

The cover of the magazine features a lush garden scene. In the center, a stone statue of a young child with curly hair stands amidst dense green foliage. To the left and right of the statue are tall, slender stalks of bright red flowers. In the foreground, several large, vibrant blue flowers are visible. The background is filled with various green plants and some tall, thin stalks of small white flowers. The overall lighting is soft, creating a serene and natural atmosphere.

American
Horticulturist

June/July 1979

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Jane Steffey
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Gilbert S. Daniels
Horticultural Consultant

Tom Stevenson
Book Editor

Alex Berry,
Katherine deLozier/Grafik
Art Directors

Katherine Clatanoff
Business Manager

Florence Bayliss
Educational Programs
Coordinator

Judy Canady
Membership/
Subscription Service

Janet Nader
Assistant to the Editor

John Simmons
Production Coordination

Publisher Services, Inc.
621 Duke Street
Alexandria, Virginia 22314
703/549-8020

Advertising Representatives

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Cover Photo: *Phlox* 'Sir John Falstaff,' *Cimicifuga racemosa* and *Platycodon grandiflorus* 'Mariesii' frame this charming statue of a young girl at "Hillside," the Connecticut home of Fred and Mary Ann McGourty. For more information about their beautiful perennial garden, turn to page 18. Photograph by Pam Harper.

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Errata: In the Early Spring, 1979 issue of *American Horticulturist*, the photograph on page 23 was incorrectly attributed and identified. The seed pod pictured is a species of *Geum*, or wild avens. The photograph was taken by John A. Lynch.

Color separations by Chromographics Inc.

Celebrate the Year of the Rose in the City of Roses.



Carol Schmeidel

The American Horticultural Society Visits Portland, Oregon October 3-7, 1979

Breathtaking vistas, the snowcapped peaks of the Cascade Mountains, lush waterfalls, the sparkling reflection of sunlight on fresh, cold streams feeding into the Columbia River, lush, green countryside. This is the Willamette Valley of the Northwest. And at its center is Portland.

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What's in a Name?

Flora's Fauna

by Elizabeth Pullar

The plant and animal worlds have more in common than one might think.

Sometime, somewhere, someone fastened a common name to many of our flowers and plants. The body of persons who performed this unrewarded service can never be recognized, for their identity is unknown. But the fact that the names selected have been carried on from one generation to another is evidence that they were no mere soubriquets but rather apt and fitting descriptions of the world's flora as observed by these nomenclators who lived so many years ago.

The affinity between flora and fauna was apparently close, for a host of animal names has been bestowed upon the wild flowers, cultivated plants, trees, shrubs, herbs and even weeds with which our ancestors came in contact. Some of the names are suitable, others are far-fetched. Many of them are humorous, not a few fanciful. Some characteristic of a plant aroused a feeling of kinship with a certain animal or its features and the connection in thought was associated with the plant as its popular name.

Often it was the appearance of some part of a plant that prompted the common title. For example, the flower head of *Celosia* reminded someone of a rooster's comb, so the name of this plant became cockscomb. In the case of *Symplocarpus*, it was the odor that was responsible for the name skunk cabbage. The date of the flowering of *Amelanchier* coincided with the spring run of shad, so this winsome tree became

known as the shadbush. Farmers used branches of *Baptisia* to insert in the horse's harness as an aid to warding off pesty flies; hence, it was given the title of horsefly weed. Because woodland birds such as the partridge fed upon the berries of *Mitchella*, it acquired the name of partridge berry. There was a reason for every name given.

Dogs and cats were a part of most homes so it is not difficult to understand why observers were motivated to link these animals or parts of their anatomy with similar characteristics in local plants. The dog was



accountable for such names as dogtooth violet, dogbane, dog fennel, dog rose, and dogwood. The shape and texture of the leaves of *Cynoglossum* inspired its scientific name which, in translation, means hound's tongue. The cat's contribution to flower names includes catnip, cat mint, cat's foot and catbriar. Then, there are pussy toes, pussy clover and pussy willow. Here, too, must be mentioned the cat's prey, as witnessed by mousetail and mouse-ear, another name for forget-me-not.

The connection between farm animals and the flora of the neighborhood shows up in many

plant names. Endearing traits or peculiar qualities of horses, cows, sheep, pigs and goats caused someone to note a resemblance to similar properties in the flower or some other part of a plant. Today we are familiar with horseradish, horsetail, horsehead, horseweed, horse chestnut, horsebalm, horse nettle and horsemint. The young horse actuated the name of coltsfoot, an early spring flower found growing wild even though it is not a native of our country. Several plants inspired by some relationship to the cow are cowberry, cow parsnip, cowslip, cowpea, cowbane and cow wheat. Calf-kill is another name for sheep laurel, the leaves of which are supposed to be poisonous to some animals. Sheep sorrel was a name bestowed on what is sometimes known as sour grass, the tart green leaves of which sheep find tasty to nibble in spring. Just as flowers were named for the young horse and the young cow, so there are the plants for the young sheep—lamb's quarters, lamb mint and lambskill.

Around the farmyard were concentrated pigs or hogs, geese, chicken, oxen and goats, so we find their names transferred to plants that have related properties. There are pignut, pigweed, hog peanut and hog apple, names which refer to the swine family. From the poultry yard comes goosefoot, goose grass and chickweed. Goatsbeard is an apt association for the flower head of *Astilbe*. And the form of the simple ox-eye daisy inspired someone to attach to it a bovine name.

Many wild animals motivated our forefathers to connect their personalities to flora. We know flowers

Continued on page 40

A Person/Plant Viewpoint

by Charles A. Lewis

How long will it be before planners and architects learn to skillfully use plants to satisfy subtle human needs and thereby enhance the quality of urban life?

It has often been pointed out that we live in two worlds. Encased within the envelope of our skin is a biological entity which, through evolutionary development, has been fine-tuned for survival in natural environments. Beyond us lies not the green world in which we learned to survive and carry forward our species, but rather a world of our own creation, built of inert materials like brick, stone, steel and glass. The conflict inherent in the juxtaposition of our ancient biological selves with contemporary settings is increasingly becoming the concern of environmentalists and psychologists. Technical changes occur at an ever increasing rate, while biological evolution proceeds at an exceedingly slow pace. It is quite possible that the technical prowess by which we control the world around us has already so far exceeded our biological development that a hazardous gulf has been created between the two.

Can we achieve a better fit for biological man in his technological world? How might we gracefully bridge the gap between these two worlds and shorten the psychological distance between living flesh and steel, asphalt and stone?

For 16 years I have seen how gardening can, in the chaotic environment of the inner city, reestablish and reinforce needed human values and help people to find themselves.

As advisor for gardening activities in public housing and other low-income areas, I have come to understand that the importance of these gardens lies not in the flowers or vegetables produced, but rather in the personal benefits experienced by gardeners in pursuing the process of gardening.

For example, in 1962 the New York City Housing Authority, largest landlord in the world, initiated a Tenant Garden Contest as a means of improving communications and feelings between tenants and management. The program, which continues today, is simple.

Plants take away some of life's anxiety and tension by showing us that life is made up of long, enduring patterns. It takes time for a cutting to grow roots, for a seed to germinate, for a leaf to open.

Tenant groups wishing to enter the contest are assigned plots of ground adjacent to their buildings. The Housing Authority provides assistance in the form of gardening instruction, a small stipend given to each gardener for the purchase of plants and other materials, and manpower to help him dig up the

bed. Tenants do everything else—they work out designs, decide on plants to be used, start them as seedlings or cuttings indoors, or purchase them from commercial sources.

Contest gardens are planted in late spring and are tended carefully all summer long. Maintenance includes the normal tasks of watering, weeding, pruning and fertilizing, plus the added responsibility of protecting the plants from vandalism. In August judges tour the gardens to select the winning entries, and prizes are awarded at a September meeting before an audience of civic leaders and tenant groups.

At first I thought this program was a rather pleasant but innocuous exercise in beautification, but as I talked to the contestants each year, I began to hear echoes of a much deeper kind of involvement. I slowly began to understand that the importance of these gardens lay not in the flowers, but in the gardener's response to his plants. One contestant told me, "This is the first creative thing I have done in my life," and added that she had gone to the library to study every book available on gardening. In lower Manhattan a Spanish-speaking woman proudly said, "They told me that you couldn't grow flowers on Avenue D, but I wanted to try. Now you should see how the old folks come out every day to enjoy the flowers." I particularly remember an older woman who, with the help of a group of children, produced a garden with flowers, vegetables and even a cotton plant. She had carefully labeled each type of plant because, she explained, it was important for children to know the names of all of

them.

Probably the most astonishing garden I saw was Japanese-inspired, complete with pond, bridge, stones and walks, and constructed of bricks and cinderblocks. It was the entry of a teenage group, members of a street gang, who were guided into the contest by a social worker. The social worker told me how diligently the boys had worked, bringing the building materials from across the city to construct the paths and edge the beds. Maintenance was meticulous and their pride was obvious. Each of these boys had a police record.

Over the years the contest gardens have become a focus for social activities. Wedding and graduation pictures are taken at favorite spots. One tenant wrote, "From early morning until late at night you can see neighbors leaning over the garden fence. It has become the center spot of our court, where everyone is a friend."

I wondered how in the inner city, where vandalism is extreme, fragile gardens could grow seemingly unmolested. The answer came from the gardeners themselves. One group said, "We know who the troublemakers are, so we invited them to join our garden group and assigned them the job of guarding the plants. Now we have no more problems." Others told of residents joining together to patrol the gardens. Mothers sat with their babies near the plot, boys and girls took turns watching. Tenants in their tall buildings had the gardens under constant surveillance, all ready to sound the alarm if anyone tried to destroy the plants.

After a few years the program started to produce unexpected results. Public housing tenants who grew flowers and vegetables joined together in a warm kind of pride and neighborliness. They saw to it that gardens and surrounding areas were kept clean and neat. They urged the groundsmen to mow lawns adjacent to gardens more frequently. Building managers reported that at

buildings with gardens children who usually trampled grass were cultivating and watering it instead, and tenants no longer threw bags of garbage out the windows.

Vandalism was reduced outside and inside the buildings. Where it had been common experience to see new landscape plantings around public housing destroyed, tenants began to ask the Housing Authority for permission to help landscape the buildings. Inspired by their summer contest garden, tenants in several projects contributed their own funds for the planting of spring flowers which would bloom before the contest gardens were planted. Tenants asked permission to install planters in the lobbies of their buildings. They even organized garden clubs in many of the projects. Thus it seemed the experience of gardening helped residents achieve a more positive attitude about their building and grounds.

How was I to understand this new neighborliness? The newly-cleaned streets and newly-painted buildings represented human benefits and were clearly different from the horticultural benefits of gardening. What human motivations, born in the garden, were being expressed in these acts of courage and hope?

Having been trained as a horticulturist, I did not feel competent to correctly interpret these unusual aspects of gardening. I assumed that the phenomena would be well documented by researchers in the behavioral disciplines. That was not the case. Psychologists and sociologists were interested, but they could not refer me to a body of research that would explain the human responses associated with gardening. Thus I began my own research aided by Mrs. Enid Haupt, who, already sensitive to the human importance of plants, provided a grant to the American Horticultural Society to establish the People-Plant Program. For three years as coordinator of the program I made contact with professionals in other dis-

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Young trees should be planted in October or November in a carefully sheltered location if light, rich soil is available, or they should be planted in April if the soil is heavy.



Photos by Pam Harper

Cryptomeria Japonica

by Gail Gibson

The variability in growth habits of *Cryptomeria japonica* was discussed in an article in the Winter, 1969 issue of *The American Horticultural Magazine* by J. T. Baldwin, Jr. I reread this article after having seen two cryptomeria trees grown as specimens in southern Maryland. At the time I had been so impressed by the tree's whorled branches with densely arranged, deep-green needles and red, cedar-like bark, that I wanted to discover whether or not the trees could be grown success-

fully in southeastern Pennsylvania where I live.

Although these trees have been reported to be evergreen and hardy in sheltered locations near New York, and even in some parts of southern New England, most of the cryptomerias I found growing here in Pennsylvania seemed to be struggling to withstand the climate. Cryptomerias often do lose their vigor with age, and specimen trees in open locations often seem to be scorched from either the winds of



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- 10th Day**—Tiensin.
- 11th Day**—Peking.
- 12th Day**—At sea.
- 13th Day**—At sea.
- 14th Day**—Arrive Shanghai.
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- 16th Day**—Sail from Shanghai.
- 17th Day**—At sea.
- 18th Day**—At sea.
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Due to the popularity of this tour reservations are invited immediately. Early reservations will ensure the best choice of ship accommodations. Call or write Florence Bayliss, Tour Coordinator, the American Horticultural Society, Mount Vernon, Virginia 22121 (703) 768-5700 for complete details.

winter or the western sun of summer. I began to think that it would not be possible to grow the tree in this area until I saw a stately and beautiful specimen at the Tyler Arboretum near my home.

The buildings of the Arboretum sheltered the tree from western and northern sun and wind, and the tree had grown well beyond the roof line.

Mature, cone-bearing trees can be expected to reach a height of 50 to 60 feet in 30 years, and older trees have been known to be 125 feet tall.

It was a tree strikingly more mature and uniformly pyramidal than the first cryptomeria I had seen, and its branches were densely whorled.

Only one species of cryptomeria is known and it is native to Japan and China. In Japan cryptomeria, or Japanese Cedar, is one of the most important trees cut for timber. The bark remaining after finishing the wood is used for roofing houses. The reddish-brown color of the bark, its cedar-like fragrance and fibrous texture enhance the deep-green color of the needles. Older trees produce roundish cones an inch in diameter. Baldwin's article included a photograph of a cryptomeria raised from seed which bore so many cones that the branches were weighted down and appeared to be weeping in form. Mature, cone-bearing trees can be expected to reach a height of 50 to 60 feet in 30 years, and older trees have been known to be 125 feet tall.

That this tree could be raised from seed interested me. I chose from the Society's free seed distribution service a packet of the mature seeds and germinated them at 70° F in a sterile

commercial mixture that was light and friable. Keeping the seedlings in constantly moist, but not saturated, loamy soil produced fast and vigorous growth—up to one foot in height for some of the plants. The differences notable in the 13 seedlings were striking: although these early characteristics would probably not have been reflected in the trees when they reached four or five feet, the seedlings at 4, 6 or 12 inches varied from sparsely and horizontally branched to almost dwarf and compactly branched. Unfortunately, the plants I had grown in pots began to lose their vigor when I moved to my present location where indoor sun was limited, and I was not able to raise a seedling which could have withstood even the most sheltered location outside.

Nurserymen here in southern Pennsylvania seldom carry cryptomeria plants for outdoor planting because there is little demand for them, and because they are not reliably hardy. It is often possible to find the dwarf *C. japonica* 'Nana' in nursery catalogues. This is a bush form which is almost globular and seldom grows over 1½ feet high. But this cultivar has particularly wiry needles and is, of course, quite unlike the stately pyramidal cryptomeria with soft, whorled branches that I had searched for and have not yet found in a nursery.

When I do succeed in finding a plant, and if in the future I have the properly sheltered location with



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well-drained, loamy, acid soil and sufficient sun, I will try to cultivate a specimen plant of my own. If these trees do establish themselves, and if the branches are not broken by snow or ice in the winter, they should grow two to four feet a year. After the trees are sufficiently mature, small male flowers appear hidden at the ends of minor shoots, hence the name cryptomeria, derived from "kryptos," meaning hidden and "meris," meaning part.

Young trees should be planted in October or November in a carefully sheltered location if light, rich soil is available, or they should be planted in April if the soil is heavy. Plants taller than 24 inches are more difficult to establish. The *Reader's Digest Encyclopedia of Gardening* recommends applying an annual dressing of "general fertilizer" over the area at the base of the tree and providing sufficient moisture to prevent the plant from drying out.

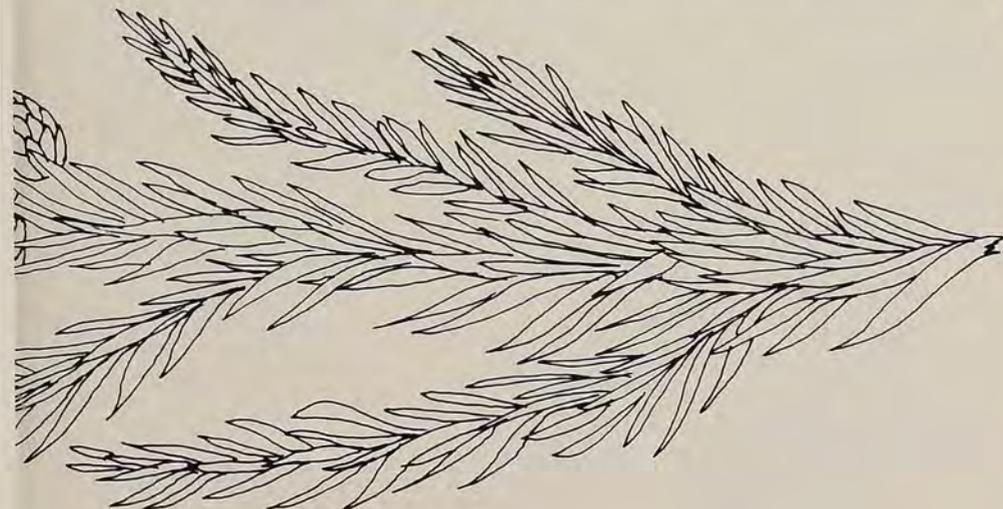
The lovely pyramidal shape of the cryptomeria is characteristic of the plant and little pruning is required. Although the plants I raised in an apartment were susceptible to attack by red spider mites, plants in the open air seldom show any vulnerability to pests. Seedlings are subject to gray-mold, but the seedlings I grew exhibited no problem with this disease.

Varieties of *Cryptomeria japonica* which do grow to tall pyramidal form are *C. japonica* 'Lobbii,' the variety of the stately tree at the Tyler Ar-

boretum; *C. japonica* 'Elegans,' which retains the soft green foliage that in all the other varieties disappears with age; *C. japonica* 'Compacta,' a dense and conical form; and *C. japonica* 'Araucarioides,' which was recently displayed in the conservatory at Longwood Gardens. This cultivar has the open and semi-pendant branch structure characteristic of the species.

I am always a little saddened to see the brown and scorched leaves of any cryptomeria, such as those of a smaller tree at the Tyler Arboretum which is only 15 feet tall. This tree is in an open location exposed to western sun and wind. Trees that are well-suited to their environment bear leaves that turn a rich purple-bronze color in winter that is very attractive. Because these trees are so sensitive to their environment, it is best not to plant cryptomerias unless a suitably low-lying and sheltered location is available.

My own open lawn is much too exposed to winter winds to foster health in the plant, so I will simply continue to admire each specimen cryptomeria I see, noting differences in the whorling of the leaves and their texture and color. As my list of discovered cryptomerias grows, and as I note the highly variable and distinctive growth characteristics of each newly-found tree, I will continue to hope that more and more of these lovely trees are planted in suitable locations here in Pennsylvania and in other states as well. 🌲



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Some Modern Fragrant Roses

by Robert L. Staton

I am so accustomed to hearing people say that while modern roses have more form and come in more colors, they just don't smell like the ones Grandma used to grow, that I no longer get frustrated with the speakers. Instead, I make a conscientious effort to direct their noses to the nearest modern specimen unveiling its exotic blend of aromas to prove them wrong. As one who has grown many of the old-fashioned roses, including some species and countless new hybrid teas, grandifloras and floribundas over the past 20 years, I say "It simply isn't so that modern roses have no fragrance." Not all roses, modern or old-fashioned, are fragrant, but many of the latest modern roses equal and even surpass in fragrance those roses of days gone by.

Perhaps nostalgia explains a lot of the misconception about modern rose fragrance. It is fashionable now to think back on days when there was time "to stop, and smell the roses along the way," as one of today's popular songs goes. I can take myself back almost 20 years simply by lifting up a spray of 'Ivory Fashion,' a floribunda introduced about the time I began growing roses, and that delightful, totally different clove-like scent transports me to another era almost immediately. 'Ivory Fashion' is a modern rose, yet in my mind it belongs to another time. I know only that I always want to have a few plants growing.

Just how important is a rose's fragrance? To the Bulgarians it is very



Photo by author

OPPOSITE: 'Sunsprite' ABOVE: 'Garden Party'

important—attar of rose is so valuable to them that they keep hundreds of drums on deposit in foreign banks to maintain their international balance of trade. To the average homeowner who wants a few plants to bring a spot of color to his yard, however, color and form are first noticed and appraised. Even though some sniffing of the blossoms is usually a part of the buying process, fragrance is regarded as a bonus, a happy one, but usually not a determining factor in buying a rose.

The fragrance of roses can be of many kinds. One immediately thinks of the damask scent, and it is mostly the red damask rose, *Rosa damascena*, that is planted so extensively in Bulgaria. Today's modern

Not all roses, modern or old-fashioned, are fragrant, but many of the latest modern roses equal and even surpass in fragrance those roses of days gone by.

roses are rarely of only one fragrance. Modern hybrids have been so mixed with other hybrids and with other species that a mixture of fragrances usually results. *Rosa gigantea*, for example, has a sweet cinnamon scent, and this smell can sometimes dominate or sometimes complement a strong damask fragrance. No matter what the fragrance, though, scent does seem to be a dominant characteristic, and many modern roses are fragrant despite the hybridizers. No doubt many of the species roses are so intensely fragrant because they had to be in order to survive. A scented rose attracted bugs and bees for pollination; the scentless perished.

Fragrance is not a stable factor in a rose, just as color is not. Factors such as heat, light, cold and moisture must be taken into account. For instance, a heavy damask fragrance does not volatilize in damp, cool weather, and for this reason you may find even your most fragrant red rose lacking in perfume on such days. The fragrance is there; it simply cannot be released. That same rose on a warm, humid day may almost overpower one with its scent. It may also volatilize all at once, and if someone is lucky enough to be walking by at that moment, he may think there could never be a more fragrant rose in all the world. In contrast, many lighter fragrances can completely volatilize and be wafted off into the air by mid-morning on a warm summer's day. Smelling that rose in the afternoon may cause one to assume it is scentless, while only hours before, in the cool of the morning, it would not have been passed by without notice.

Generally, roses are more fragrant in warm and humid conditions than in warm and dry conditions, although some roses are very fragrant in both hot and cold weather and can even have a different fragrance at these two extremes. I have found 'Ivory Fashion' to have a more clove-like scent in cooler weather and a more honey-like scent under warmer conditions. Diseases can

also affect the smell of roses; if mildew is present one of the first effects it has is to destroy fragrance.

Before making a solemn proclamation as to the fragrance or lack of fragrance of a particular rose, be certain to observe it under different conditions. Inhale it in spring, in summer, in fall, on hot days, on damp days and after a rain. Nestle your nose deep into it in the morning, at noon and at night. Do not proclaim, with but a solitary whiff, that "modern roses just aren't fra-



Armstrong Nurseries

'Sweet Afton'

grant." You could be denying yourself a bounty that you did not even know existed.

A list like the one that follows is a dangerous one to make, for a true listing would be infinitely longer, and I have surely left out several favorites of avid rosarians. But I believe firmly that many of the roses on this list can hold their own with, and even surpass, some of the old favorites in regard to fragrance. This is not to slight the old-fashioned; their charm is unique, their simplicity is quite elegant and a great many of them have fragrance in abundance.

I have tried to arrange the roses on

the list beginning with those with the strongest scent and ending with those with the lightest scent. Such a listing, however, could never be completely accurate; a selection has to depend on a person's sense of smell. My own favorites change just as the scent of the roses change, from morning until night, from season to season, from a rainy, dreary day to a bright, sun-filled day. I am certain my preferences will continue to change as the hybridizers create more of these exotic specimens. I really wouldn't want it any other way.

'Typhoo Tea'

This new rose, available in the United States for only the last few years, is a creation of Sam McGredy, a native of Ireland who has been doing his most recent hybridizing work in New Zealand. I believe 'Typhoo Tea' to be the most fragrant of roses, taking on such challengers as 'Madame Isaac Pereire,' a Bourbon rose dating back to 1880 and world-renowned for its fragrance, and *Rosa damascena X bifera*, the Autumn Damask, which dates into antiquity. I have observed this rose on the Gulf Coast and in the Pacific Northwest and have been awed by its fragrance. The fragrance seems to be present under all conditions at any time of the year during its blooming period. 'Typhoo Tea' has a unique blend of damask and strong fruit scents. It is no wonder that it is supremely fragrant, for it is a cross between 'Fragrant Cloud' and 'Arthur Bell,' two roses that also excel in this category. It has perfection of form in the Northwest, but I have had some trouble getting it to reach the same beauty on the Gulf Coast. The center petals ball over, but even this does not stop that intoxicating fragrance from emerging from deep within the blooms. 'Typhoo Tea' is a must-have plant for fragrance alone.

'Fragrant Cloud'

A European introduction by M. Tantau of Germany, this rose has been commercially available in the United States for 10 years, and

longer on the European continent. Its name is apt; the fragrance is a fruit blend that is extremely heavy. It easily competes with many of the old roses in terms of fragrance. I have found its scent to be lacking only on cold, rainy days in early spring and late fall, but even then it is such a bountiful producer of coral-vermilion blooms that it is worthy of occupying a spot in the rose bed. The color is sometimes washed over with a hint of coffee, and there are times when I actually believe I can smell a hint of coffee within the blooms. 'Fragrant Cloud' is a cross between a seedling and 'Prima Ballerina,' itself a powerfully fragrant rose and one that seems able to pass along its good attributes to its progeny.

'Granada'

This rose is truly one of the all-time favorites, whether for its riotous color, its superlative form, its abundance of bloom or its penetrating fragrance, a subtle blending of tea and damask odors. Winner of an All America Award as well as the Gamble Award for Fragrance in 1968, this popular modern beauty seems to waft its scent aloft day or night, in hot, cold, dry or wet weather. It comes from another all-time fragrant beauty, 'Tiffany,' and its mellow blending of bright nasturtium red, orange, and yellow produces a rose that draws one's attention and holds it as its perfume permeates the air. A truly good acquisition.

'Papa Meilland'

Known to the avid rosarian for its superlative show form, this deep-red, damask-scented beauty is the epitome of the dark, lustrous, fragrant roses that everyone loves. I find the fragrance to be present even under cool conditions, a surprise since many damask-scented beauties prefer warm temperatures to bring out their best qualities. A product of two other deep-red roses with intense fragrances, 'Chrysler Imperial' and 'Charles Mallerin,' 'Papa Meilland' had to be fragrant. It is not as readily available as many

less worthy reds, but it is still carried by some specialty nurseries and is cherished by all who know and grow it.

'Double Delight'

This rose is very new and is already capturing attention and prizes wherever it is grown. The cream-colored petals become deeply brushed with a bright carmine-red as the sun hits the outer row of petals, making a stunning contrast. The fragrance, as befitting a cross between 'Granada' and 'Garden



Photo by author

'Lady Luck'

Party,' is one of the most intense to appear on the scene in the last several years. This is a rose whose vigor and vitality, delightfully refreshing color and almost overpowering fragrance will ensure that it will be around for a long time.

'Royal Albert Hall'

This rose is hard to find through American sources, but it is a very popular rose on the European continent and will not go unnoticed in the garden either for lack of color or scent. Its red and yellow coloring demands attention and its damask fragrance, blended with a tangy, fruity odor under most conditions, adds intrigue to this most unusual

rose. A child of 'Fragrant Cloud,' 'Royal Albert Hall' is deserving of far greater fame.

'Crimson Glory'

Perhaps it is stretching to include 'Crimson Glory' among the newer hybrids, but its introduction in the 1930's still qualifies it under our heading of modern. A low, sprawling bush that readily mildews, it can still produce an occasional bloom that will attract the eye and the nose, for its deep damask fragrance is at times overwhelming. This deep red is not always easy to grow, but it is still widely available and prefers warm temperatures to be at its most fragrant.

'Lady Luck'

Technically, I should not include this rose in the survey, for it has all but disappeared—unfairly—from the commercial market. 'Lady Luck' should not be confused with a later entry called 'Lucky Lady,' a grandiflora that seems to have suffered the same fate as far as distribution is concerned. 'Lady Luck' is a medium to light pink rose that occasionally has impeccable form. It is a moderate producer and always bears intensely fragrant roses that seem to be a mixture of damask and wild honey scents. This is a delightful rose, a creature of aristocratic bearing that many will never know, and one whose petals alone can make a magnificent potpourri.

'Sunsprite'

Known as 'Friesia' on the European market, this rose comes from the Kordes family of Germany and may be our only really good yellow floribunda with a pronounced scent. Good, delicious scent in yellow roses has usually been elusive to date, but it seems to have stabilized in 'Sunsprite.' This rose has a moderate, fruity scent that seems to be present under almost all conditions. The medium-yellow flowers, which grow in clusters, retain their color, a much sought-after factor in yellow roses. 'Sunsprite' is readily available through most American rose nurseries.

When your fragrant roses reach full maturity, don't let them go to waste. Instead, pick the flowers and use the dried petals, even the leaves, in one of these recipes to enjoy for months and years to come. These recipes are reprinted from *Fragrance, How to Make Natural Soaps, Scents and Sundries* by Beverly Plummer, with the permission of Atheneum Press and Old Sturbridge Village.

New Morning Potpourri*

Add the following ingredients to a container and mix.

- 1 cup rose petals.
- 1 cup orange blossoms
- 1 cup sweet lemongrass
- 1 cup lemon thyme

- 1 tablespoon aniseed (crushed)
- 1 tablespoon caraway seeds (crushed)
- 1 tablespoon tonka beans (crushed) or orrisroot (cut)

Rose Jar Mixture

(Courtesy of Old Sturbridge Village, Sturbridge, Massachusetts)*

- 1 quart rose petals (dried)
- 1 tablespoon orrisroot (cut)
- 1 tablespoon mixed nutmeg, cinnamon, and allspice (crushed)
- 1 tablespoon gum benzoin

Mix the above ingredients in a pottery bowl. When well mixed, add bits of vetiver root, vanilla bean and dried orange peel stuck with clove.

Divide the mixture into thirds. Put one-third in a rose jar, then add a few drops rose oil, oil of rosemary and lemon

verbena. Add another third, repeat the oils. Do this until the jar is filled. Seal for six weeks, then break the seal and stir well with a wooden spoon. Each season, add more rose petals, keeping the jar filled.

My Favorite Sachet*

Add the following ingredients to a container and mix.

- 1/2 cup rose leaves
- 1 cup lavender flowers
- 1 cup calamus root (cut)
- 1 tablespoon coriander seeds (bruised)
- 1 tablespoon orrisroot (powdered)
- 2 drops oil of rhodium
- 4 drops tincture of musk

*(Editor's Note: Tonka beans, gum benzoin and orrisroot function as fixatives which hold and blend other scents.)

'Garden Party'

Even though we move into the realm of light-to-moderate fragrances here, the sweet honey and clove-like scent of 'Garden Party' is a total delight. Ivory petals kissed with a lavender-pink edging, this rose can have perfection of form, color and fragrance. The often large (six inches and more) blooms of this variety seem to maintain their fragrance throughout the long life of the bloom. 'Garden Party' is considered one of the few successful crosses of 'Peace' and 'Charlotte Armstrong,' and its fragrance is surprising in that 'Peace,' the most popular rose of the 20th century, is virtually scentless, and 'Charlotte Armstrong' has only a light fragrance. 'Garden Party' is still a very popular rose after having been on the market for two decades. Its unique fragrance has to be part of the reason for its success.

'Royal Highness'

Another progeny of 'Peace' ('Peace' X 'Virgo'), this pale-pink rose has a beautiful form. Its sweet-briar fragrance is haunting, its lovely form totally captivating. Fragrance seems to be constant with this rose; fluctuating conditions do not affect it. 'Royal Highness' is widely available and deservedly so.

'Sweet Afton'

Another near-white to pale-pink variety, 'Sweet Afton' is a bountiful





Attar of rose is so valuable to the Bulgarians that they keep hundreds of drums on deposit in foreign banks to maintain their international balance of trade.

OPPOSITE: 'Fragrant Cloud'
ABOVE: 'Double Delight'
BELOW: 'Granada'

producer of flowers that resemble 'Royal Highness' in coloration but do not have the latter's superior form. 'Sweet Afton' more than makes up for this shortcoming, however, with its very sweet scent and its easy-to-grow constitution. This rose will always supply its grower with bouquets to bring into the house, and its fragrance will be persistent and most pleasing. It is still available through at least one large rose-growing firm and should definitely be considered when making potpourris.

'Ivory Fashion'

This rose does not have a strong fragrance, but a persistent perfume that I can only describe as a mixture of honey and cloves. The ivory-colored blossoms in their perfectly-shaped clusters can be a vision of loveliness. To smell the rose at its peak, which is during warmer weather, is to love it. Not many floribundas are noted for their fragrance but this one is an exception. Even though it is a 20-year-old hybrid, 'Ivory Fashion' is still carried by many nurseries because of its superlative qualities.



Photo by author



Selected Source List for Some of the Roses Mentioned

Armstrong Nurseries
P.O. Box 4060
Ontario, California 91761
'Typhoo Tea,' 'Fragrant Cloud,'
'Granada,' 'Double Delight,' 'Crimson
Glory,' 'Garden Party,' 'Royal
Highness,' 'Sweet Afton.'
Carl Pallek & Sons
Box 137
Virgil, Ontario LOS ITO, Canada
'Royal Albert Hall'
Jackson and Perkins Company

1 Rose Lane
Medford, Oregon 97501
'Fragrant Cloud,' 'Sunsprite.'
Melvin E. Wyatt
Johnny Cake Ridge
Mentor, Ohio 44060
'Garden Party,' 'Royal Highness,'
'Sunsprite,' 'Double Delight,' 'Granada,'
'Fragrant Cloud.'
Thomasville Nurseries, Inc.
Box 7
Thomasville, Georgia
'Fragrant Cloud,' 'Granada,' 'Double
Delight,' 'Crimson Glory,' 'Garden
Party,' 'Royal Highness.'

The Forgotten 'Kwanso'

by Beryl Munday and Vivian Munday

You may never have heard of 'Kwanso.' It is not listed in any dictionary and it is barely mentioned in most flower manuals or encyclopedias. Many inquiries we made brought forth little information about the plant. The American

Hemerocallis Society told us only that it is a species of daylily and that it comes from China.

At one time 'Kwanso' must have grown in many of the French and Spanish gardens in the old town overlooking the Mississippi where

we lived. The family that originally built our home had lived in it for 60 years and had planted practically everything that grows in the region. I am told the property was beautiful as long as the owners could care for it, but eventually the surviving



member could no longer do so. At her suggestion friends took many of the plants and bulbs from the yard and garden not long before a tragic fire ruined the house.

When we bought the place the completely rebuilt house was inviting, but the grounds were unsightly. Since all of us were gardeners, replanting was soon in progress. Roots of some plants refused to die even after continued abuse during the reconstruction. The old clematis soon climbed the new porch posts, and a flowering almond pushed up two small whips. Daffodils and narcissi appeared from bulbs that had been overlooked, and a surprise lily lived up to its name.

It was three years before the 'Kwanso' startled us with its remarkable blossoms—orange, with deeper markings in the petals. Instead of the usual bell shape, the flowers were more flaring and triple petaled, one row above the other. A botanist might call the lower one of the three rows sepals, or he might call all of them tepals, a new term used when both petals and sepals look alike. No one we questioned in our neighborhood, including a botanist from our local college, remembered ever having seen the flower.

Oddly enough our 'Kwanso' had appeared in a bed of named daylilies we had ordered from a midwestern grower. We sent pictures to the firm to learn if our stranger had accidentally been included in our order. It had not. It was then that we learned we had double-flowering 'Kwanso.' The flower apparently had come from pieces left in the ground years before.

Strangely, later that same summer, our botanist friend showed us a 'Kwanso' that had bloomed in her bed of old-fashioned daylilies. She had lived in the house nearly 20 years, and to her knowledge it had never bloomed before. Later we visited an old garden in town that had changed little since it was planted

more than 70 years ago. Down one of the garden paths we came upon a bed of 'Kwanso.' To the owners they were daylilies, different from the rest, but old and familiar just the same.

Over a period of several years we have gradually found other information about 'Kwanso' that has made the flower even more interesting to us. Most authorities, including L. H. Bailey, consider 'Kwanso' a cultivar of the common orange daylily, *Hemerocallis fulva*. Others, however, consider it a distinct species. Regardless of the fine points of classifi-

So far as is known, the species daylilies all came to our country from the Orient by way of Europe. One route was through Hungary and another was by way of Lisbon.

cation, 'Kwanso' certainly is special enough to be clearly distinguished from the common orange daylily.

Perhaps more interesting than the taxonomic puzzle it presents is the way in which 'Kwanso' was introduced into the United States, apparently around 1860. So far as is known, the species daylilies all came to our country from the Orient by way of Europe. One route was through Hungary and another was by way of Lisbon. The orange daylilies, including 'Kwanso,' left a trail through Lisbon. We can speculate that these types were more common in the Oriental area where traders

from Portugal went to buy. In colonial times plants were important cargo on ships bringing early settlers to America. Daylilies arrived early and moved westward with the pioneers. *H. fulva* was so widely distributed in this way that it became known as the Homestead Lily. 'Kwanso' came somewhat later.

The first European report about 'Kwanso' was by a naturalist and officer of the Dutch East India Company named Kaempfer. He was stationed in Japan around 1690 and noted both the Chinese and Japanese names for the plant. Quanso was the Japanese vernacular name, seemingly a derivation of the Chinese Hsuants'ao. The German spelling became Kwanso.

Why does 'Kwanso' receive so little recognition in these days of excitement over double daylilies? The plant's sterility is one reason. 'Kwanso' may very occasionally have viable pollen, but rarely, if ever, does it have normal female reproductive parts. Two characteristics of 'Kwanso' reduce its chances for setting seed. Ordinarily an increase in the number of petals means a decrease in the number of reproductive parts. In addition, 'Kwanso' is triploid; that is, there are three sets of genetic material in every cell rather than the usual two.

This additional information has made the flower's persistence in our yard seem even more amazing. Since its chances of sexual reproduction are almost nonexistent, it cannot survive as an embryo plant "stored" for years in a buried seed. It ordinarily must survive as a fully-developed plant part, which it was able to do even through several years of violent treatment. It may be that this amazing persistence has enabled it to become so commonplace that people ignore it, but 'Kwanso' has certainly become one of our favorites. Not only is it a beautiful, low-maintenance plant, but it is also one with an impressive historical background. 

"Hillside"

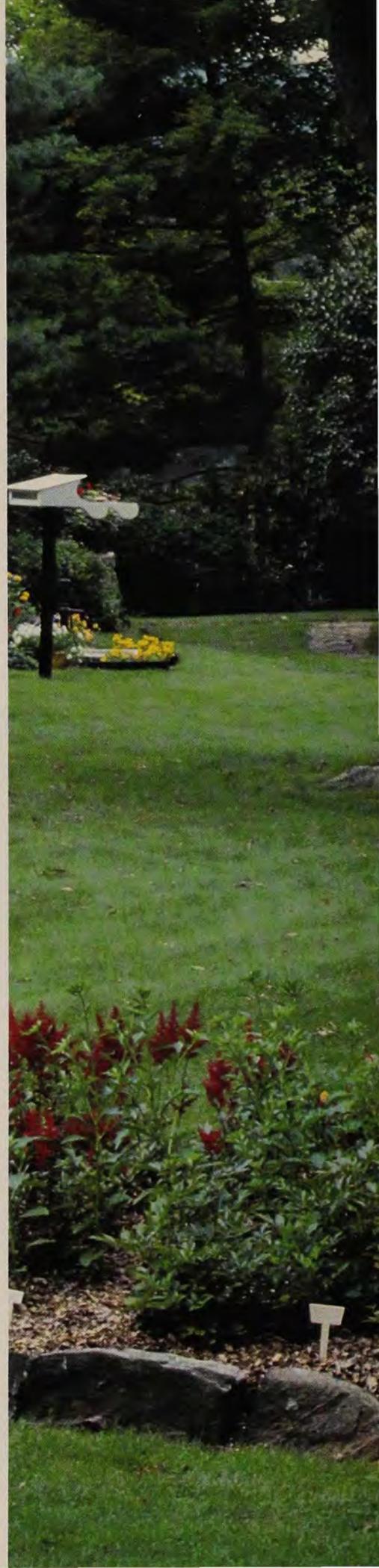
A Perennial Garden

by Pam Harper

Lucky the gardener who inherits old stone walls, mellow with age and lichen and moss encrusted. Such a wall greeted me as I entered "Hillside," the Connecticut home of Fred and Mary Ann McGourty. Both avid gardeners (Fred is editor of publications for the Brooklyn Botanic Garden and writes a gardening column for the *New York Times*), the McGourtys have created one of the country's loveliest perennial gardens at "Hillside." It is a place I love to visit, especially during July when Tidewater, Virginia, my home, is unbearably humid and hot.

Photos by Pam Harper

The gardens at "Hillside," the Connecticut home of Fred and Mary Ann McGourty, are filled with over 400 different kinds of plants, mostly colorful summer-flowering perennials.







As I approached "Hillside" by way of the old stone wall, I spotted yellow *Hemerocallis* 'Hyperion' in full bloom there. Other walls define, without enclosing, the perimeters of the main garden, which consists of lawn and perennial beds and borders within a woodland clearing. Such walls make the perfect background for the McGourtys' many plants, but they also provide a haven for chipmunks and mice, kept under control by the family cats.

In this part of the Northeast, winter waits impatiently in the wings even as spring creeps tardily on stage. During dinner the McGourtys and I talked of favorite trees. Mary Ann's is *Cornus florida*, but she cannot grow this dogwood here since buds may be blighted by

late spring frosts. But such limitations, ironically, may have contributed to the success of their garden. Better, perhaps, to think for a week and work for a day than the other way around. Snow (100 inches a year) precludes outdoor work for several months, but planning goes on all year.

The couple's aim is maximum bloom at the time when it can be most enjoyed—July and August. Towards this end two processes go on simultaneously. First, individual plants are evaluated. There are over 400 kinds in the garden now, excluding ferns and wildflowers. Many more have fallen by the wayside, and the winnowing process goes on as Fred and Mary Ann become increasingly selective.





Color, texture, need for sun or shade, height, habit and flowering time must all be taken into account.

Among the genera most strongly represented are *Allium*, *Astilbe*, *Epimedium*, *Geranium* (the true ones, not *Pelargonium*), *Hemerocallis*, *Phlox*, *Sedum* and *Veronica*. There are 19 kinds of *Hosta*, ranging from the wee *H. venusta* and gold-leaved 'Kabitan' to the great, gray-green *Hosta sieboldiana* with nine-inch-wide leaves and short, dense heads of white flowers. The fragrant 'Honeybells' is here, the graceful *H. lancifolia*, autumn-flowering *H. tardiflora*, wavy-leaved *H. undulata* with cream and green variegation and, used in a sweep against one wall, white-edged *H. decorata*. *H. 'Frances Williams'* is a new addition with a bright-gold edge to the large leaves.

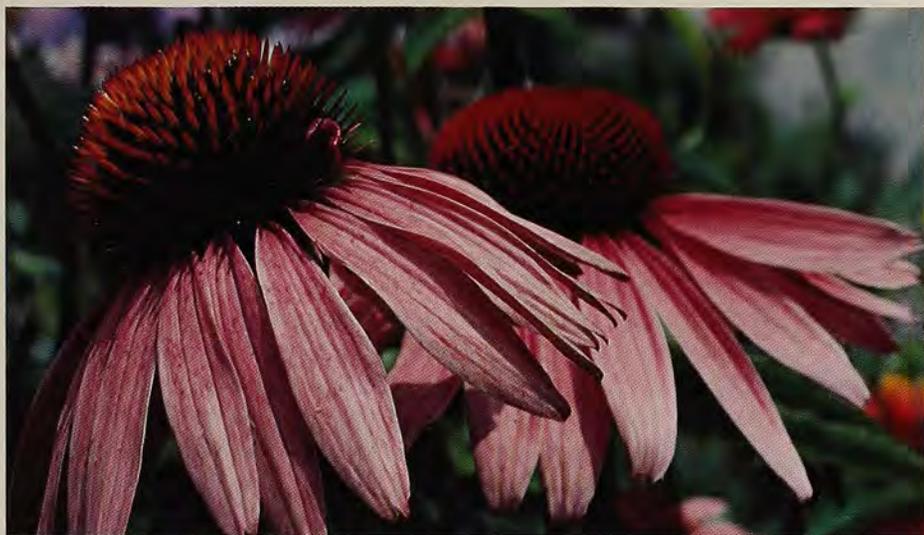
Hostas come late into growth and thus can share their bed with daffodils. They are primarily foliage plants, but most kinds also have pretty flowers. *H. decorata* was in bloom this first week of August, the

delicate, pale-mauve flowers backed by a clump of *Heliopsis helianthoides* 'Incomparabilis' with its shaggy, yellow double-daisies.

A plant has a point in its favor here if it demands only minimal attention, but "labor-saving" is not the watchword in this garden. After fair trial, chronic invalids go on the compost heap, but plants deemed worthy of staking and spraying are accorded these attentions. The phlox are free from powdery mildew stems, not from fortune's smile but from the timely application of a Benlate spray. *Lobelia cardinalis*, an indispensable pure red, is farouche in character, unwillingly domesticated, and its presence in the garden fleeting unless frequently seedling-renewed (self-sown or otherwise). At "Hillside" it grows near a tumbledown section of wall in the shade of the woods, with ferns for company.

Aesthetics is the other consideration. A handsome and healthy plant may yet be discarded if it does not blend or contrast pleasingly with others to create a satisfying overall picture. Some annuals are used as fillers, but not scarlet sage, which, Fred says, always seems to be shouting, "Look at me!" Color, texture, need for sun or shade, height, habit and flowering time must all be taken into account. Familiarity with a wide range of perennials certainly helps; plans on paper or in the mind play a part, but in the end the most pleasing combinations have come about from trial and error over the years.

As do most plantspeople, Fred and Mary Ann vacillate when asked to name a favorite perennial, but about their favorite genus there is no ambivalence. It is *Astilbe*, a preference attested to by the presence of 25 kinds on the garden inventory. *Astilbe chinensis* 'Pumila' has so many good qualities that it is forgiven the nondescript pinkish-mauve of the 15-inch plumes and is used as an edging plant. Dense and chunky and rarely needing division, it flowers in late summer. Taller *Astilbe X*



OPPOSITE ABOVE: Annuals in containers surround a black iron pump, one of several decorative objects in the McGourty's garden. LEFT: In the foreground, *Hemerocallis* 'Hyperion,' *Sedum* 'Autumn Joy' and *Ligularia dentata* join colors with *Filipendula ulmaria* 'Flore Plena' in the background. ABOVE: *Echinacea purpurea*, purple coneflower.

*In this part of
the Northeast, winter
waits impatiently in
the wings even as
spring creeps tardily
on stage.*



ABOVE: The "garden girl," seen from the back, is framed by *Cimicifuga racemosa*.

OPPOSITE: Color abounds. Here, *Astilbe* 'Fire,' *Artemisia* 'Silver Mound,' *Chrysanthemum parthenium* (feverfew), *Cimicifuga racemosa* and lilies add their hues to the palette.

arendsii cultivars include white 'Bridal Veil' and 'White Gloria,' pink 'Europa' and 'Peach Blossom,' brighter pink 'Rheinland,' mauve 'Hyacinth,' ruby-red 'Glow,' and crimson 'Fanal.' Outstanding during my visit was 'Fire,' more beet-red than flame, a color accentuated by nearby plantings of feverfew and *Artemisia* 'Silver Mound.'

Feverfew (*Chrysanthemum parthenium*) gets high marks for grace, versatility and continuous bloom through July and August. It is always the bridesmaid, never the bride, but in its supporting role it is used often and in quantity. *Artemisia* 'Silver Mound' is also valued for its ability to bring out the best in other plants. A favorite for late summer bloom is garlic chives, *Allium tuberosum*, bearing white doilies of small, fragrant stars on sturdy, 18-inch stems. But don't let this plant go to seed lest scallion turn rapscaillon, distributing its progeny all over the garden. *Chrysogonum virginianum*, a front-of-the-border plant tolerant of most conditions but best in moist soil and part shade, gets an accolade for remaining longest in bloom. Its yellow stars make a pleasing duo with the violet-blue cups of *Platycodon grandiflorus* 'Mariesii.'

I saw the McGourtys' garden at peak bloom. There seemed to be no gaps, but I soon discovered this was an illusion. Many flowers had come and gone (*Actaea rubra* displayed its red berries), others (the taller sedums and *Chrysanthemum X morifolium* cultivars in particular), were not yet open. Two weeks before it had been a different garden, and in two more weeks it would present yet another face.

One picture in pastels drew me back repeatedly during my July-into-August visit: a "pink for a girl, blue for a boy" combination of delicate colors. The pink clouds of *Filipendula rubra* were shoulder high, and at their feet grew the tripetalled *Tradescantia* 'J. C. Weguelin,' the two plants' disproportionate heights bridged by a neighboring planting of *Echinacea purpurea* in varying shades

of pink. Indoors a vase contained the dried heads of last year's *Echinacea*. Remembering this combination led me to transplant pale-blue *Pseudomuscari azureum* (*Hyacinthus azureus*) beneath my pink *Magnolia soulangiana* this spring.

At the other end of the same border, slender spires of *Cimicifuga racemosa* (needing no staking) reared above salmon-pink *Phlox* 'Sir John Falstaff.' Among them stood a statue of a little girl made of weathered gray stone, pot-bellied and winsome, one of several such features in the garden. Other garden accompaniments included an old, black iron pump and stone trough surrounded by annuals in containers. This week pansies, petunias and yellow *Calceolaria rugosa* bloomed inside it. An urn at the corner of some steps was stuffed tight with double *Gaillardia* 'Butterscotch Bronze' and blue bachelor's buttons. Containers also stood on the walls holding, among other things, ornamental cabbages and rhubarb chard with its ruby-red stems, both safely out of the reach of rabbits.

The new kitten, Shadow, made a living feature, at times curled up beneath the feverfew, at times batting at flowers with a tiny paw. The butterflies, following Shadow's lead, also darted about the garden, exhibiting a predilection for *Centaurea macrocephala*, purple cone-flower (*Echinacea purpurea*) and bee balm. *Monarda didyma* 'Croftway Pink' and 'Cambridge Scarlet' are the bee balms chosen for this garden.

Allium senescens is a topnotch onion, not as spectacular as the widely advertised *Allium giganteum*, but decidedly more reliable and versatile. It is a variable species and three forms are grown at "Hillside." One grows 18 inches high, possessing sturdy, tight-knit clumps of immaculate, daffodil-type leaves. Another is more compact, and *A. senescens* 'Glaucum' has grayer leaves in whorls close to the ground. All have mauve, drumstick flowers. Other onions appreciated here are



the tall and slender *A. sphaerocephalum* with its egg-shaped, reddish-purple heads, *A. schoenoprasum* (chives), yellow *A. flavum*, the similar pinkish-purple *A. pulchellum* (of which there is also a white form), and the native *A. tricoccum* with white flowers and leaves two inches across, unusually wide for an onion.

That there should be no jarring juxtaposition of color is a primary consideration to the McGourtys, but differences in the habits and textures of plants are also important. There is little similarity between the daintiness of *Rudbeckia laciniata*, the linsey-woolsey look of *Centaurea macrocephala* with its great brown-bracted, thistle-like heads, lanky

stems and large, rough leaves, and the neat dwarfness of one-foot *Coreopsis* 'Goldfink' except that they all have yellow flowers and bloom at about the same time. Each has its place. *Centaurea macrocephala* looks well with the deep-mauve spikes of *Stachys officinalis*. Behind the great, plate-like leaves of *Ligularia dentata* are the creamy, fluffy plumes of *Filipendula ulmaria* 'Flore Plena,' and in front of it the succulent leaves and as yet unopened flowers of *Sedum* 'Autumn Joy.'

This garden is a photographer's paradise. Dead-heading is done at least twice a week, there are no clashing backgrounds to be focused out, and rarely must a damaged leaf be removed or tucked out of sight.

Though a tidy garden, it is neither formal nor rigidly disciplined.

To a visitor it must seem that years of work and planning have brought the garden to its zenith. One might well ask, "What more can be done?" But Fred and Mary Ann are not resting on their laurels. Among that week's acquisitions were a particularly fine form of pink *Achillea* (admired in the garden of a friend, who promptly handed Fred a spade), and a taller, upright form of *Chrysogonum*.

The garden looks so effortless in August. True, summer tasks are not as strenuous as the planting and dividing, weeding, mulching and staking of May and June, or the raking and shredding of leaves in autumn, but there is still plenty of work to be done. Container plants must be watered often. Mary Ann spent a pre-dinner hour hand-picking Japanese beetles. When Fred's watchful eye noticed chewed *Liriope* leaves, out came the slug pellets. And a raccoon, crouching forlornly in a Hava-Hart trap on the lawn ("An object lesson to its friends," said Fred), was taken for an evening drive to a nearby park, the fourth released there that week.

The plants in the McGourtys' garden flower earlier in the south, but they still bloom in the same sequence, so the same combinations will work there. Some of these perennials may not prosper in warmer parts of the country, however. To determine which do best or won't grow at all in your area, consult *Perennials and Their Uses*, published by the Brooklyn Botanic Garden under Fred McGourty's editorship.* The book contains planting suggestions for many areas, lists of perennials for different purposes, gardens to visit, tips for the successful cultivation of perennials, information about propagating them, and much other useful information. 🌿

**Perennials and Their Uses*

Published by the Brooklyn Botanic Garden, Fred McGourty, Editor. 1000 Washington Avenue, Brooklyn, New York 11225. \$1.75.

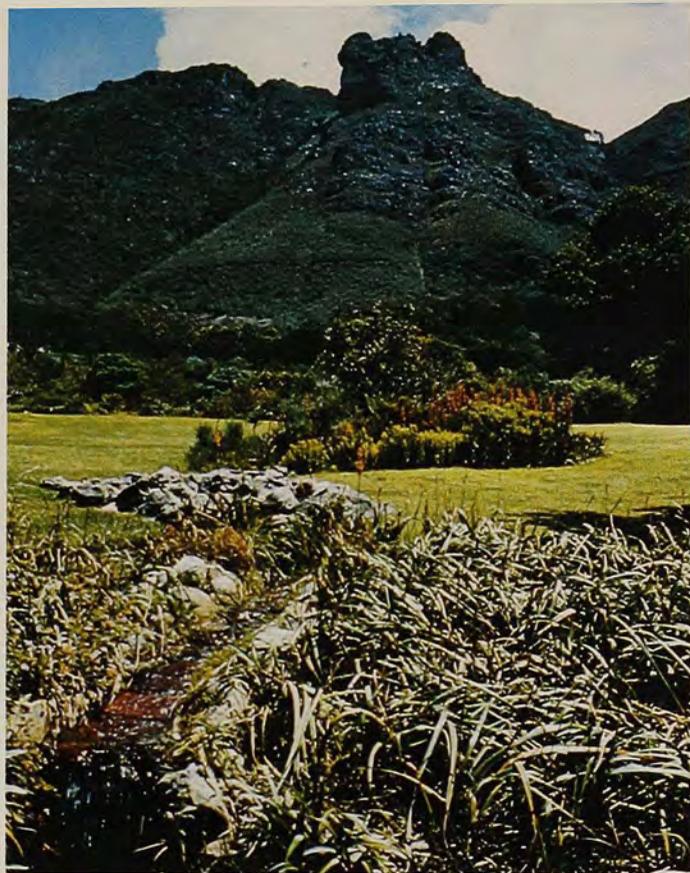
Kirstenbosch Botanic Garden



BELOW: There are over 50 species of *Watsonia* growing in the Republic. Most are spring flowering and grow in shades of pink, rose, orange and white.

ABOVE RIGHT: The peaks of Castle Rock loom against the horizon, providing a dramatic backdrop for the many flowers growing below.

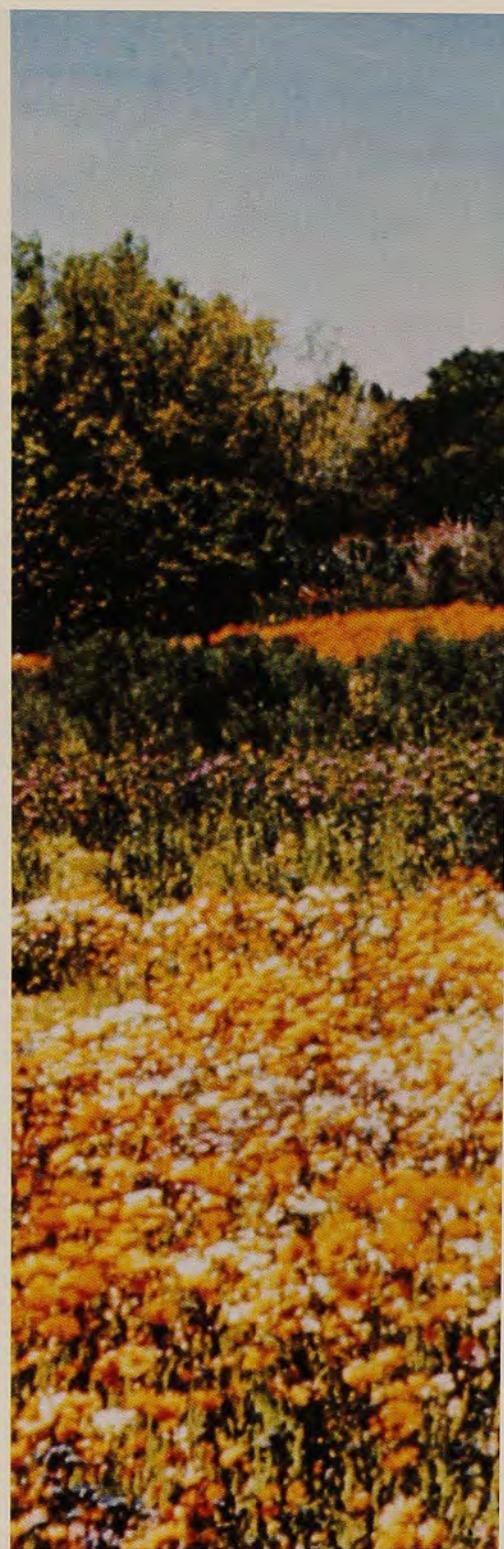
BELOW RIGHT: *Erica mammosa* is an erect shrub which grows to a height of three feet or more. There is a great variation in the colors of the flowers, which may be pink, red, white or green.



Members of the American Horticultural Society who are taking the Society's trip to South Africa this fall should look forward to seeing the masses of color produced by all of these South African wildflowers at this famous garden in the foothills.

Kirstenbosch, the main National Botanic Garden of South Africa, will be at its glorious best in September. The rainy season of June, July and August will have passed, and spring in all its glory will descend on this 1,300-acre tract situated at the base of South Africa's Table Mountain. Mass plantings of spring-flowering annuals (*Arctotis*, *Ursinia* and *Gazania*) will form brilliant patches of orange, gold and yellow, interspersed with the dazzling whites of the white rain daisy (*Dimorphotheca pluvialis*) and dainty, China-blue *Felicia*.

There are several National Botanic Gardens of South Africa,



but Kirstenbosch serves as main headquarters and is truly the most colorful in its mountain setting. There are approximately 18,000 species of plants in this country, 2,600 of which are native to the Cape Peninsula. It is the purpose at Kirstenbosch to grow as many of the 2,600 as will do well under the conditions there.

Proteas are probably the most spectacular of South Africa's indig-



enous flora. There are over 400 species in the country spread among 14 genera, none of which are found on any other continent. *Protea repens* has been selected as the national flower. Americans have been introduced to marvelous protea specimens brought to the states a few years ago at the International Botanical Congress in Baltimore by Dr. H. B. Rycroft, the director of this world famous garden.

The small succulents like *Dorotheanthus* will also burst forth into shimmering kaleidoscopic color with flowers of magenta, red, orange, yellow and pink. Stately *Watsonia*, in shades of pink, mauve and white, can never be observed under more colorful settings. And, of course, many of the proteas are September flowering, including the dainty and colorful 'Blushing Bride' (*Serruria florida*). 

OPPOSITE: *Gazania ringens*, often called wild marigold, produces a glorious show of color year after year and is very hardy.

ABOVE: October yields this colorful display at Kirstenbosch. Most of the flowers are members of the Compositae family.



LIGULARIA

by Mrs. Ralph Cannon

There are so few companions which make good company for large-leaf hostas that when they are found they should be appreciatively noted. Ligularias are one suitable garden accompaniment to hostas; the first plants that were sent to me from England a number of years ago have grown superbly in my garden. They like a moist soil with good drainage and are equally at home in full sun or dappled shade. Since ligularias have a fibrous root system, they appreciate a loose, porous soil which gives them freedom. They are not particular about the pH of the soil. If grown in full sun they might need some extra water during a dry season, but they do not have to be watered in the woods in dappled shade. If the plants wilt and require some extra water, sink a gallon can with fine holes punched in the bottom among the plants and fill the can with water. The slow seepage of the water will provide extra moisture for the large leaves.

Ligularias are herbaceous plants and belong to the Compositae order, one of the largest dicotyledonous families. Ligularia flowers are compound. Their most noticeable characteristic is the crowding of a number of small florets into a head or central disc that is surrounded by an involucre of bracts which has the effect of a single blossom. These plants are impressive perennials with large, glistening, leather-like leaves nearly orbicular in shape and sharply toothed, which may measure 12 to 20 inches across. The plants have a bold, imposing stature of three to four feet when in blossom. Their stiffly upright flowering stems carry the flowers in long heads.

There are two ligularia cultivars that grow well in our country's climate: *L. dentata* 'Golden Queen,' with broad, alternate green leaves and heads of rich, glowing golden-yellow florets, and 'Othello,' with purplish-

bronze leaves and heads of bright-orange flowers. When in full flower these cultivars are a rewarding and striking sight. Both bloom from July to September. This long period of bloom is of great value to a garden, but even without their bloom the plants' foliage still makes them decorative specimens. Neither cultivar requires any special winter protection.

Ligularias must be used at the back of a border, or if used with large-leaf hostas an adjacent planting is more telling than an even distribution. Two or three plants grouped behind or to the side of hostas make a handsome

treatment. Even when used as a single specimen they add gaiety and color to the scene.

Ligularias grow easily from seed. To collect their seed allow the blossoms to mature on the plant. When dry, the heads open to form downy balls of feathery, tufted seed. John Gerard, in his *Herball* of 1597, describes these seed heads as "downie blow-balls that are carried away with the wind." Before they dehisce, gather the heads and obtain the

good, plump seed. Each head will give only a few seed. I generally plant the seeds during the winter on frozen ground and cover them with a light layer of wood ashes. They will germinate in the spring, and after being allowed to grow a year before transplanting, they can be removed in small clumps and planted elsewhere.

These plants' worse pests are slugs and snails. If a layer of wood ashes is kept around the plants they will be protected; otherwise, use pellets of metaldehyde. Since growth is started early in the spring these precautions also should be started early.

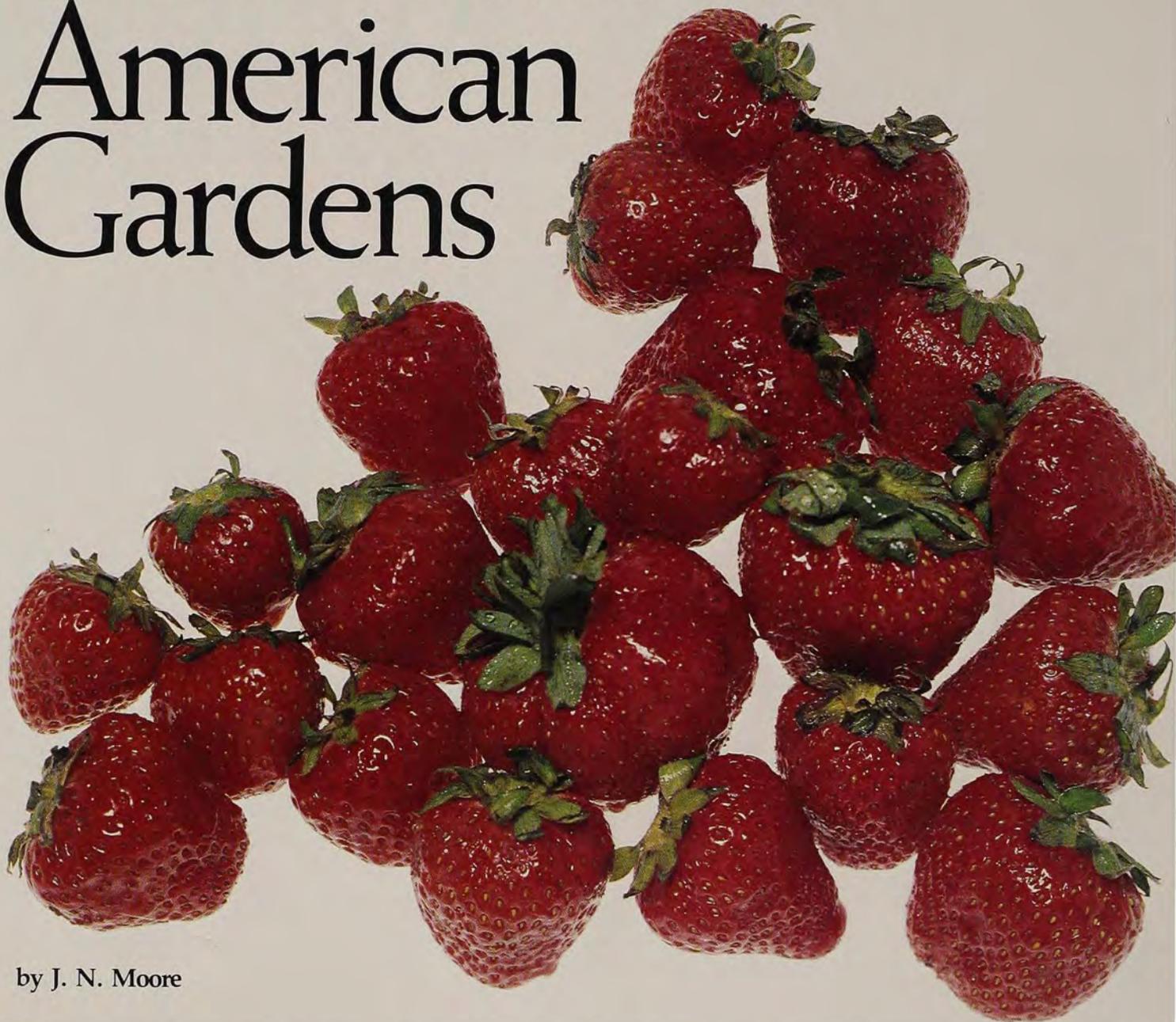
For ornamental purposes there is no bolder or more decorative plant than ligularia. Its beautiful foliage and form provides a glorious splash of color as a backdrop for many plants, especially large-leaf hostas.

*There are two
ligularia cultivars
that grow well in our
country's climate: L.
dentata 'Golden
Queen' and L.
dentata 'Othello.'*

Ligularia dentata 'Golden Queen'



Small Fruits for American Gardens



by J. N. Moore

Luscious strawberries, large plump blueberries, tasty blackberries — these and other small fruits can be grown easily in your own garden. Like millions of Americans, you can experience the pride and enjoyment of growing your own fruit and relish the delicious, nutritious rewards of your labor. All that is required is a small space, the

proper varieties and a little attention to cultural requirements.

Small fruits are ideally suited to garden culture. They require little space for significant yields of fruit. For example, a 25-foot row of strawberries may produce 25 quarts of berries, and a single blueberry bush can produce over 15 pints of fruit. In addition, small fruit plants are pe-

rennials and can remain productive for many years with proper care. While insect and disease pests do exist, such problems are fewer than with tree fruits and vegetables, and fewer controls are needed.

Home-grown small fruits are usually of better quality than fruits available in retail outlets. The edible quality of small fruits is closely tied

to freshness; fruits are at their maximum quality when harvested since they are highly perishable and begin to deteriorate in quality soon after harvest.

Small fruits are well suited to home processing. They can be frozen with no preparation (no blanching, no additives) with little or no loss in quality or nutritive value. They can also be easily processed into delicious jams and jellies. Thus the products obtained from a small fruit garden can be enjoyed all year.

Plants of many small fruit species may be utilized easily in the home landscape for both aesthetic beauty and practical fruit production. Shrub borders may be created with blueberries, blackberries, raspberries or currants. Single plants of blueberries in the landscape are attractive with their white, bell-shaped flowers in spring, their attractive clusters of blue fruit in summer and their red leaves in the fall. Strawberries, cranberries and lowbush blueberries also make nice-looking, fruit-producing ground covers, borders or accent plants.

Many of the small fruits may be container grown. Blueberries have a limited root system and may be grown in patio containers for several years. Strawberries may be successfully grown in almost any type of container, even window boxes for apartment fruit production. Two common methods of growing strawberries in a small space for both fruit production and landscape beauty are the "strawberry barrel" and the "strawberry pyramid." In the former, a wooden barrel is filled with soil and holes are bored in the sides. Strawberry plants are planted in the holes and the fruits and runners will later cover the barrel. A strawberry pyramid is made by forming several vertical tiers of decreasing circumference from wood siding or metal edging, filling them with soil and planting strawberries in each level. As the plants grow they cascade down the pyramid giving a living, green, fountain effect.

The most important decision a small fruit gardener makes is the choice of variety, for the future success or failure of his planting is dependent, in large measure, on the varieties planted. Small fruits are greatly influenced by such climatic factors as day length, summer and winter temperatures, light intensity, humidity, length of the growing season and rainfall. The performance of small fruit varieties is governed by an interaction of the genetics of the plant with the local environment. Relatively small differences in climate may greatly affect the plant's performance. For this reason, types that are outstanding in one region of the country may do very poorly in another region.

The most important decision a small fruit gardener makes is the choice of variety, for the future success or failure of his planting is dependent, in large measure, on the varieties planted.

Fortunately, plant breeders have developed varieties of most small fruits for all sections of the United States. New gardeners should consult experienced neighbors or their local agricultural extension agent for the proper variety to plant in their area. Do not assume that all small fruit varieties will perform according to nursery catalog descriptions. Such descriptions may accurately represent the variety in the region to which it is best adapted, but may not be accurate for all parts of the country. More small fruit home gardens have failed due to poor choice of varieties than from all other reasons combined.

No attempt has been made in this

article to discuss the cultural procedures for growing small fruits. An excellent article by Dr. D. K. Ourecky on small fruit culture appeared in Volume 56, No. 1 of the *American Horticulturist* (Late Winter Issue, 1977). The reader should refer to that article for cultural information.

Strawberries

The strawberry is probably the most widely grown of all small fruits. It is grown in every state in the United States and nearly every country of the world. Strawberries are also the most affected by the environment. Thus there are literally hundreds of varieties of strawberries with differing regional adaptations.

Within the past decade strawberry breeders have developed a number of new varieties which are superior to varieties of the past. Some of the outstanding varieties, their origins and areas of adaptation are shown in the table accompanying this article. In addition to these widely grown varieties, other varieties are available for specific conditions. For example, 'Badgerbelle,' 'Ft. Laramie,' 'Stoplight' and 'Cyclone' are best adapted to extremely cold winter regions.

Everbearing strawberry varieties are available which will produce some fruit throughout the summer and fall. These varieties often produce poor beds and may not produce as high a yield in the spring as the June-bearing varieties. Some of the better everbearers are 'Ft. Laramie,' 'Geneva,' 'Ozark Beauty' and 'Quinault.'

Blueberries

Blueberries are grown commercially in only a few states, but they can be grown in home gardens in most areas of the country provided an adapted variety is used, the soil is sufficiently acid and adequate soil moisture is maintained. There are three major types of blueberries: the lowbush, which grows wild over much of New England; the highbush, which is the type commercially grown in New Jersey, Michi-

gan, North Carolina and Washington; and the rabbiteye, which is adapted to the climate of the deep South. There are no named varieties of lowbush, but many good varieties of highbush and rabbiteye have been developed by plant breeders. Some of the outstanding varieties are listed in the table.

The highbush varieties shown in the table are generally adapted to most areas of the Northeast, Midwest, Northwest, and areas southward to north Arkansas. Varieties developed in North Carolina, 'Harrison,' 'Wolcott' and 'Croatan,' are best adapted to the southern Atlantic coast area. Two very cold-hardy varieties, 'Northland' and 'Patriot,'

developed in Michigan and Maine respectively, are suggested for areas with extreme winter temperatures.

The rabbiteye varieties are recommended for most areas of the South where winter temperatures do not exceed 0°F. They do require some winter chilling to break rest period and will not grow south of northern Florida. Rabbiteye varieties are not self-fruitful, and at least two varieties must be planted to ensure cross-pollination.

Recently the Florida Agricultural Experiment Station released six low-chilling blueberry varieties. 'Sharpblue' 'Flordablue' and 'Avonblue' are highbush types adapted to northcentral Florida while

'Bluegem,' 'Aliceblue' and 'Beckyblue' are rabbiteye varieties adapted as far south as southcentral Florida. These varieties extend the southern limits of blueberry culture. Two ornamental varieties of blueberry are available: 'Ornablue' and 'Tophat.' 'Ornablue' is medium dwarf and 'Tophat' is very dwarf. While primarily intended for ornamental usage, the fruits are edible, although smaller in size than standard varieties.

Raspberries

Raspberries should be considered for home gardens since it is difficult to buy fresh raspberries in many parts of the country. While most people are familiar with red-fruited

Some Outstanding Small Fruit Varieties of North America

Variety	Developing Agency ^z	Year Introduced	Region of Best Adaptation in U.S. ^y
Strawberry			
Aiko	CA-AES	1975	California, Florida (?)
Apollo	NC-AES	1970	Southern Atlantic Coast West to Arkansas
Atlas	NC-AES	1970	Southern Atlantic Coast West to Arkansas
Benton	OR-USDA	1975	Pacific Northwest
Cardinal	AR-AES	1974	Upper and Mid-South
Delite	IL-USDA	1974	Midwest
Florida Belle	FL-AES	1975	Florida, Gulf Coast
Guardian	MD-USDA	1969	Northeast, Midwest, Mid-Atlantic
Heidi	Private	1972	California
Holiday	NY-AES	1972	Northeast
Olympus	WA-AES	1973	Pacific Northwest
Ranier	WA-AES	1972	Pacific Northwest
Raritan	NJ-AES	1968	Northeast, Mid-Atlantic
Redchief	MD-USDA	1968	Northeast, Midwest, Mid-Atlantic
Shuksan	WA-AES	1970	Pacific Northwest
Tangi	LA-AES	1973	Gulf Coast
Tioga	CA-AES	1964	California, Florida
Totem	Can. Dept. Agri.	1971	Pacific Northwest
Tufts	CA-AES	1972	California, Florida
Blueberry (Highbush)			
Bluecrop	NJ-USDA	1952	Northeast, Midwest, Upper South, Northwest
Blueray	NJ-USDA	1955	Northeast, Midwest, Upper South, Northwest
Bluetta	NJ-USDA	1968	Northeast, Midwest
Collins	NJ-USDA	1959	Northeast, Midwest, Northwest, Upper South
Coville	NJ-USDA	1949	Northeast, Midwest, Northwest, Upper South
Earliblue	NJ-USDA	1952	Northeast, Midwest, Northwest, Upper South
Harrison	NC-USDA	1974	North Carolina
Jersey	USDA	1928	Northeast, Midwest, Northwest, Upper South
Wolcott	NC-USDA	1950	North Carolina

Variety	Developing Agency ^z	Year Introduced	Region of Best Adaptation in U.S. ^y
Blueberry (Rabbiteye)			
Climax	GA-USDA	1974	South, West to Texas
Southland	GA-USDA	1969	South, West to Texas
Tifblue	GA-USDA	1955	South, West to Texas
Woodard	GA-USDA	1960	South, West to Texas
Red Raspberry			
Fallred	NH-AES	1964	Northeast, Midwest
Haida	Can. Dept. Agri.	1973	Pacific Northwest
Heritage	NY-AES	1969	Northeast, Midwest, Mideast
Latham	MN-AES	1914	Northeast, Midwest, Mideast
Meeker	WA-AES	1967	Pacific Northwest
Milton	NY-AES	1942	Northeast, Mideast
Newburgh	NY-AES	1929	Northeast, Midwest, Mideast
Taylor	NY-AES	1935	Northeast, Mideast
Willamette	OR-USDA	1942	Pacific Northwest
Black Raspberry			
Allen	NY-AES	1957	Northeast
Black Hawk	IA-AES	1955	Midwest
Bristol	NY-AES	1934	Northeast
Dundee	NY-AES	1927	Northeast
Jewel	NY-AES	1973	Northeast
Munger	Private	1890	Pacific Northwest
Purple Raspberry			
Amethyst	IA-AES	1968	Midwest
Brandywine	NY-AES	1976	Northeast, Midwest
Clyde	NY-AES	1961	Northeast
Yellow Raspberry			
Amber	NY-AES	1950	Northeast
Fallgold	NH-AES	1967	Northeast
Blackberry (Erect)			
Cherokee	AR-AES	1974	South, Midwest
Cheyenne	AR-AES	1976	South, Midwest
Comanche	AR-AES	1974	South
Darrow	NY-AES	1958	Northeast, Mideast
Blackberry (Trailing)			
Aurora	OR-USDA	1961	Pacific Northwest
Black Satin	IL-USDA	1974	Mideast, Upper South
Boysen	Private	1935	Mideast, South
Dirksen Thornless	IL-USDA	1974	Midwest, Mideast, Upper South
Marion	OR-USDA	1956	Pacific Northwest
Olallie	OR-USDA	1950	Pacific Northwest
Oregon Evergreen	?	?	Pacific Northwest

^z AES = Agricultural Experiment Station

^y Does not necessarily preclude successful culture in other regions.

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raspberries, varieties are available which produce black, purple or yellow fruits. The table lists some of the better garden varieties of raspberries.

The red-fruited varieties, 'Heritage,' 'Latham,' 'Milton,' 'Newburgh' and 'Taylor,' are well suited to most of the eastern United States. For extremely cold areas in the Northeast and Midwest, the varieties 'Boyne,' 'Chief,' 'Fallred,' 'Latham' and 'Liberty' should be considered. In the Pacific Northwest the best adapted varieties are 'Canby,' 'Fairview,' 'Haida,' 'Meeker' and 'Willamette.'

Black raspberries are not fully hardy to very low temperatures. 'Allen,' 'Bristol,' 'Dundee' and 'Jewel' do well in much of New England. For colder areas of the Midwest, 'Black Hawk' should be tried. In the Pacific Northwest, 'Munger' and 'Plum Farmer' seem well adapted.

Purple raspberries have been mainly grown in the eastern United States. However, the varieties 'Amethyst' and 'Brandywine' are proving suitable for many areas of the Midwest.

Raspberries are cool-season fruits and are best adapted to areas in which summer temperatures are not extreme. The southern range of adaptability has been extended by the introduction of the red-fruited varieties 'Southland' and 'Dormanred.'

A few red raspberry types are available that produce both a summer and a fall fruit crop. These make good home garden additions since they extend the season of fresh fruit. One of the most widely adapted fall-fruited varieties is 'Heritage.' Others are 'Durham,' 'Fallred,' 'Indian Summer,' 'September' and 'Southland.'

Blackberries and Dewberries

There are two types of blackberries according to growth habit: the erect type, in which the canes are self-supporting, and the training blackberries (so-called "dewberries"), which require support for the

canes. Erect varieties produce suckers from the roots and can be propagated with root cuttings. Trailing types are usually non-suckering but produce canes from an underground crown. One disadvantage of erect, suckering varieties in a garden situation is their tendency to spread. The trailing types can be contained in a given area much easier.

The best variety of erect blackberry for the northern part of the United States is the 'Darrow.' It is hardy and produces good crops of large, good-quality fruit. 'Hedrick' and 'Bailey' are also adapted to northern areas. For much of the South and lower Midwest 'Cherokee,' 'Cheyenne' and 'Comanche' are well adapted. They are productive, large-fruited and of good quality for fresh use or processing. In areas where winter temperatures do not fall below 0°F, the Texas varieties, 'Brazos,' 'Brisson,' 'Roseborough' and 'Womack,' should be tried.

Do not assume that all small fruit varieties will perform according to nursery catalog descriptions.

Most varieties of trailing blackberries are not hardy enough to be grown in the colder regions of the country without winter protection for the canes and are best adapted to the West Coast and South. Of the thornless trailing varieties, 'Dirksen Thornless' is proving to be the most hardy and may be grown successfully in some areas of the Midwest.

There is presently much interest in the thornless varieties of blackberries. Recently the USDA developed a series of thornless trailing blackberries that are superior in regions to which they are adapted. They are 'Dirksen Thornless,' 'Black Satin,' 'Thornfree' and 'Smooth-

stem.' They are very vigorous, prolific and produce large berries. However, with the exception of 'Dirksen Thornless,' they lack winter hardiness for northern areas. Other thornless varieties are 'Thornless Boysen' and 'Thornless Young,' but they are less productive than their thorny counterparts. All thornless blackberries have trailing canes and require support.

Several blackberry varieties have been developed for specific climates and have rather narrow limits of adaptation. For the lower South, the trailing varieties 'Early June,' 'Gem,' 'Flint' and 'Georgia Thornless' are adapted. In northern Florida, two low-chilling varieties, 'Flordagrind' and 'Oklawaha,' are available to extend the southern limit of blackberry production.

Currants and Gooseberries

These are good garden fruits since they are easy to grow and hardy even for colder regions. They are, however, prohibited by law in certain states because they are alternate hosts for white pine blister rust. Currants make excellent jelly and juice and are very high in vitamin content. Gooseberries are used for pies and jellies.

Some of the better varieties of currant are 'Red Lake,' 'Stephens #9' and 'Wilder.' Recommended gooseberry varieties are 'Chautauqua,' 'Fredonia' and 'Poorman.'

Elderberries

Elderberries occur in the wild in many areas of North America, and considerable fruit is harvested from wild plants for pies, jelly and wine. However, much improved varieties have been developed by plant breeders. Some of the improved varieties are 'Adams #1,' 'Adams #2,' 'Johns,' 'Kent,' 'Nova,' 'Scotia' and 'York.' Since elderberries are not very self-fruitful, it is recommended that two or more varieties be planted for cross-pollination. 🌿

Sources of plants of varieties mentioned in this article can be obtained from your local agricultural extension service or agricultural experiment station.

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by Tom Stevenson

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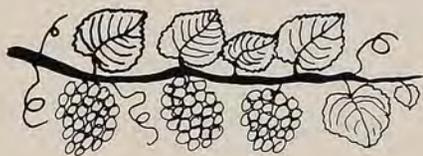
Published by the American Camellia Society, David L. Feathers, Editor. 476 pages. Beautifully illustrated. \$12.50. Available from the American Camellia Society, P.O. Box 1217, Fort Valley, GA 31030.

David Feathers and the other writers who contributed to this book are internationally known for their knowledge of the camellia. The book, the editors tell us, "is intended to reflect the knowledge and history of the camellia and its culture accrued over a period of the last 40 years or so."

In 13 chapters the authors discuss the following aspects of the camellia: history, origin and environment, basic culture, flower types, acquisition of plants, flower and plant usage, propagation, species and camellia relatives, diseases and pests, container and greenhouse culture, hybridizing and genetics, research, experimentation and mutation.

The appendix includes a glossary of terms, a list of camellia societies in the United States and overseas, a list of camellia nurseries in the United States and a selected list of articles written about camellias.

The 24 pages of color include more than 55 varieties of camellias, flower forms and flower arrangements.



THE GARDEN, AN ILLUSTRATED HISTORY

Julia S. Berrall

Published by Penguin Books, New York, NY. 388 pages. \$11.95 paperback.

Large or small, grandiose or intimate, gardens have always mirrored the cultural achievements of their time, believes Julia Berrall, author of this new Penguin publication and frequent lecturer on the subject of gardens of the past, flowers through the centuries and flower and fruit symbolism in Christian art.

In this book, filled with 203 illustrations, many of which are in color, Berrall traces the history of the garden. She discusses ancient Egyptian attitudes toward

garden design as well as the Oriental's garden philosophy. Her history takes the reader up to the present day. Of special interest is her discussion of George Washington's horticultural knowledge and activities.



MAGNOLIAS

Neil G. Treseder

Published by Merrimack Book Service, Salem, NH. 243 pages. Well illustrated. \$59.95

Treseder's book is the first comprehensive work written about magnolias since J. G. Millis's *Magnolias*, published in 1927. This new publication includes details about all Asian and American temperate zone species. The majority of magnolia's numerous hybrids and crosses also have been recorded.

The book also includes a revised survey of the genus *Magnolia*, together with *Manglietia* and *Michelia* by the late James Edward Dandy, former keeper of botany at the British Museum of Natural History. Some interesting notes on magnolia cytology have been contributed by Dr. John Wilkinson of the University of Exeter.

The many line drawings are by Marjorie Blamey; nine of the striking color plates are taken from her paintings.

Treseder, a fourth-generation member of a well-known family of Cornish nurserymen, spent 10 years gathering information for the book. He studied magnolias in several Cornish gardens which contained many of the original introductions from such collectors as Forrest and Wilson. He also visited magnolia collections in other parts of the British Isles, in America and in the Far East to complete his research.

THE ENCYCLOPEDIA BOTANICA—THE DEFINITIVE GUIDE TO INDOOR BLOSSOMING AND FOLIAGE PLANTS

Dennis A. Brown

The Dial Press, New York, NY. 304 pages. Well illustrated. \$30.00.

Until his death, Dennis Brown was Commissioner of Horticulture and Forestry for the New York City Parks Department. Using the knowledge he

gained in this capacity, as well as previous expertise derived from his years as Director of Horticulture for the New York Botanical Garden, Brown wrote this comprehensive text on indoor gardening.

His purpose, he said, was to "endeavor to present clean solutions to the problems of growing plants in the home. I hope this book will discredit the notion that a green thumb is a mysterious gift possessed by a lucky few."

The encyclopedia contains chapters on basic botany, culture, seasonal care, propagation, pests and diseases, terrariums and hanging baskets, artificial lighting and hydroponics, herbs and other culinary plants, bulbs, corms and tubers, cacti and succulents, bromeliads, ferns and orchids—in short, almost everything one needs to know to grow plants indoors. Brown also includes details about 300 kinds of plants with attractive flowers, 200 plants with attractive foliage and numerous plants with attractive fruit.



FLOWERING PLANTS OF THE WORLD

V. H. Heywood

Consultant Editor

Published by Mayflower Books, New York, NY. 334 pages. \$17.95

The flowering plants, known scientifically as the class Angiosperm, are the dominant group of vascular plants on earth today. They arose some 120 million years ago or more, and about 80 to 90 million years ago they had become the characteristic plants dominating most parts of the world.

There are at least 250,000 species of flowering plants grouped into 250 to 350 families. They are our main sources of food crops, timber, fibers, vegetable oils, gums, herbs, spices, flavorings, drugs, stimulants and narcotics. They also adorn our parks, gardens, streets and other public places the world over as trees, shrubs and flowers.

A new book, *Flowering Plants of the World*, with V. H. Heywood as consultant editor, describes and illustrates in full color the great majority of these plant families.

The main text was written by a panel of internationally recognized authorities.

Vernon Heywood, the consultant editor, is currently dean of the faculty of science and has been professor of botany and head of the botany department at Reading University since 1968. He is also director of the Plant Sciences Botanical Garden.

The opening section of the book is an informative introduction to the forms, structure, ecology, uses and classification of flowering plants. More than 300 families of flowering plants are then described, each with a concise and readable account of the distribution, diagnostic features, classification and economic uses of its members.

Every family member also has a specially designed quick-reference panel giving details of the number of species and genera, their general distribution and economic uses, while the distribution is also presented visually on a map of extra clarity.

The specially commissioned color plates are not only scientifically accurate but also constitute a beautiful and unique collection of paintings, according to the publisher.

The book provides a wealth of information which will be invaluable to the botanist and fascinating for the general

reader. Says the publisher, "Perhaps the book will help focus attention on some of the problems faced by flowering plants throughout the world and stimulate a greater appreciation of their role in our future."



AN ILLUSTRATED HISTORY OF GARDENING

Anthony Huxley
Published by Paddington Press,
New York, NY
352 pages, \$24.95

The growing enthusiasm for plants and planting, outdoors and indoors, is not a passing fancy but is well rooted in an age-old passion for gardening, believes Anthony Huxley, one of the great British writers and lecturers on horticulture.

Huxley is the author of an excellent new book, *An Illustrated History of Gardening*, in which he details the different kinds of gardens that have been created since man first cultivated plants more than 5,000 years ago. Persian "parads,"

Mexican labyrinths, medieval love gardens, apothecary gardens, the four square Tudor garden, Turkish garden floats, Oriental water gardens, rock gardens, herb gardens and terrariums are just a few of the different variations that were and still are cultivated. Huxley discusses them all as he traces man's development as a grower of plants.

His story begins with the men who began to live in settled communities rather than temporary shelters fashioned to accommodate their nomadic hunter's existence, and it continues through our recent history, when the garden, as we know it, was developed. Huxley believes a true garden can be said to exist when the shade-casting tree in an enclosed yard was deliberately placed, and was accompanied by plants deliberately grown for food, progenitors of our vegetable crops.

But what is most enjoyable about Huxley's book is that his look into the past makes us see the present in a new way. It is the forgotten past which fascinates. "The student of ways and means of gardening," says Huxley, "cannot fail to be amazed by how little is really new and how much is astonishingly old in principle."



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Magnolia 'Caerhays Belle'



Photo by author

by James Gossler

Its growth as a youngster was perhaps the fastest of any magnolia in the test phase.

A comparatively new and exciting magnolia hybrid is being tested in western Oregon. This hybrid, 'Caerhays Belle,' is the result of a mating between the spectacular *M. sargentiana* var. *robusta* and the widely popular *M. sprengeri* 'Diva.' These trees were first successfully paired in 1951 at the J. C. Williams garden at Caerhays Castle in Cornwall, England. The actual feat of creating the new plant was accomplished by Charles Michael, head gardener, and the tree first flowered in 1965.

The flowers of 'Caerhays Belle' are huge, heavenly scented and perfectly textured. Tepals are broad and salmon-pink. The 12 tepals are spoon-shaped and are about 12 inches across on the average. The tree flowers profusely and regularly.

In Oregon the tree started as a scion grafted in 1972. The plant grafted easily and grew very vigorously from the first and then flowered in 1977 on a well-shaped, eight-foot tree. Its growth as a youngster was perhaps the fastest of any magnolia in the test phase; it was then a rare treat to see such a tree flower in a brief five years from graft.

The parents of 'Caerhays Belle' possess exceptional attributes. *M. sargentiana* var. *robusta* presents huge 12-inch, shell-pink flowers in moderate numbers. It has a decided weakness to extreme cold, however, and is sometimes killed when temperatures drop to 0° F. *M. sprengeri* 'Diva' produces a profusion of rich, rosy-pink flowers which average eight to 10 inches across. It possesses an admirable cold-hardiness as evidenced by the successful growth of trees in Philadelphia, New York and Michigan.

The obvious question arises, can 'Caerhays Belle' match the magnificent flowers of *M. sargentiana* var. *robusta* and inherit the cold-hardiness of the more sturdy 'Diva'? Most observers agree that the flowers of this fine union are indeed first rate and are equal to *M. sargentiana* var. *robusta*. Flower numbers exceed this parent. The still unanswered question is whether it has the cold-hardiness of parent 'Diva.'

Neil Treseder, in his just-published definitive book entitled *Magnolias*, quotes Julian Williams, the owner of Caerhays Castle: "From the hybridist's point of view *M.*

sprengeri 'Diva' makes a good parent—we have several [offspring] here—"Caerhays Belle' being the best ('Diva' X *M. sargentiana* var. *robusta*). The flowers of this hybrid are good and the seedlings began to flower early in their lives."

Experiences with grafted magnolias both at the Strybing Arboretum in San Francisco and in western Oregon dispel the old bugaboo of niggardly-slow flowering in English gardens. Frequently, seed-produced trees in England of *M. campbellii*, *M. sargentiana* var. *robusta*, and *M. sprengeri* 'Diva' may be 15 to 25 years old before flowering. It is not surprising to see grafted plants on America's West Coast flower in five to 10 years. The grafted plant of 'Caerhays Belle' blooming in five years as a strappingly vigorous youngster is, however, a heartening experience. To some it would seem a revelation.

Many growers and writers on the subject of magnolias call attention to the tree's attractive and ornamental seed cones. The cones of 'Caerhays Belle' clearly show the beauty of these brilliant red seeds being expelled from a perfect cone. These fleshy, large seeds pop out of their compartments on fragile filaments which keep them briefly attached awaiting collection by a greedy squirrel or bird. These cones are perhaps the most ornamental of any magnolia and are truly a natural work of art.

Asiatic magnolias prefer a well-drained, moderately rich soil; a woodland setting is ideal. They will bloom and prosper best in a site without excessive competition for light and root space. They appreciate liberal mulching and frequent irrigation during the summer dry season. Any disturbance of their fleshy surface roots is resented and no cultivation of them is necessary. Good, well-rotted compost plus old manure is preferable to commercial inorganic fertilizers. Protection from wind is advisable, especially for large, fragile flowers.

Short-range observation of this plant suggests that it will be a first-rate addition to American gardens. And, although the parent plants are nearly perfect, 'Caerhays Belle' may very well surpass its gifted heritage. 

The Gossler Farms Nursery, 1200 Weaver Road, Springfield, Oregon 97477, is presently the only source for this magnolia in America. If you are interested in obtaining this variety for your garden, have patience—at present, the nursery's production of 'Caerhays Belle' is sold out over a year in advance.

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Flora's Fauna

Continued from page 3

as rabbit foot clover, harebell, lion's foot, lion's tooth, foxglove, foxtail grass, tiger lily, beaver poison, leopardbane, deer grass, staghorn sumac, moose wood, elephant ears, squirrel corn, squirrel tail grass and monkey flower.

Birds have given their identities to a variety of flowers in curious and amusing ways. Canary bird flower, whip-poor-will's shoes (lady's slipper), cockspur, swanweed, dove tree, cuckoo button, pigeon berry, larkspur, robin's plantain, wake-robin, partridge vine, hawkweed and crowfoot are plants with pleasant avian associations. There is even a wildflower known as bird's nest, the seed head of which is reminiscent of a well-built nest.

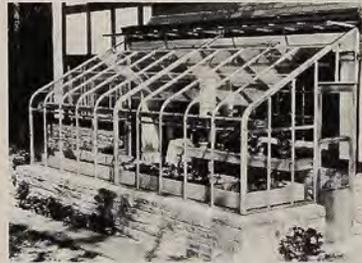
Insects gave rise to the common names of butterfly weed, butterfly bush, spider plant, spiderwort, fleabane, fleawort, bugbane, lousewort, bee balm, horsefly weed and catchfly. Fish engendered the titles of pickerel weed, shadbush, cod-head, trout lily and basswood. Reptiles, especially snakes and amphibians, were linked to special flowers. There are snakeberry, snakeweed, snake flower, snake grass, snake head and snake mouth as well as rattlesnake plantain, rattlesnake root and rattlesnake weed. The adder's tongue and adder's mouth have come down to us as names inspired by vipers. Toadflax, turtlehead, alligator wood and lizard's tail also may be mentioned in this category. And the fictitious dragon must not be forgotten, for it gave rise to the familiar snapdragon and dragonhead, to say nothing of the false dragonhead, our garden *Physostegia*.

Nature lovers and contemporary gardeners take fauna-inspired floral names for granted. But in deference to the sharp-witted ingenuity of our forebears, we should try to understand their cunning and often mischievous linkage of plants to animals.



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Contributors

Mrs. Ralph Cannon holds a doctorate from the University of Chicago and is now retired as Emeritus Professor from that institution. She owns 26 acres of Illinois woodland where she has experimented with many gardening projects since 1939. She has contributed articles to *The American Daffodil Journal*, *The American Rock Garden Society Bulletin*, *The Hosta Bulletin* and *American Horticulturist*.

Gail Gibson is the author of gardening articles which have appeared in *Plants Alive* and *Home Garden*. She is a member of The American Horticultural Society and The Pennsylvania Horticultural Society.

James Gossler, a graduate of Oregon State University, has been a nursery grower for 15 years, specializing in *Magnolia*, *Stewartia*, *Davidia*, specialty maples and *Styrax*. He has contributed articles to *Sunset Magazine* and the *American Magnolia Society Newsletter* and has served as a consultant to *Sunset Western Garden Book*.

Pam Harper received her horticultural training in England. While in England, she owned a specialist nursery and wrote *The Story of a Garden*, published in 1974. She has also written articles for *Flower and Garden*, *Horticulture*, *Organic Gardening*, *Plants and Gardens*, *Pacific Horticulture* and *American Horticulturist*. She is the owner of the Harper Horticultural Slide Library, which contains over 17,000 slides covering a wide variety of horticultural subjects.

Charles A. Lewis has a master's degree in Horticulture from Cornell University. He has been a plant breeder and garden center operator and is currently administrator of the Collections Program of The Morton

Arboretum in Lisle, Illinois. Excerpts from his B. Y. Morrison address have also been printed in the *American Institute of Architects Journal* and will soon appear in *Psychology Today*.



J. N. Moore is a professor in the Department of Horticulture at the University of Arkansas. He received his doctorate in Horticultural Plant Breeding from Rutgers University and has been the recipient of three national awards for research from the American Society for Horticultural Science. Dr. Moore is currently teaching a course at the University of Arkansas on Small Fruit Culture.

Vivian Munday is an Assistant Professor of Horticulture at the University of Georgia. Her main interest is in outdoor plants, especially daylilies. She is active in the International Plant Propagators Society and is also Editor of the *Southern Region Proceedings*. **Beryl Munday** is an avid amateur gardener whose primary horticultural interests are daylilies and African violets.

Elizabeth Pullar holds a landscape architecture degree from the University of Massachusetts. She has written gardening articles for the *New York Times*, *Christian Science Monitor*, *Hartford Courant* and *Springfield Republican*, as well as *House & Garden*, *American Home*, *Horticulture*, *New York Botanical Garden Bulletin* and *American Horticulturist*. She has traveled widely around the world studying foreign gardens and has written articles on the gardens of England, France and Japan. For several years she was garden editor of the *Connecticut Circle*.

Robert L. Staton has a degree in Ornamental Horticulture from Texas A&M University. He is currently Horticulturist-Grounds Supervisor for Rice University. He is an accredited rose judge of the American Rose Society and has grown over 1,000 rose plants in the last 20 years.

Tom Stevenson is a nationally known garden writer. He writes a syndicated gardening column which appears in 400 newspapers across the country and is Garden Editor of the *Washington Post*. He was honored last year as the recipient of the Garden Writing Citation presented by the American Horticultural Society. Mr. Stevenson has also served as the official White House garden consultant for every President since Kennedy. For the past 10 years, he has written the gardening portion of the *Encyclopedia Britannica Book of the Year*.

The Editorial Staff of *American Horticulturist* welcomes your questions and comments about articles which appear in this issue. Please send letters to The Editor, *American Horticulturist*, The American Horticultural Society, Mount Vernon, Virginia 22121. 

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MR. AND MRS. MATHEWS WITH THEIR 1974 MODEL 'ACCELERATOR' COMPOST BIN

Mr. and Mrs. Mathews, of Rosemont, New Jersey, are keen organic gardeners. They cultivate a vegetable garden, avoid chemical pesticides and use a Rotocrop compost bin to help keep their soil in peak condition for incredibly high yields.

Mr. Mathews bought the bin as a Christmas present for his wife after seeing a mail-order advertisement, and they use it all the time. "We dump everything in—except bottles and tin cans", says Mr. Mathews. "corn stalks, potato vines, spent lima beans, banana peels, grapefruit skins and coffee grounds. We don't want the garbage man to take such good things away."

And what a harvest of good food they enjoy—they are completely self-sufficient for vegetables! The produce from their garden includes 317 pints of frozen corn, 55 jars of tomato juice, 36 peach baskets of lima beans, 55 baskets of potatoes, plus bushels and bushels of cauliflower, blueberries, strawberries, carrots, peas, celery, onions and other flavorful food crops. They use their compost bin continuously, winter and summer, mixing finished compost into the soil.

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Person/Plant Viewpoint

Continued from page 5

ciplines who helped to explore the role of vegetation in human well-being.

Research revealed a number of beneficial side-effects of "ghetto gardening," foremost among them the way in which this pastime helped residents develop self-esteem. A plant is a living entity, its future dependent on the gardener's ability to provide conditions for growth. Each day as he tends his garden the gardener observes the growth of his plants and sees in his efforts a measure of his success in planting, watering and fertilizing. He anticipates and watches the slow but steady progress from seedling to young plant to full maturity and flowering. New leaves, stems and flowers are his reward. He identifies with his garden and builds a personal relationship with it. The garden becomes an extension of himself, a highly visible representation of his individuality. When his garden blooms he has brilliant evidence of his success.

Plants also communicate messages concerning life qualities to those who tend them. They display rhythms that are different from those of the man-built environment. Their growth is steady and progressive, not erratic and bizarre. The gardener sees a continuous, predictable flow of change from seedling to mature plant. He sees that change need not be disruptive but can be part of a dynamic stability. How different is this phenomenon from our technological society where the flow of life is constricted by schedule and regulation and must change rapidly to accommodate fads and other distractions.

Plants take away some of life's anxiety and tension by showing us that life is made up of long, enduring patterns. It takes time for a cutting to grow roots, for a seed to germinate, for a leaf to open. Plants respond visibly to the sun in its daily course and signal the change of seasons.

These rhythms in plants are biologically set in their genes by the same forces that set human biological clocks. An oak tree has looked like an oak tree for thousands of years. There is a comfort in knowing that a rose is indeed a rose at all times and in all places.

Though the settings of these gardens are in low-income areas, I do not mean to imply that only those who live in the ghetto can benefit from gardening. It is, rather, that the smallest measure of personal gain stands out more clearly in settings of social impoverishment. The fragile beauty of flowers and the blooming of self-esteem become more obvious when set against the stark background of human despair.

Rachel Kaplan surveyed over 4,000 members of the American Horticultural Society seeking to discover the kinds of benefits and satisfactions they found in gardening. Over 60% of the Society's members listed "peacefulness and tranquility" as the most important kind of satisfaction they gained from gardening. The answer of this more affluent group underscores the psychological importance of gardening. It is our humanity, not our economic or social status, that prompts us to enjoy it.

The beneficial qualities of plants and gardening are also being used to heal and rehabilitate individuals in mental hospitals, physical rehabilitation centers, drug centers, prisons and geriatric centers. Called Horticultural Therapy, this program brings together individuals specially trained in the skills of therapeutic horticulture with those needing personal help.

From a person/plant viewpoint the garden is indeed a healing environment. In cities across the country this healing approach is demonstrating its effectiveness. The gardens in areas like South Bronx, Brooklyn, Detroit and Chicago are helping to heal some of the ills of our urban environment, though initially each program's goal was only to produce food and improve nutri-

tion. How much more effectively might gardening bestow its human benefits if we understood the personal intricacies of human responses to plants? Clearly this is a call to the behavioral disciplines to study this phenomenon. It is also a call to architects and planners, the designers of the places in which we live, work and play, to use this technique for its full effectiveness, not only to *relieve* but also to *prevent* urban stress.

The healing quality of urban gardens, urban vegetation, plants in buildings and on windowsills is real. In some way they fulfill needs not met by the brick, steel and glass of our technological age. How long will it be before gardens are seen as more than horticultural endeavors? How long will it be until we fully recognize the virtues of vegetation for easing stress brought on by biological man coming to grips with technological man? How long will it be before planners and architects learn to skillfully use plants to satisfy subtle human needs and thereby enhance the quality of urban life?

We have emancipated ourselves from total dependence on the natural environment. But, as Jay Appleton, author of *The Experience of Landscape* suggests, we all "long to get back, when the opportunity arises, to that proper environment to which our inborn behavioral mechanisms are still tuned, and in it to live and move and have our being."

That proper environment is a healing environment. It is a place where ancient links between person and plant are reestablished and we find fulfillment. That environment exists today in the real world and is available if we but learn to see it. 

This article is excerpted from the 1978 B.Y. Morrison Memorial Lecture delivered by Mr. Lewis to the American Institute of Planners in New Orleans. The B.Y. Morrison Memorial Lectureship was established in 1967 by the Agricultural Research Service to recognize distinguished accomplishments in the environmental sciences and to stress the urgency of preserving and enhancing man's environment.

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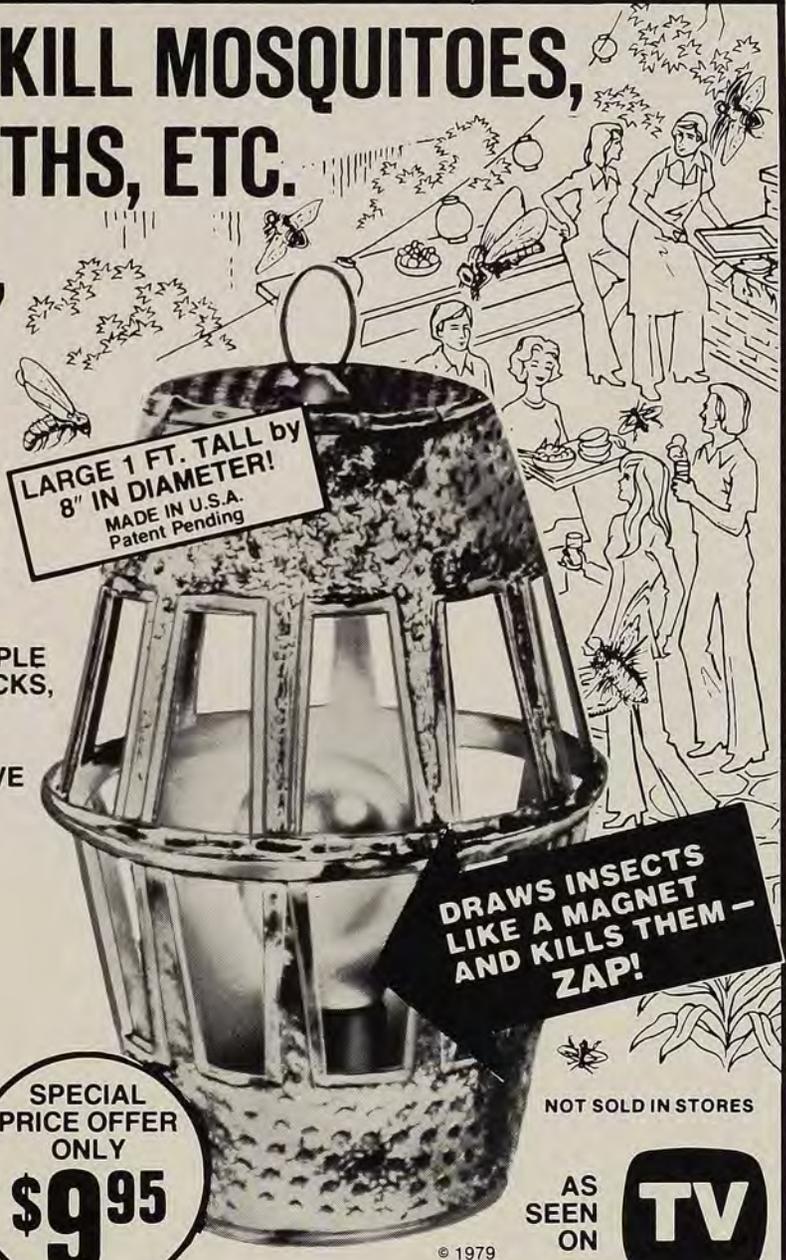
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