', with wine-red stems and foliage of green and red, flushed with silvery-gray; *Pachysandra procumbens*, a native of the Allegheny Mountains that blooms in early spring with white to pale-pink flowers, forming large clumps over time but never given to running; and the fine Japanese roof iris, *Iris tectorum* 'Album', with sculptural white flowers on 18-inch stems.

Andre Viette Farm & Nursery has been in the Viette family for over 50 years, and it recently moved from Long Island, New York to Virginia. Their nursery grows a large collection of garden perennials and rock garden plants, including over 50 types of *Hosta*; the rare black mondo grass, *Ophiopogon planiscapus* 'Arabicus', with its dark-purple, almost black leaves; and the wonderful variegated form of the woodland iris, *Iris pallida* 'Variegata'.

If you are looking for a show-stopper in your woodland garden, try the spectacular shade plant, the yellow ladyslipper orchid, *Cypripedium calceolus*.

The garden is generally open to visitors and stocks many items not listed in the catalog, which costs $1.00.

The Winterthur Plant Shop is a new addition to the Winterthur Museum of Delaware. The plants offered are all propagated from the distinctive collection of the Winterthur Gardens and are grown in their own gardens and nursery. The selection is truly fine, ranging from native shrubs and trees to exotic flowers and magnificent rhododendrons. The catalog carefully lists cultural requirements. Among the prizes offered is the graceful white forsythia, *Abeliophyllum distichum*, also called the Korean abelia-leaf, with its clusters of very sweet-smelling, pale-white flowers that bloom in early April on branches that rarely grow over five feet. This small shrub is hardy to at least -20°F if given some protection from heavy winter winds.

Woodlanders is located in the hills of South Carolina and they grow and ship trees and shrubs—both hardy and exotic—perennials, ferns and other native American wildflowers. Complete cultural instructions are included in their catalog, so the gardener need never fear buying from a southern climate for a northern spot—though their shipping season ends in mid-March when plants in their area have started to break dormancy. Woodlanders carries the most interesting Stoke's aster (*Stokesia laevis*), with its quill-like daisy "petals"; the beautiful yellow trillium (*Trillium discolor*); and the great blue lobelia (*Lobelia siphilitica*), perfectly hardy all the way to Zone 4.

—Peter Loewer

Peter Loewer is a botanical artist and scientific illustrator who writes and illustrates his own books. His latest book is *Evergreens, A Guide for Landscape, Lawn and Garden.*

MAIL-ORDER SOURCES

- Alpenglow Gardens, 13328 King George Highway, Surrey, B. C. Canada, V3T 2T6. The catalog is $1.00, and an American check is fine.
- The Banana Tree, 715 Northampton Street, Easton, PA 18042. Send 25¢ in coin or stamps.
- Kurt Bluemel, Inc., 2543 Hess Road, Fallston, MD 21047. The list is 50¢.
- The Cummins Garden, 22 Robertsville Road, Marlboro, NJ 07746. The first catalog is $1.00, and a refund coupon is issued.
- Endangered Species, 12571 Red Hill Avenue, Tustin, CA 92680.
- Far North Gardens, 16785 Harrison, Livonia, MI 48154. The catalog is $1.00, deductible from the first order.
- Greer Gardens, 1280 Goodpasture Island Road, Eugene, OR 97401. The catalog is $2.00.
- Holbrook Farm and Nursery, Route 2, Box 223 B, Fletcher, NC 28732. The catalog is $1.00, refundable with the first order.
- International Growers Exchange, Inc., Box 397, Farmington, MI 48024. Catalogs cost $3.00 and include the general catalog and the latest sale lists of imported and domestic bulbs.
- Lamb Nurseries, E. 101 Sharp Avenue, Spokane, WA 99202. The catalog costs $1.00.
- Las Pilitas Nursery, Star Route Box 23x, Santa Margarita, CA 93453. The catalog is $1.00.
- Milaeger's Gardens, 4838 Douglas Avenue, Racine, WI 53402. The catalog is $1.00.
- Plants of the Southwest, 1570 Pacheco Street, Sante Fe, NM 87501.
- Rocknoll Nursery, 9210 U. S. 50, Hillsboro, OH 45133. The catalog also lists a number of low-growing shrubs suitable for the smaller garden. The cost is 40¢ in stamps.
- Sandy Mush Herb Nursery, Route 2, Surrett Cove Road, Leicester, NC 28748. The catalog is $1.00.
- David B. Sindt, 1331 West Cornelia, Dept. H, Chicago, IL 60657.
- Siskiyou Rare Plant Nursery, 2825 Cummings Road, Medford, OR 97501. The catalog and fall supplement is $1.50.
- Stonecrop Nurseries, Route 301, Cold Spring, NY 10516. Send a stamped (20¢), self-addressed envelope for a list.
- Andre Viette Farm & Nursery, Route 1, Box 16, Fisherville, VA 22939.
- The Winterthur Plant Shop, Winterthur Museum and Gardens, Winterthur, DE 19735, $1.00.
- Woodlanders, 1128 Colleton Avenue, Aiken, SC 29801. The catalog is $2.00.

SOURCES

ARISTOLOCHIA

Plants

Carroll Gardens, PO Box 310, 444 East Main Street, Westminster, MD 21157. *A. durior.*

Logee's Greenhouses, 55 North Street, Danielson, CT 06239. Catalogue $2.50. *A. elegans, A. grandiflora, A. peruviana.*

Seed

J. L. Hudson, Seedsman, PO Box 1058, Redwood City, CA 94064. Catalogue $1.00. *A. durior, A. elegans, A. galeta, A. minor.*

Thompson and Morgan, PO Box 100, Farmingdale, NJ 07727. *A. elegans, A. grandiflora.*

HONEYSUCKLE

Lonicera heckrottii is available from Carroll Gardens, PO Box 310, 444 East Main Street, Westminster, MD 21157 and Wayside Gardens, Hodges, SC 29695.

NEW PLANTS FOR '83

Many of the plants we selected are available only from the single source mentioned in the descriptions. Write to these companies at the addresses below. The plants for which no source is mentioned should be available from most major mail-order seed and nursery houses as well as local garden centers and nurseries.

W. Atlee Burpee Company, Warminster, PA 18991, catalogue free.

Carlsons Gardens, Box 305, South Salem, NY 10590, catalogue $2.00.

Girard Nurseries, PO Box 428, Geneva, OH, catalogue free.

Greer Gardens, 1280 Goodpasture Island Road, Eugene, OR 97401, catalogue $2.00.

Klehm Nursery, 2 East Algonquin Road, Arlington Heights and Algonquin Roads, Arlington Heights, IL 60005, catalogue free.

Logee's Greenhouses, 55 North Street, Danielson, CT 06239, catalogue $2.50.

Geo. W. Park Seed Company, Inc., PO Box 31, Greenwood, SC 29647, catalogue free.

Siskiyou Rare Plant Nursery, 2825 Cummings Road, Medford, OR 97501, catalogue $1.50.

Andre Viette Farm and Nursery, Route 1, Box 16, Fishersville, VA 22939, catalogue $1.00.

Wayside Gardens, Hodges, SC 29795, catalogue $1.00.

White Flower Farm, Litchfield, CT 06759, catalogue $5.00

NEW PLANTS FOR '83 PHOTOGRAPHS

Page 1: photographs courtesy of Greer Gardens (left) and White Flower Farm (top and bottom).
Page 15-19: 1.24. Denholm Seeds; 2. Bodger Seeds; 3.4. Andre Viette; 5. Burpee Seed Co.; 6.19.20.23. Ball Seed Co.; 7. Klehm Nursery; 8. Girard Nurseries; 9. Park Seed Co.; 10.11. Wayside Gardens; 12. Goldsmith Seed Co.; 13. Siskiyou Rare Plant Nursery; 14.25. Greer Gardens; 15. AARS; 16.21. Logee's Greenhouse; 17.18. White Flower Farm; 22. Carlsons Gardens.

PRONUNCIATION GUIDE

Guide to Botanical Names in This Issue

The accent, or emphasis, falls on the syllable that appears in capital letters. The vowels that you see standing alone are pronounced as follows:
i—short sound; sounds like i in "hit"
o—long sound; sounds like o in "snow"
a—long sound; sounds like a in 'hay".

Abelia X *grandiflora*
a-BEEL-ya grand-i-FLOR-ah
Abeliophyllum distichum
a-beel-ee-o-FILL-um dis-TY-kum
Acacia drepanolobium
ah-KAY-see-ah dre-pan-o-LOW-bee-um
Acanthus ah-CAN-thuss
Acer rubrum A-ser REW-brum
Alcea rosea al-SEE-ah ROSE-ee-ah
Allamanda cathartica
all-ah-MAND-ah cath-AR-ti-ka
A. neriifolia
a. nere-ee-eye-FO-lee-ah
A. violacea a. vy-o-LACE-ee-ah
Allium cepa AL-ee-um SEE-pa
Aloe barbadensis AL-oh-ee bar-ba-DEN-sis
A. vera a. VARE-ah
Amorphophallus rivieri
ah-mor-fo-PHAL-us riv-ee-AIR-ee
Apocynum a-po-SY-num
Arctostaphylos ark-toe-sta-FILL-os
Aristolochia californica
air-riss-toe-LO-kee-ah kal-i-FORN-i-ka
A. durior a. DUR-ee-or
A. elegans a. ELL-eh-ganz
A. fimbriata a. fim-bree-A-ta
A. gigantea a. ji-GAN-tee-ah
A. grandiflora a. grand-i-FLOR-ah
A. serpentaria a. sir-pen-TARE-ee-ah
A. tomentosa a. toe-men-TOE-sa
Artemisia ar-tem-EEZ-ee-ah
Aruncus dioicus ah-RUN-kus dy-O-i-kus
Astrantia ah-STRAN-tee-ah
Athyrium goeringianum
ah-THIGH-ree-um gair-ring-ee-A-num
Aubrieta aw-BREE-sha
Beaumontia grandiflora
bow-MONT-ee-ah grand-i-FLOR-ah
Betula populifolia
BET-yew-la pop-you-li-FO-lee-ah
Brassica BRASS-i-ka
Buchloe dactyloides
BEW-klo dack-til-o-EYE-deez
Buddleia BUD-lee-ah
Calceolaria cal-see-o-LAIR-ee-ah
Carex grayi CARE-ex GRAY-eye
Carissa grandiflora
care-ISS-ah grand-i-FLOR-ah
Caryopteris care-ee-OP-ter-iss
Catharanthus roseus
cath-are-AN-thuss ROSE-ee-us
Celtis occidentalis
KEL-tiss ock-si-den-TAY-liss
Centaurea macrocephala
cen-TAW-ree-ah mack-ro-SEFF-ah-la
Cerbera SIR-ber-ah
Chrysanthemum coccineum
kris-AN-thee-mum cock-SIN-ee-um
Crysopsis villosa kri-SOP-sis vill-O-sa
Cistus monspeliensis
SIS-tuss mon-spell-ee-EN-sis
C. psilosepalus c. si-lo-SEE-pal-uss
Cladonia cristatella
clay-DOAN-ee-ah kris-ta-TELL-ah
C. rangiferina c. range-i-fer-EYE-na
Coreopsis auriculata
kor-ee-OP-sis aw-rick-you-LAY-ta
Cornus kousa KOR-nus KOO-sa
Coronilla valentina
kor-o-NILL-ah val-en-TY-na
Cypripedium calceolus
sip-ri-PEE-dee-um cal-see-O-lus
C. reginae ç. re-JIN-ee
Daphne DAFF-ne
Deutzia DEWT-see-ah
Dianthus plumarius
dy-AN-thuss plu-MARE-ee-us
Dimorphotheca ecklonis
di-mor-fo-THECK-ah eck-LOW-niss
Dipladenia amoena
dip-la-DEEN-ee-ah am-o-E-na
Draba bruniifolia subsp. *olympica*
DRAB-ah brew-nee-eye-FO-lee-ah
o-LIM-pi-ka
D. dedeana d. dee-dee-A-na
Elaeagnus angustifolia
ell-ee-AG-nus ang-goose-ti-FO-lee-ah
Festuca ovina var. *glauca*
fes-TEW-ka o-VY-na GLAW-ca
Ficus benjamina FY-kus ben-ja-MY-na
Forsythia viridissima
for-SITH-ee-ah veer-i-DISS-i-ma
Fouquiera splendens
foo-key-AIR-ree-ah SPLEN-denz
Franklinia alatamaha
frank-LIN-ee-ah ah-la-ta-MA-ha
Fritillaria frit-ill-AY-ree-ah
Funaria hygrometrica
foo-NARE-ee-ah hy-gro-MET-ri-ka
Geranium dalmaticum
jer-A-nee-um dal-MAY-ti-kum
G. sanguineum g. san-GWIN-ee-um
Gladiolus byzantinus
glad-ee-O-lus biz-zan-TY-nuss
Grimmia apocarpa
gri-MEE-ah a-po-CAR-pa
Hedwigia ciliata
hed-WIG-ee-ah sil-ee-A-ta
Hedyotis caerulea
head-ee-O-tiss see-REW-lee-ah
Hepatica americana
ha-PAT-i-ka a-mer-i-KAN-ah
Heuchera HEWK-er-ah
Hosta sieboldiana
HOSS-ta see-bold-ee-A-na
Houstonia caerulea
hew-STONE-ee-ah see-REW-lee-ah
Hoya HOY-ah
Iris pallida EYE-ris PAL-id-ah
I. pumila i. PEW-mi-la
I. sibirica i. sy-BEER-i-ka
I. tectorum i. teck-TOR-um
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Kochia KOSH-ee-ah
Koelreuteria paniculata
kol-rew-TERE-ee-ah pan-ick-yew-LAY-ta
Lathyrus latifolius
la-THY-rus lat-i-FOL-ee-us
Leucobryum glaucum
lew-co-BRY-um GLAW-cum
Lilium martagon LIL-ee-um MAR-ta-gon
Liriodendron tulipifera
leer-ee-o-DEN-dron too-lip-i-FARE-ah
Lobelia cardinalis
lo-BEEL-ee-ah/lo-BEEL-ya car-di-NAY-liss
L. siphilitica l. siph-i-LIT-i-ka
Lonicera americana
lo-NISS-er-ah a-mer-i-KAN-ah
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L. etrusca l. eh-TRUSS-ka
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ly-si-MOCK-ee-ah vul-GAY-riss
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man-de-VILL-ah ahm-ah-BEE-liss
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M. splendenz m. SPLEN-denz
M. suaveolens m. su-av-ee-O-lenz
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P. taeda p. TEE-da

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PLAT-in-us ock-si-den-TAY-liss
Plumeria rubra plu-MARE-ee-ah REW-bra
Polytrichum commune
pol-ee-TRY-cum ko-MEW-nee
Primula vulgaris PRIM-yew-la vul-GAY-riss
Pseudotsuga menziesii
sue-do-SUE-ga men-ZEES-ee-eye
Quercus alba QUER-kus AL-ba
Rauvolfia canascens
rau-VOL-fee-ah ka-NAY-senz
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R. vomitoria r. vo-mi-TORE-ee-ah
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ro-do-DEN-dron aw-rige-er-A-num
R. lochae r. LOCK-ee
R. macgregoriae r. mac-GREG-or-ee-ee
R. mucronulatum
r. mew-kron-yew-LAY-tum
R. periclymenoides
r. pair-i-cly-men-o-EYE-deez
R. schlippenbachii r. schlip-en-BACH-ee-eye
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ROOS tox-i-co-DEN-dron
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rob-IN-ee-ah sue-do-ah-CASE-ee-ah
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S. preussii s. PRU-see-eye
S. sarmentosus s. sar-men-TOE-suss
Taxodium distichum
tacks-O-dee-um dis-TY-kum
Thevetia peruviana
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Thunbergia myorensis
thun-BERGE-ee-ah my-or-REN-sis
Thymus broussonetii
THY-mus/TY-mus brew-son-ET-ee-eye
T. camphoratus t. cam-for-A-tuss
Trachelospermum tray-kell-o-SPER-mum
Tradescantia virginiana
tray-des-KAN-tee-ah ver-jin-ee-A-na
Trillium discolor TRILL-ee-um DIS-col-or
Vinca major VINK-ah/VIN-ka MAY-jer
V. minor v. MY-nor
V. rosea v. ROSE-ee-ah
Viola odorata vy-O-la/vee-O-la o-door-A-ta
Weigelia wee-GELL-ee-ah
Yucca filamentosa YUK-ah fil-i-men-TOE-sa

Whorled buds resemble loose hands of 1½-inch, fuchsia-pink bananas. Each bud splits and reflexes into two parts, the upper section oblong, shallowly scalloped into four lobes, the lower one long and slender. The inner sides are banana yellow. Seen sideways, an open flower suggests a story book dragon's head, breathing sparks of extruded yellow stamens.

I ordered goldflame, as I do so many plants, because I wanted to grow it and learn about it, and without first deciding where it was to be planted. When the good-sized clump arrived, bareroot, in early spring, I cut off a small rooted section and potted it up as a security deposit, for this was my second try; an earlier order brought a plant too dried out to survive. The potted piece convalesced in a shaded plunge bed near the house where watering is not overlooked. I then wandered round the garden seeking a vacant spot for the main clump. Behind a large boulder over which it could loll would have seemed the ideal spot—or might reflected heat have scorched the leaves and shortened the life of the flowers? In any event, there is not so much as a pebble on our two sandy acres.

Most English books say honeysuckles need moist shade. Instinct (or cussedness) led me to ignore this advice and seek a place in the sun. The spot picked out was immediately behind a wide bush of the low and spreading *Abelia* X *grandiflora* 'Prostrata' alongside the driveway. The soil is sandy, but well enriched with leafmold, and there is shade for the honeysuckle's roots under the abelia's spreading, twiggy branches. I had one misgiving: honeysuckles, and indeed most plants, grow towards the light. Could I, by removing branches growing towards the stronger western afternoon sun, induce branches to spread forward over the abelia towards the east? The answer has proved to be yes. A position facing south or west would nevertheless be preferable if there is a choice. The host shrub should be chosen with care—certainly not a choice, slow-growing evergreen. *Abelia*, in this area, is an inexpensive, sturdy, fast growing shrub, easily rejuvenated by hard pruning when branches shaded out by the honeysuckle get bare or die. I shorten the honeysuckle branches in winter or very early spring so that it will not entirely engulf its host, which is in its own right a pretty shrub valued for late season flower.

Meantime my smaller plant was rooting through the drainage hole of its quart container and needed a permanent home. This one got quite different treatment. I planted it against the trunk of a pine (*Pinus taeda*) alongside a shady path. Scandent shrubs will climb, but they need help until they reach branches over which to drape themselves. I used staples (the semi-circular kind used for attaching wire to wooden fence posts) to attach the main stem to the trunk of the pine and knocked them in only shallowly to leave room for expansion. Once the honeysuckle reached the branches of the pine it managed nicely for itself. It does not, like Hall's, wrap itself boa constrictor-style round trunk and branches, hugging its prey to death. Goldflame hoists itself towards the sky by making an occasional lackadaisical loop round a branch, a stub or one of its own stems, then reclining a bit before reaching up again to make another half twist, and so on. After a year it had grown 10 feet into the pine, with side branches of almost equal length looped horizontally, but all of this so loosely attached that when cut back in autumn a couple of tugs brought it all tumbling down. This plant flowered quite well, but not nearly so profusely as the other, nor for as long. Shade was only part of the reason for the difference, the other being that goldflame flowers in whorls at the tips of the branches, not in the axils of lower leaves. A plant encouraged to climb has fewer tips than one kept pinched out and bushy. Next year I will aim for a compromise with some pinching done to encourage branching and flowering at trunk level rather than high in the branches of the pine out of the field of view.

There are other possibilities to be explored. By pinching and pruning to form a permanent woody framework it should be possible to shape goldflame into floriferous mounds needing no support. Or, by staking, to train it in the same way as tree and bush wisterias. It would also lend itself to training round a pole in the flower border or on a fence or gatepost. I have tried it in a terrace tub but this didn't work too well because it wants to grow up and out rather than cascade. In the hands of a patient and punctilious gardener it also could be trained on a trellis against a house wall, a warm one in the cooler parts of the country, north or east facing where summers are hot and held in place with staples or plastic covered wires.

Pamela Harper is a garden writer, photographer and lecturer who lives in Seaford, Virginia. She owns Harper Horticultural Slide Library, a collection of over 25,000 slides on garden subjects.

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The Design Page

Photos by author

Framed by towering conifers, this rather grand vista in the garden at Naumkeag in Stockbridge, Massachusetts, takes full advantage of the dramatic terrain sloping to orchards and distant hills.

Rosemary Verey has created a pleasant feeling of intimacy and a strong sense of purpose with this bench placed at the end of a vista lined with herbaceous borders, laburnum walk and fountain.

VISTAS are an element of garden design all too frequently associated with the grandiose. Mention vistas to a gardener and chances are visions of Versailles or long walks lined with massive hemlocks will flash through his mind. A vista can certainly be a distant view seen through an alleé or frame of trees, but it can also be a shrub- or herbaceous-lined walk leading to an intimate enclosure; the use and type of vista depends as much on the site as on the gardener's imagination.

The creation of a vista is certainly made easy when a property has natural features or views that can be framed and brought into focus or, simply, lots of space. The drama of a vista is definitely not harmed by additional length, and anyone thinking of designing a vista might think of spending an afternoon in his garden with a tape measure.

But distance is relative. One of the most pleasing vistas I've seen is in a garden not much over 60 feet long. Framed with six-foot Korean rhododendrons, the vista's focus is a clump of young canoe birch (*Betula papyrifera*) set against the billowing mass of a neighbor's line of unevenly spaced hemlocks. Even though the path stops short of the birch and turns right to become a mowed path into a wildflower lawn, part of the success of this vista is that the viewer's eye continues into the space between the hemlocks. This illusion of furthered space is a great device; in fact, the Japanese call it "borrowed scenery"—a glimpse beyond the garden becomes, in effect, part of the garden.

There is an implied linear balance in a vista. Though this does not mean one should place plants in mirror image, balance of color and mass helps the eye along. In this woodland vista I mentioned, the balance is accomplished with staggered plantings of eight-foot pink royal azaleas (*Rhododendron schlippenbachii*) to the rear and six-foot rosy-lavender Korean rhododendron (*R. mucronulatum*) in front, while on either side *Phlox divaricata* unifies the plantings and leads the eye down the path toward the birch, its catkins shaking in the April breezes.

In early May, five-foot white pinxterbloom azaleas (*R. periclymenoides*), along with underplantings of delicate pink, six-inch *Geranium dalmaticum* and soft-pink, eight-inch *Geranium sanguineum* 'Prostratum Lancastriense' are in bloom; the first blooming from May through August, the latter into October. Late summer sees the red spires of *Lobelia cardinalis* provide a striking contrast to the birch. In autumn these deciduous azaleas and rhododendrons turn bronze-crimson and yellow and *Geranium dalmaticum* an orange-crimson—a wonderful complement to the birch's golden leaves. The autumn and spring bulbs planted between European ginger, an evergreen groundcover, assures nearly nine months of successive bloom.

Optimum space is a goal in every landscape but particularly the small garden where a vista(s) may be the major feature(s) and major planted area. As with this woodland, in a small garden year-round interest becomes as vital and as functional as the vista itself. In winter, for most parts of the country, when bloom has passed and color has subdued, evergreen trees and shrubs or the architectural branching of deciduous trees can assume an added importance.

Framing a view or object—in this example, a canoe birch—lends direction and logic to the landscape. Seen from the other side of the garden, somehow that tree at the end gives a definite reason to explore the path. In other examples, the deliberate focus of a vista can draw the viewer's eye (and feet) through a stand of fir trees to a distant meadow, across the lawn to a pond or down the length of a city garden to a fountain set against the wall.

By selecting and focusing on features or aspects of the landscape, a vista invites the viewer to "read" the landscape. Much as a poem is savored, then reread, the eye looks through a vista, then back and out again, the elements of each vista coming together in their own unique rhythm. Like a good dramatic poem, each type of vista builds its own level of expectation; the view beyond the garden—an exhilarating sense of expansion, the closed vista—the comfort of a secure embrace.

—Margaret Hensel

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

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