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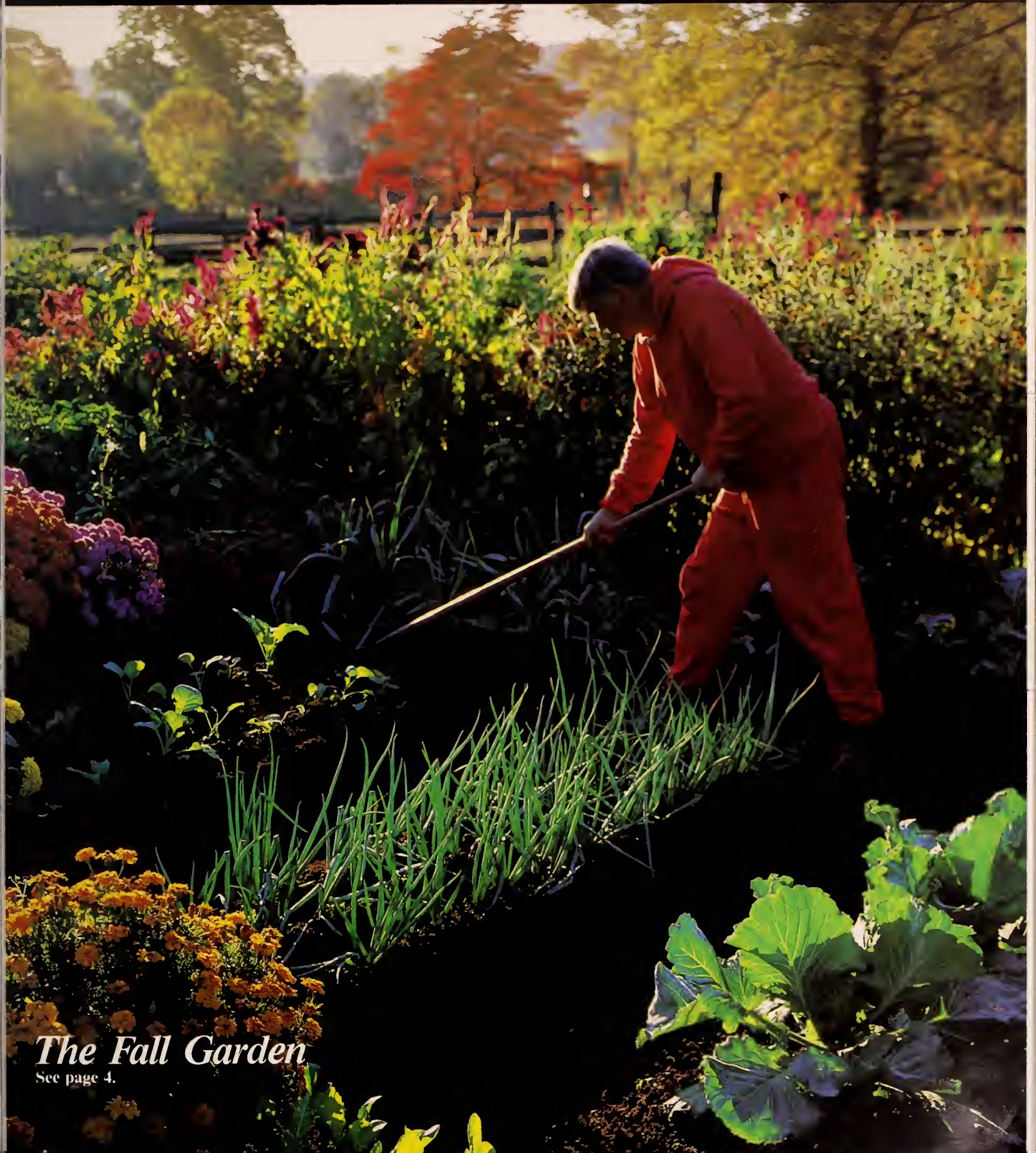






# GREEN SCENE

THE MAGAZINE OF THE PENNSYLVANIA HORTICULTURAL SOCIETY • SEPT./OCT. 1989 • \$2.00



*The Fall Garden*

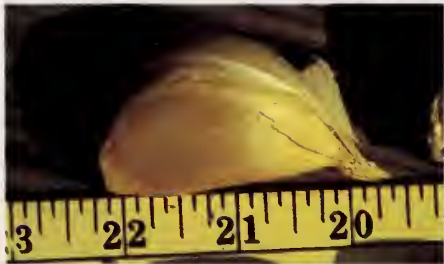
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**Front Cover**

Walter Chandoha cultivates to create a dust mulch around growing fall vegetables. The loose soil acts as an insulator keeping in warmth and keeping out cold. Five minutes of hoeing daily, early in the morning or in the evening, keeps even big gardens neat and weed free.

photo by Walter Chandoha

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photo by Walter Chandoha

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# GINGER'S MEMORIAL, HIGH HOPES AND GENTLE HEROES

 By Jean Byrne

Ed MacFarland called: "You should see my brother Glenn's garden. It's great. You ought to write it up."

What makes it so great, I asked. "Roses. Lots of them. He never had roses until his dog died five years ago. He planted a bush on Ginger's grave in his yard and that got him started."

I perked up when Ed told me Glenn's roses had won some awards at the Harvest Show and at the Philadelphia Rose Society Show. We checked it out: Robert Ballantine, president of Philadelphia's Rose Society said Glenn was a good grower, and he liked the garden. We asked Judy McKeon, the rosarian at the Morris Arboretum of the University of Pennsylvania, to check it out; she liked it and wrote the story on page 12. While we were working on the story about Glenn's garden, he called. "My brother Ed's got a great herb garden. You should write it up." How many more in your family, Glenn?

As this issue attests, gardeners range in form and style from Glenn and his rose garden, to Liddon Pennock whose vocation and avocation are plants, to Paul Meyer, who is chair of Horticulture at the Morris Arboretum and who scouts new plants in exotic climes in the style of China Wilson and other explorers. This issue's gardeners also include Cornell University senior extension associate Roger A. Kline who devotes his life to garlic and vegetables, and John Swan who also likes garlic and who, along with his wife Ann, claimed a spot in the serpentine barrens in West Chester, to create for themselves a glorious garden.

Most of us are not inclined to think of these people who hoe and plant, and who celebrate the cycles that come and go each year, as heroes. So I was delighted and touched recently when I saw a British movie, "High Hopes," about a young woman who planted trees and cleared mucked up lots in London for a living.

About the film, set in Margaret Thatcher's England, a *Welcomat* reviewer said "it offers a compassionate view of a world coming apart, at the same time insisting on a human capacity to hold it together."

The human capacity to hold it together was epitomized most by the young woman who planted the trees and cleared the grungy lots with her mates. Her yearning for "growing things" set her apart from the other self-absorbed or alienated characters in her life. The high point of the film came when she rescued her boyfriend's mother who had been set upon by his brutalizing sister, and led the mother up to their London rooftop to show her a surprise. In the midst of the fog and industrial landscape of their neighborhood, stood a tiny garden, the size of my desktop. The mother, the young woman and her boyfriend sat watching the brave little flowers, defying the pollution and wind. The garden was a tenuous symbol of their "high hopes"; maybe they wouldn't go far but they would continue to grow.

There was something exhilarating about a movie whose moment of epiphany was a minuscule garden that enabled someone to survive. I wondered what the moviemaker would make of Glenn's grief transformed into a rose garden or of the daily lives of many Philadelphia gardeners. Of the PHS Philadelphia Green staff and community gardeners for example, who work together to clear rubble-strewn lots or rally people to create 30 or 40 or 50 neighborhood gardens. Or to slowly create blocks with window boxes or tire gardens or barrels filled with flowers, sometimes in areas plagued by drug wars and abandoned waste. Philadelphia Green's been sneaking up on the city for more than a decade now. And I can't help thinking that gardening in parts of our city demonstrates a "human capacity to hold it together," when all else has failed. Gardeners and gentle heroes.



photo by Judith C. McKeon





# THE FALL GARDEN

By Walter Chandoha

Something has happened to our seasons. We once had springs that started cool, windy and wet in March and April, warmed up in May and by June we were ready for summer. But no more. Now we seem to go from winter right into summer with maybe two or three weeks of spring-like weather when everything blooms simultaneously.

The changed weather pattern is not all bad. To balance what we lose in the spring nature returns to us in the fall — lots of warm, sunny days, cool nights, adequate rain, delayed frosts (sometimes) and Indian summers that last almost until Christmas.

In recent years, with the freaky springs we've had, my early plantings have not been too successful. Seeds rotted in the cold, wet soil and if any germinated the plants sat and shivered waiting for growth-inducing warmth. Or maybe everything would get off to a good start then oppressive heat that came too early would mess up the garden — broccoli and lettuce bolted, peas stopped growing but bugs grew like Topsy, the blossoms of tomatoes and peppers dropped. And in the heat it was too uncomfortable to work in the garden. So the weeds grew — and grew.

After several of these unsuccessful spring gardens, I toyed with the idea of postponing *any* planting until mid-May but never followed through. Then a few years later, a backlog of spring assignments (I'm a freelance photographer/writer) gave me no choice. I had no time to plant a garden. Mid-May came and went and so did all of June and still nothing was planted. I thought it was too late to start a garden so I announced to my family we'd have no vegetable garden that year. I was overruled. Reluctantly, the garden was finally

started — on the Fourth of July weekend. We didn't harvest anything until September but when the harvests started they were fantastic and the garden kept going far beyond the October frosts. We had beans and zucchini, carrots and beets, dill and basil, peppers and tomatoes, many brassicas, lots of salad greens and even some potatoes. Planting in warm soil got the vegetables off to a good start and the heat of summer and

*continued*

*The garden was finally started — on the Fourth of July weekend. We didn't harvest anything until September but when the harvests started they were fantastic and the garden kept going far beyond the October frosts.*



As spring crops are harvested in mid-summer, succession plantings are made in the empty beds. After restoring this bed with compost and fertilizer the author raked it smooth and planted with Egyptian onions 6 inches apart in rows a foot apart.

An international fall garden: French celeriac, ferny-leaf Italian finocchio, ruby Swiss chard; Japanese mizuna, Italian radicchio flanked by American Salad Bowl lettuce. Surrounded by Mexican marigolds and Japanese chrysanthemums they make a colorful and very edible garden. With the exception of the marigolds, everything growing in this garden is coldhardy and can take frosts.

photos by Walter Chandoha

## FALL GARDEN

Kale, cabbage, lettuce and Swiss chard are cold hardy and continue to grow even after frost covered. Cold improves their flavor. ▶

A make-shift cold frame made of cement blocks and storm windows protects this bed of lettuce far into the fall. Covered during winter, the plants go dormant and resume growth in early March. ▼



the even weather of fall kept their growth steady and unchecked. Bugs were almost non-existent in the fall. That first autumn garden was one of the best I have ever had. It got me out of the habit of rushing to plant too early in the spring and opened my eyes to the potential of fall gardening.

The key to having bountiful fall harvests is to time planting to get crops close to maturity around the first fall frost date,

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***Bugs were almost non-existent in the fall. That first autumn garden was one of the best I have ever had.***

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usually October 15 in my area (North Jersey), give or take 10 days. By checking the indicated days to maturity on seed packets and in garden catalogs I coordinate planting time with the first fall frost date. But to allow for less than ideal growing conditions on which maturity dates are based, I add a safety cushion of 10-15 days for short maturity tender crops. If a bean or zucchini matures in 60 days and the first frost date is October 15, I count back 60

days to August 15, add the 15-day cushion and plant no later than August 1. The cushion not only allows for an earlier-than-usual frost date but also for extra pickings before the plants are killed by the frost. If the frost comes late we gain additional picking days.

Hardy vegetables — the brassicas, root crops, and salad greens — are not bothered by light frosts. But they tolerate lower temperatures if they are close to maturity when the weather turns cold. Additionally, if given some protection from chilling winds and a mulch to keep the cold out of the still-warm soil, harvests can be extended until early winter.

Since I've become a fall garden enthusiast we routinely get our entire Thanksgiving dinner from the garden (except the turkey and the cranberries). And some years, the garden keeps producing until Christmas.

●  
Photographer/writer Walter Chandoha's work has appeared in many national publications including the *New York Times*, *Fine Gardening*, *Organic Gardening* and *Ladies Home Journal*. His photos have been featured on more than 300 magazine covers.



Bounty from the fall garden picked just before the frost and brought under cover can be stored for consumption weeks, even months after harvest. Pears, tomatoes, pumpkins and squashes last longest when storage area is cool but above freezing. Soon after the harvests, produce will be removed from baskets and spread out on tables and the floor.



J. Lidden Pennock, Jr. stands on four-foot-high brick wall patterned by severely clipped ribbons of ivy, to tailor a clipped cloud-pruned yew.

# Hedera helix: Roles in Landscape Design

 By J. Liddon Pennock, Jr.



**H**edera helix (English ivy) is traditionally used as a ground cover where nothing else would exist, or as a camouflaging agent on walls to conceal an architectural error made by building designers. English ivy, with its range of cultivars, can also play a significant role in landscape design.

We have used it effectively in the small room-like gardens of Meadowbrook Farm, either planted directly into the soil or grown to perfection in containers. One of our greatest triumphs was to create an actual pair of ivy trees grown on their own trunks.

In the early stages the process of training the trees was carried out in a cold greenhouse in the winter, and outside in the summer. The cuttings were taken from the adult portion of the vine, growing on the building or a tree, projecting out in bushy clumps away from the juvenile vine. The cuttings were taken in early summer, stuck in a suitable rooting media, with bottom heat and constant mist. After the cuttings developed roots, we transferred them to pots filled with a good average potting soil mix. We installed a supporting stake on which to train the cuttings. After the plant reached approximately four feet, the growing tip was pinched, inducing side shoots to appear, which were also pinched as they grew. Each bit of growth, if not pruned, would develop flower buds followed by fruit. It took nearly five years before the new standard ivy trees were planted on the south side of the house, protected from the north wind, with total sunshine available. Beneath each was a ground

cover of bronze leaf *Ajuga*, flanked on the north side by a *Taxus* 'Hicksii' three-foot-high clipped hedge. The rectangular beds of *Ajuga* were bordered by an edging of glacier ivy, the grey-green foliage making a pleasing all-year-round contrast to the dark leaved *Ajuga*. Most ivies will flourish in sun or shade.

An interesting adjunct to the area where one of the two ivy trees were planted was the treatment of the stone corner of the

house that projected out onto one of the beds. The wall area was about eight-foot high by two-foot wide. Instead of allowing ivy to simply grow up and conceal this wall, we placed a wire frame, following the same dimensions as the wall, with a diamond-shaped pattern of criss-cross wire. The wire panel was affixed several inches away from the wall with metal dowels implanted in the mortar. Any variety of ivy could have been used to train over the open-wire screen but

since there was already a vigorous-growing Baltic ivy (*H. helix* 'Baltica') in the direct vicinity we diverted runners of it to the base of the wire frame; the ivy grew with dispatch. It was groomed to maintain the diamond-shaped pattern.

An interesting way to decorate a brick wall with ivy is to train the runners on a horizontal pattern, thus giving the effect of a small espalier tree done in the French rather angular manner.

Nothing could be more striking than a ground cover of gold heart ivy happily growing under the dense shade of a large *Cedrus deodara*. The bright yellow centers on many of the leaves give the appearance of dappled sunlight coming through the thick branches of the cedar tree.

The forms and shapes that can be created with ivies grown in containers are as varied as one's imagination. The basic forms are usually wire: circles, globes, hanging baskets, pyramids and any number of topiaries of birds and animals. These forms can be stuffed with dried moss in which rooted cuttings are inserted, or the forms may simply be used as a support for the trailing vine tendrils.



photos by John C. Gouker

Three spherical forms: a trained wreath of glacier ivy (foreground) in an antique lead urn is backed by the rounded mass of a handsome English boxwood. Towering over them is a standard tree of pure *Hedera helix* in its adult form. Along the wall, the strongly delineated shape of the baltic ivy crisscrosses in a diamond pattern on a wire frame attached to the stone wall. The variegated border, which surrounds the *Ajuga* bed beneath the ivy tree, is *Hedera calico*.

photos by John C. Gouker





◀ An early 18th century lead eagle appears as if it has landed from a long flight on a Doric column set above a lead basin. The basin is backed by an ivy-clad wall with a wreath of clipped ivy at its base.

Two flights of flagstone steps: the lower one supports a graceful pair of potted topiary swans trained over a simple wire frame; the upper flight shows ivy garlands on each riser. Pairs of ivy pyramids accent the base of the steps. ▶

Any ivy grown in containers will not withstand our cold winter temperatures. All potted specimens should spend from November to April in a cool greenhouse or sunporch where they should be watered regularly and checked for insects.

*Hedera canariensis* (Algerian ivy) in any of its varieties will not withstand excessively low temperatures. *Hedera colchica*, however, will at Meadowbrook Farm. There is a mature vine of *Hedera colchica* 'Dentata' that flourishes effectively on an eight-foot stone wall that divides the herb garden from a rear parking area. For the last 50 years it has shown no devastation even after one of our very extreme winters.

Contrary to other opinions, I find that almost all cultivars of *Hedera helix* are hardy in the Delaware Valley. This species has given us infinite pleasure because of its versatility and its extraordinary tones of green. It must never, however, be neglected. If not controlled it can become as difficult a vine as honeysuckle in its rampant attack on its neighbors who are, unfortunately, not as aggressive in their growing habits.

At Meadowbrook Farm *Hedera helix* has been the source of some very successful horticultural projects. English ivy now adds a great deal to the enchantment achieved through the 50 years of establishing the gardens at Meadowbrook Farm.

●  
J. Liddon Pennock, Jr. was president of the Pennsylvania Horticultural Society from 1954-57 and is currently a member of PHS's Council, and perennial principal advisor of the Philadelphia Flower Show. Pennock is president of the Philadelphia Flower Show Inc., former producers of the Philadelphia Flower Show. He is a member of the Advisory Committees of Longwood Gardens and Morris Arboretum of the University of Pennsylvania, and a director of Delaware Valley College of Science and Agriculture.



*In five short years, Glenn MacFarland went from novice rose grower to Harvest Show blue ribbon winner, from one rose bush to 130, from one variety to 60.*

photo by Judith C. McKeon



▲ Glenn MacFarland's productive (25 ft. x 75 ft.) rose garden is enclosed within a rustic country fence.

**T**he thorny patch in a rose exhibitor's life is typically unfavorable weather: lack of winter snow cover, late frost, too little or too much rainfall, cold or hot spring temperatures. Glenn MacFarland, a rose enthusiast who gardens in northeast Philadelphia, is undaunted by unseasonable temperatures or drought or flooding of which he's had a lion's share in the past five years. No, Glenn MacFarland's pet peeve is a young rabbit who munches on his excellent rose bushes.

MacFarland's peaceful solution: adopt the peevish rabbit as a pet. He feeds the rabbit alfalfa pellets to lure it away from the roses. The gentle, yet practical, approach to coexistence is not surprising in an animal lover who turned to rose growing when his cherished Irish setter died five years ago. MacFarland buried Ginger in the garden, marking the site with a handsome sculpture. As a tribute, he decided to plant a single rose bush. From bitter-sweet beginnings Glenn MacFarland has become a passionate rose gardener and more recently an exhibitor.

MacFarland's love affair with the queen of flowers began as a boy in his grandmother's garden. He grew up in the Torresdale section of Philadelphia's far northeast, a stone's throw from the Delaware. His grandmother, a German immigrant, brought with her a family love of rose growing acquired from her father, an amateur rose breeder. Glenn recalls the beauty and fra-

grance of his grandmother's roses particularly the hybrid tea 'Talisman,' a 1929 introduction bearing long-stemmed golden-yellow flowers highlighted with orange and copper. There were also climbers and surely 'Peace,' the welcome hybrid tea with blooms a soft blend of yellow and white tinged with pink. A favorite of Glenn's, 'Peace' also found a home in his garden, where the family tradition of rose gardening thrived and grew a bush at a time.

A grounds supervisor and skilled mechanic at a country estate in Chester County, Glenn has put his eclectic field knowledge into making a top-notch rose garden complete with irrigation system, lighting, and elaborate drainage. With an innate gardening sense, he put a good deal of toil and time into bed preparation. Each of his 130 bushes has been given a good

start. Roses require a sunny, well-drained situation and do not tolerate wet soils. In his heavy clay soil MacFarland dug planting pits at 2½-foot intervals to a depth of 3 feet, filled the bottom 12 inches with gravel and replaced the clay with top soil. Taking his gardener's knocks in stride, Glenn reclaimed the garden when a nearby creek overflowed its banks in the spring of 1988, submerging half of his beds under a foot of water. More backbreaking digging; he installed drainage trenches 3-foot deep filled with ¾" crushed stone and added run-off pipes to rescue his roses from a near fatal encounter with wet feet.

#### *good cultural practice*

The key to growing healthy rose bushes that produce high-quality blooms is good cultural practices. MacFarland's rose-



photo by Sol Snyder

A favorite at the show table, 'Pristine,' is a top exhibition rose with classic hybrid tea form. ▶

gardening calendar begins in early spring. About the time forsythia comes into bloom, he begins pruning. After pruning he spreads about one cup of alfalfa pellets around each bush to provide a shot of nitrogen (no danger from rabbits at this time since the bushes are dormant); he also applies Rose-tone at recommended rates after pruning in April, at first flowering in June and again in July. MacFarland protects his bushes from rose diseases and pests with spray applications of Funginex and Orthene at 7- to 10-day intervals. He finds a foliar feed helpful especially before cutting stems for rose shows.

MacFarland appreciates the neat appearance a shredded hardwood bark mulch gives to the garden; it also helps to retain soil moisture. Soaker hoses provide irrigation in dry periods. Regular deadheading,

cutting spent flowers to a strong five-leaflet node through the growing season, allows the bushes to repeat their flowering on strong new stems.

MacFarland does no hard pruning in late autumn; he lets the canes stand about 4-feet tall over the winter. In December he applies a winter protection of soil or mulch hilled over the crown of each bush. This provides some insulation for the crown protecting it from fluctuations in soil temperature.

Five years ago Glenn MacFarland planted a few rose bushes, and with each year of success and mounting passion added more. Today the productive 25x75-foot rose garden enclosed within a rustic country fence displays 130 bushes of some 60 rose varieties boasting colorful quality blooms. MacFarland has also had success with

growing standard roses. Displayed individually at regular intervals around the perimeter of the garden, the tree roses add a touch of elegance. Outlined with attractive miniature lights, the garden is particularly festive on fine summer nights when the tiny beacons provide a starry, dream-like quality befitting the queen of flowers. Some of MacFarland's favorite roses include: medium-pink sprays of the regal 'Queen Elizabeth'; the classic hybrid tea 'Pristine' with blushing pearl-white flowers; and the heavenly scented 'Double Delight,' a single bloom of the popular red and white hybrid tea not only perfumes the hand that holds it but fills an entire room with its fragrance.

### *exhibiting at the Harvest Show*

In the autumn of 1987, Glenn MacFarland cut some of his best roses and

*continued*



Colorful sprays of the grandiflora rose 'Sundowner,' one of the 60 top-notch rose varieties grown by Glenn MacFarland.



Queen Elizabeth Rose

photos by Judith C. McKeon



## VISIT THE PENNSYLVANIA HORTICULTURAL SOCIETY

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For an exhibitor's schedule call PHS, 625-8250. Anyone may enter any of the more than 300 Harvest Show classes. The 19 sections range from annuals to apple butter, bulbs to baked goods, grape wine to grasses, and cactus to cotoneaster. Show off your harvest and visit with your gardening neighbors.

entered them in the horticultural classes at the Harvest Show. He won a first with the hybrid tea, 'Mister Lincoln,' and several second and third prize awards. Competing in the 1988 show, he tripled his winnings capturing three blue ribbons with the hybrid tea roses, 'Mirandy,' 'Headliner,' and 'Broadway.' While exhibiting, Glenn met other rose exhibitors and was encouraged to join the Philadelphia Rose Society. MacFarland enjoys the fellowship, information sharing and support of the members.

In June, MacFarland exhibited for the first time in the Philadelphia Rose Show, winning a first prize in the novice class with the hybrid tea rose, 'Summer Dream.' He also captured several third and honorable mention prizes in the competitive classes. Robert Ballantine, president of the Philadelphia Rose Society, is pleased with Glenn MacFarland's zeal for growing and exhibiting roses. "Part of the joy is his enthusiasm; I'm impressed with how quickly Glenn has come along. He is growing very good roses." Glenn plans to continue exhibiting roses at the Harvest Show where he caught the blue ribbon fever.

Judith C. McKeon is rosarian at the Morris Arboretum of the University of Pennsylvania and a member of the board of the Philadelphia Rose Society.

# EUROPEAN BEECH:

photo by Paul W. Meyer



The delicate, luminescent emerging beech leaves (*Fagus sylvatica*) are especially striking in the spring. In Europe branches bearing young leaves are popular in flower arrangements.

## *It's time to plant more*

 By Paul W. Meyer

The European beech's (*Fagus sylvatica*) heavy, buttressed trunk and smooth, gray, muscular bark, is the epitome of strength and longevity. Its variants, ranging from purple to fern leaf forms and from weeping to columnar forms, never cease to intrigue me. Yet great old European beeches, long a fixture in Delaware Valley landscapes, are dying at an alarming rate and becoming increasingly rate. Thus, it's an opportune time to evaluate their problems, and assess the future of European beeches in the Delaware Valley.

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*It is possible that beech populations originating from the interior of the Balkan Peninsula and Turkey, where the latitude is similar, will be better adapted to Delaware Valley conditions.*

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European foresters have long noted that beeches are relatively short-lived when compared with other forest trees. Though some oaks may live to be 300 years old, the typical life span of the European beech in its native habitat is 100-150 years. Thus, it's not surprising that so many of our old European beeches, now passing the century mark, are declining. This is certainly a respectable life span, yet we tend to expect big trees to live forever. Curiously, some ancient beeches in England's Epping Forest, which were pollarded (repeatedly cut back to 8-12 feet and allowed to regrow for successive crops of wood) until early in this century, are reputed to be between 200 and 400 years old. Pollarding, thought it disfigures the trees' natural form, seems to delay the aging of beech and other tree species.

### *environmental stress*

Since few people would recommend regular pollarding of landscape beeches, we should expect an aging beech to become less vigorous and to have difficulty dealing with environmental stress factors. Unfavorable climatic conditions, insects, and

*continued*



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diseases, which the tree could easily overcome in its youth, become more formidable problems for an aging tree. An aging beech tree, though seemingly healthy, should be monitored closely to spot early signs of stress and to alleviate the unfavorable conditions.

Beech roots require a lot of oxygen and are susceptible to damage from compacted soil, altered drainage patterns, fill over the roots, or anything that impedes root zone aeration. Don't pave over any part of a beech tree root zone or drive equipment across it. Even heavy foot traffic can be detrimental.

Because of its shallow root system and heavy canopy, it is difficult to grow turf under a beech. Even competitive, shade-tolerant groundcovers like Japanese pachysandra and English ivy are slow to establish though they will usually survive and eventually fill in. It would be a mistake to

attempt to cultivate under a beech or add a layer of topsoil when establishing groundcovers since these operations could seriously damage the root system. The natural beech leaf litter makes an ideal mulch and is best left undisturbed.

#### *insects and diseases*

Insects such as beech leaf miner, beech scale, and woolly aphid are another source of stress. Normally, a vigorous tree can handle a light infestation but heavily feeding insects hasten the decline of aging trees. Monitor and treat insects before they get out of control. The Morris Arboretum Plant Clinic (215-247-5777 1-3 p.m. Monday through Friday) can help diagnose and evaluate these problems.

In the Delaware Valley, the severe and recurring droughts of recent years have been another important source of stress for beech trees. Though usually quite drought

tolerant, aging trees are more susceptible to drought-related injury. In periods of prolonged drought, deep watering at the rate of one inch of water over the entire root zone every 10 days will benefit the tree.

Once a beech is severely weakened, it becomes susceptible to infection by a relatively weak fungal pathogen, *Nectria*. *Nectria* normally will not infect young, vigorous trees but in weak plants it causes bark cankers, dieback, and often death. Once the tree is infected with *Nectria*, prune out cankered branches and try to restore its vigor through good cultural practices.

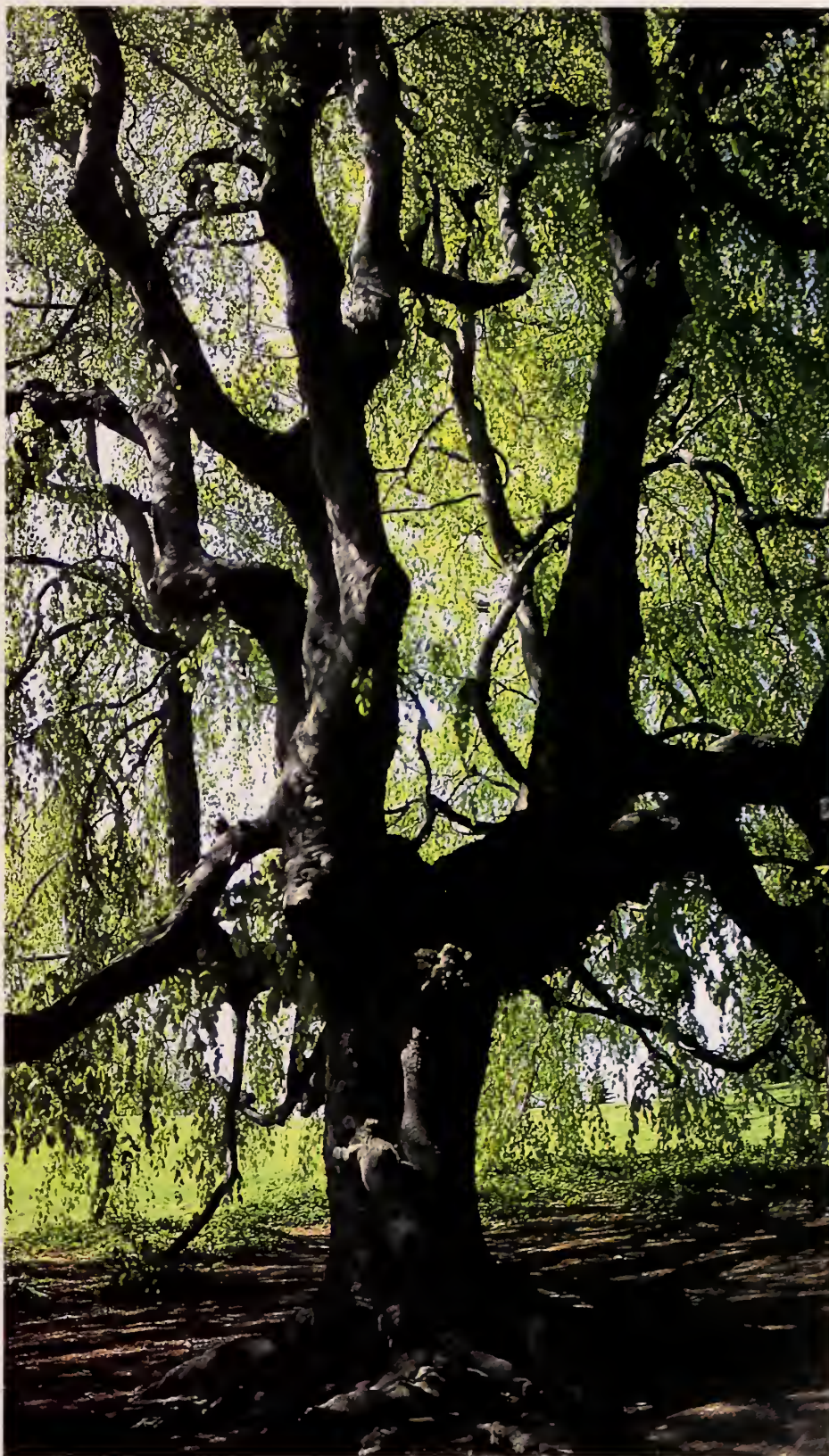
#### *introduce new populations*

The natural distribution of the European beech is extensive, ranging from Asia Minor across most of Europe to southern England. Throughout this range the climate



◀ The fine specimen of weeping European beech (*Fagus sylvatica* f. *pendula*) grows at the Morris Arboretum of the University of Pennsylvania. Estimated to be about 100 years old, it measures 53 feet tall and 79 feet across and the main trunk is 8'8" in circumference. It is the largest specimen of its kind in Pennsylvania.

The branches of this weeping European beech sweep the ground, forming an arboreal rotunda. Many of the outer branches have rooted over time and a second generation of trees is growing up from the outer edges of the canopy. ▼



varies dramatically, and it is likely that populations from various parts of this range have evolved along slightly different lines with each population best adapted to somewhat different growing conditions. Foresters have documented this kind of intraspecific variation in a number of other forest species with wide distributions.

Because of the strong political and cultural connections, it is likely that most European beeches already in cultivation in American gardens are of English or northern European origin. Climatically, this is the part of its range *least* similar to the Delaware Valley. It is possible that populations originating from the interior of the Balkan Peninsula and Turkey, where the latitude is similar, will be better adapted to Delaware Valley conditions. Also, like the Delaware Valley, these areas have a continental climate with hot, sometimes droughty summers and very cold winters.

*the green scene* / september 1989 continued



The largest specimen of purple European beech (*Fagus sylvatica* f. *atropunicea*) in Pennsylvania grows at the Morris Arboretum. It measures 81 feet tall, and 110 feet across. The circumference measured at 3' above the ground is 22' 7".

This is significantly different from the maritime climates of Britain and north-western Europe. The Morris Arboretum is working to obtain documented wild collections of European beech from these more continental areas. Perhaps in time, these new forms can push the life expectancy of European beech in American gardens beyond the present average.

Until these wild documented trees are tested and evaluated, however, the forms presently in cultivation are certainly worthy of continued use. Unfortunately, since so many of our aging trees are dying, the species is developing an unwarranted bad reputation. Remember, the European beech has a respectable life expectancy (over 100 years) and its beauty is indisputable. Young European beeches are usually trouble free, seldom having significant insect or disease problems. With good reason, it has become an important part of the landscape heritage of the Delaware Valley, and its tradition should be perpetuated.

### planting

In Europe, beech trees can be found growing naturally on both acidic and alkaline soils. They grow best on relatively light, rich, well-drained soils. Since the roots require good aeration, it is safest to plant the tree slightly higher than it was in the nursery, with about 10% of the root ball above the surrounding grade level. Create a saucer-shaped basin for irrigating around the root ball and mulch to prevent drying. Fertilizing can speed the growth of young

trees after they are established. Apply carefully though, since the surface roots are easily burned by over-fertilization. Follow package instructions and use slow-release formulations. Never use broadleaf lawn herbicides over beech roots since its shallow roots are particularly susceptible to damage.

A European beech will grow to become a large tree and in an open site it maintains its branches to the ground. It is ideally suited for groves or for lawn specimens in large open sites in modern parks, campuses,

industrial estates and large gardens. By planting now, we can insure that beech will continue to be an important tree in our landscapes into the 22nd century and that future generations can enjoy the same legacy that was left to us by our Victorian forebears.

Paul W. Meyer is chair of Horticulture for Morris Arboretum of the University of Pennsylvania.

## EUROPEAN BEECH VARIANTS

The purple beech, copper beech, fern-leaf beech and weeping beech are a few of the names for the many variants of the European beech. The purple leaf forms of European beech, *Fagus sylvatica* forma *purpurea* occasionally occur spontaneously in the wild and have been cited in literature as early as 1680. One group of five purple European beeches appeared naturally near the village of Buch in Switzerland. In legends, these were said to have sprung up where five brothers had killed each other, staining these trees with their blood. Purple-leaved trees in cultivation originally came from scions of these and other wild trees. Seedlings of purple-leaved parents may display varying shades of purple or green. The best of these forms are propagated asexually, by grafting, and given a cultivar name to assure uniformity.

Similarly, weeping and cut-leaf forms have arisen occasionally and many trees showing variations are in cultivation. Because the variations are often slight, the nomenclature of these variants is confused.

### European beech forms and cultivars commonly found in the Delaware Valley

**Purple European Beech** (*Fagus sylvatica* f. *purpurea*; synonym: *F.s.* f. *atropunicea*).

— This name is loosely applied to any European beech with purple or purplish leaves. It is a heterogeneous group and the intensity and longevity of the red leaf pigment into the summer is variable. Late in the season many are indistinguishable from the standard green form. One of the best of the purple-leaf clones is Rivers European Beech (*F.s.* 'Riversii'). Selected around 1870 in England, this clone has the most deeply colored leaves of the purple forms. The deep, nearly black, color persists well throughout the season.

**Copper European Beech** (*F.s.* f. *cuprea*).

This name is sometimes given to variants with a light red, or bronze-colored leaf. Leaves often fade gradually to dark green late in the summer. Because there is no clear-cut distinction between light copper and dark purple leaf forms, it is considered by many botanists to be a synonym of *F.s.* f. *purpurea*.

**Fern-leaf or Cut-leaf European Beech**

(*F.s.* f. *laciniata*; synonym: *F.s.* 'Heterophylla'). In practice, this name is loosely applied to many of the European beeches' variants with deeply cut leaves. One of the best of this group is *F.s.* 'Asplenifolia,' a fine textured clone with deeply cut foliage. Its leaves are sometimes linear, especially at the terminal.

**Weeping European Beech** (*F.s.* f. *pendula*). Another general name applied to all weeping forms. Many named and unnamed weeping clones exist, varying in form and stature.

**Dawyck European Beech** (*F.s.* f. 'Dawyckii'). A narrow, upright clone originating near the Dawyck Estate in Scotland.

**Tricolor European Beech** (*F.s.* 'Purpurea Tricolor'; synonym: *F.s.* 'Roseomarginata'). This selection has creamy-white variegated leaves, with an irregular pink margin. Though colorful in the spring, it fades by midsummer. A specimen of this cultivar growing at the Morris Arboretum often scorches by late summer.



# ALLIUM

## Starburst Standouts

 By John P. Swan

photo by John P. Swan



Purple *Allium aflatumense*, White Azalea Treasure and tree peony flowers combine to create a striking May arrangement created by Gay Mason.

Most people are acquainted with the *Allium* genus through its robust edible bulbs: onion, garlic, and the milder shallots, leeks and chives. These earthy delights are but humble country cousins of the many striking ornamental species. The genius of this genus is its unique contribution to three of life's pleasures: good eating, good health, and beauty in the garden. While the unassuming onion is content to work its gustatory wonders underground, the decorative alliums thrust their spectacular finery into the bright sunlight in an array of purples, reds, delicate pinks, white, yellow, even blue.

### **vigor, versatility and variety**

Their distinctive starburst flower clusters

range in size from 2 inches to a foot across, atop sturdy stalks anywhere from 5 inches to 5 feet tall. Some of the smaller dwarf species are at their informal best in rock gardens, tucked into niches, or even naturalized. Contrast that with the large, erect species topped with grapefruit-size lavender globes standing stiff as sentries at Buckingham Palace. We prefer to group these for eye-catching formal accents behind perennial beds or in shrub borders.

*A. christophii*, on the other hand, has spectacular space-age flower spheres looking for all the world like a bursting sky rocket. It needs to be admired in a prominent spot without competition.

With careful selection, one can have a sequence of allium bloom from spring



◀ Soft lilac stars of *A. christophii*, furry gray *Stachys byzantina*, green mint, and purple leaves of *Corylus maxima* 'Purpurea' blend in a subtle arrangement created by Ann Swan.

▶ Outstanding in the garden and in arrangements, *A. aflatunense* stands erect on sturdy 2½-foot stems.



through the summer and into fall. Just try to find other true bulbs that color up your garden over such a long time. Some garden species also have a pleasing fragrance (belying their onion parentage), but we grow alliums for their conspicuous blooms in the garden, as marvelous cut flowers, and for their striking effect in dried arrangements.

Most of the large flowering ornamental alliums lose their basal leaves shortly after blooming and resume their annual rest period underground gearing up for next spring. For this reason they are best placed in a spot where other plants can mask or fill in the space. Spreading perennials and bedding annuals do the trick for us. We've also learned to mark the location of these bulbs. Memory doesn't work. The sight of your favorite bulb impaled on the end of your digging fork does not make for good humor.

#### *few demands on your time*

Alliums, like daffodils, are about as close to a no-maintenance plant as you can get. Quite a claim when compared to the current fashion labelled "low-maintenance gardening," a myth as every good gardener knows. If your soil is well drained, preferably enriched with organic matter you can grow show-quality alliums. Most species need full sun and prefer dry summers. A balanced fertilizer (5-10-5 or 5-10-10) scratched into the surrounding soil in early spring will add to the bulb's longevity.

They are practically pest free. On very rare occasions, alliums can be infected with an incurable soil-borne rot that starts in the stem and moves down to the bulb, destroying it. Simply remove the plant and don't replant in the same area. Healthy clumps can be left in place for years and thinned



Destined to grace a dried arrangement, the four-inch-wide seed head of *A. aflatumense* will be covered with black bead seeds when mature.

when crowding reduces flowering, anytime after foliage is gone. Small bulblets can be used to increase your collection and will mature quickly.

Bulbs can be planted in early spring or fall in holes about three times as deep as the diameter of mature bulbs. When spacing, consider the plant size and leaf spread to avoid overcrowding.

#### **standouts in dried arrangements**

If you allow the flower stalks to go to seed and dry, they will become "woody" and ready for cutting around September. In their natural golden straw hues, they make stunning dried arrangements. They can be sprayed with clear lacquer for durability. Or, you can spray gold, silver, or "snow" on

the starry seed head balls for brilliant Christmas arrangements. We find the huge starburst seed heads of *A. christophii* to be spectacular. The smaller, 4-inch starry seed cluster of *A. aflatumense* are less dominant, but no less beautiful.

There seems to be no end to the number of interesting alliums, but one has to guard against becoming a mini-nursery. The few species on our "Hit Parade" are, above all, survivors. They have rewarded us by blooming year after year, even when neglected.

#### **the Swans' allium hit parade**

*A. moly*. The lily leek or golden garlic is one of the few yellow-flowering alliums. Its up-facing, golden-yellow, 3-inch-wide inflorescences are borne on 12-inch stems in

late May. The attractive tulip-like leaves disappear when flowering is over. They show off best planted in groups in light shade, although we have had a gorgeous cluster blooming for over 10 years in full sun. Being a vigorous grower it makes a fine naturalizer. In a garden setting it will need thinning every few years.

*A. karataviense* asserts its individuality by departing from the typical narrow leaves of the clan producing instead, broad, richly marked leaves that arch gracefully back and hug the ground. It blooms in June on a 10-inch stalk bearing a white to pinkish-white flower cluster. Sometimes the stems are twisted, which adds to their charm when the dried seed heads are used in arrangements.

*continued*



Arching textural leaves and pinkish white flowers of ground-hugging *A. karataviense* add a graceful note to the early season garden.

*A. sphaerocephalum*, the drumstick allium, grows to 2½ feet topped off with a dense wine red “drumstick”

flower cluster. For best mass effect, plant bulbs close together. Good for cutting and drying.

*A. christophii*. Sometimes called stars of Persia, it is the largest, most dramatic of all our alliums. A hands-down favorite. In June it literally explodes in perfect symmetry to a foot-wide sphere covered with countless metallic-lilac flower stars, each sporting bright green seed capsules. The flower head stands up to rain and is held erect on strong two-foot stems. They retain their rigidity when dried adding practicality to their outstanding beauty when displayed solo or in dried arrangements.

*A. schoenoprasum*. These are the chives of culinary renown, but there’s no reason to make them spend their lives in the vegetable garden. These decorative plants are smothered with pinkish clover-like blooms in late May. In addition to the tasty leaves, the fresh flower heads make a delightful rose-tinted herbal vinegar. Wayside Gardens offers a bright rose-red cultivar, ‘Forescate.’

*A. caeruleum*. Blue-flowered alliums are a rarity, but this beauty will grace your garden with 2-foot-high ping pong balls of cornflower blue in early June. A dainty plant that forms attractive clumps.

*A. aflatunense* displays dense 4-inch globes of starry, lilac-purple blooms on 2½-foot stems in early June. It is similar to *A. giganteum*, the 5-foot curiosity, but harder and longer lasting. There is also a white variety, but it lacks the punch of the purple.

*A. cernuum* or nodding onion is a native wildflower of delicate beauty. It sends up an 18-inch stalk that arches gracefully forming a shower of pinkish flower bells. A July bloomer, it naturalizes with ease.

*A. senescens glaucum* - The leaves of this low-growing, mat-forming allium are curiously twisted giving it an interesting textured effect. Numerous pinkish flower heads rise above the plant in late July.

*A. tanquicum*, another July bloomer with long twisted strap-like leaves, has a 2-inch pale lavender flower ball on 2-foot stems.

*A. tuberosum*, Chinese chives. A vigorous grower, it produces abundant, daffodil-like leaves which add a mild oniony zest to summer salads. The plants bursts into bloom in September with numerous white “tennis ball” flowers. The seed heads can be dried, but cut them with care. They self-seed at the drop of a hat.

To know your alliums is to know your

onions. At least the well-dressed, mannerly ones. For versatility, textural quality, brilliant accents they are hard to beat. And each winter as your garden lies bare, just under the frozen crust hidden deep inside each bulb lies the promise of another summer brimming with color.

#### Allium Sources:

Park Seed Company  
Cokesbury Road  
Greenswood, SC 29647-0001

Wayside Gardens  
1 Garden Lane  
Hodges, SC 29695-0001

White Flower Farm  
Litchfield, CT 06759-0050

John Swan is a frequent contributor to *Green Scene* and the garden he and his wife Ann cultivate in Chester County has been on several tours for PHS and other organizations. For more about allium, see *An Underground Guide to Growing Harvest Show Quality Onions* by John Swan, *Green Scene*, March 1984, p. 4-6.

# GARLIC

## *You Either Love It or Hate It*

 By Roger A. Kline

*Garlic then have power to save from  
death  
bear with it though it make  
unsavory breath,  
and scorn not garlic like some  
that think,  
it only makes men wink  
and drink & stink.*

17th Century poem

**N**o other garden crop seems to provoke the love/hate feelings that garlic does. Its advocates are always striving for larger and more pungent bulbs. They can never grow enough. They use garlic daily as the spice of their lives. Detractors shy away from it, using salt and pepper or ketchup instead.

Commercially, most of the garlic grown in the United States is produced in California. That production is not sufficient to satisfy our needs, so we import much of it from Mexico, Argentina, Guatemala, China, Peru, Spain, Italy and Chile. But as with most vegetables, quality is the best from properly grown home garden plants. Garlic fresh from the ground will send your nostrils into ecstasy and your body to burning. This pungency seems to increase as the garlic begins to lose moisture. Yet garlic bought at the supermarket has dried even more substantially (probably after long storage) and loses some of its flavor by the time it reaches our palate.

Since much of the garlic is grown in latitudes south of ours, they often are not types that will adapt to our environment. Garlic, like onions, are very specific for the day length and heat in which they grow. Therefore, types grown in California do not generally do well in the northeast. Growers in New York State in cooperation with Cornell University have set out to collect and identify garlic strains adaptive to the northeast United States. This group, called the Garlic Seed Foundation, has identified several strains, which they are now multiplying to get enough stock to supply growers and home gardeners.

### *the basics of growing garlic*

The garlic bulb is that round unit covered with a papery sheath, divided into sections

*the green scene / september 1989*



Heather Browne wears an elephant garlic flower head.

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***Elephant garlic's cloves can get as large as a normal garlic bulb. Usually only four or five cloves are formed in each elephant bulb.***

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called cloves. Young garlic can be harvested before it divides into cloves. Normally garlic has eight to ten outer cloves, and in some cases many inner cloves, which get smaller and smaller towards the center. One planted clove gives rise to one bulb, similar to a seed in other crops.

The garden soil should be tilled, and well-rotted compost or manure added to it. Granular fertilizer such as 5-10-10 may also be added at the rate of one pound per 20 feet of garlic row. Work all this material

well into the ground. The best time to plant garlic in the northeast is between October and the early part of December. The idea of fall planting is to establish that young plant by letting roots grow out of the bottom of the clove, with only a small bit of green leaf emerging from the soil before winter sets in. The plant will begin to grow again in the spring. The final size of the garlic is dependent, in part, on this early initial growth in the spring.

Large bulb size is also directly related to large clove size. Plant only your largest cloves. Through this fertile well-worked soil, dig a furrow about four inches deep and set an individual clove every four inches, setting the bottom end of the clove (as it sat in the bulb) firmly in the bottom of the furrow. Cover them (do not pack) with soil so that their tops are about two inches below the soil.

The roots grow out of the bottom of the cloves first and the top growth may not appear for two or three weeks after that. Cloves don't need to show any top growth before winter and will still survive. The roots of the clove help to anchor it in the growing medium especially in the spring when there is alternate freezing and thawing, which might heave the clove out of the ground. Some growers mulch their garlic over winter with straw as they do strawberries.

In the spring when the plants are six inches tall and the ground around them is dry enough to walk on, sidedress the garlic with a moderate nitrogen fertilizer, about one pound per 50 feet of row, six inches away from the plants. This will enhance early growth of the leaf tissue. Do not sidedress after May.

Garlic, because of its relatively narrow leaves and sparse foliage, cannot compete

*continued*

Hardneck topsets (left) and soft neck garlic (right).

## TO GARLIC

When long of yore, its fumes arose,  
And helped to shape the Roman nose,  
A favored food was garlic then,  
For fighting fowls and fighting men.

They mixed it with the warriors' hash,  
And with the roosters morning mash.  
It kept the legions primed for war  
Till fear of Rome spread near and far,  
And doubtless made game fighting cocks  
Of pacifistic Plymouth Rocks.

A shrinking rabbit fed up thus  
Would lick a hippopotamus.  
Hence sprang old tales of sudden death  
From dragons slaying with their breath.

Bob Adams  
Department of Vegetable Crops  
Cornell University, 1925

with weeds; they will reduce the garlic yield. Don't neglect to water; lack of moisture will reduce the final size of the bulbs. They require  $\frac{1}{2}$  to  $\frac{3}{4}$  inch of water a week, so if it doesn't rain, irrigate. As the garlic matures through July, stop irrigation and let the leaves start to die naturally.

When to harvest garlic is an art as well as a science. If the garlic is left in the ground too long or the leaves are allowed to dry, the cloves will get so large, they will probably break through the papery sheath surrounding the bulb and the garlic will dry out quickly. The papery sheath protects the cloves and holds in moisture. To be safe, dig the garlic out of the ground when the leaves are just starting to turn yellow. Some gardeners gauge readiness by feeling the neck above the bulb and digging when it is "soft and flexible." This is normally in July or early August. In a dry year they will mature earlier.

### types of garlic

Garlic can be categorized several ways but one easy characteristic to notice is whether or not the garlic produces a stalk and seed head above the leafy tissue. If no stalk is produced, the garlic is called *soft neck*. This is the type we normally get from California. It lends itself nicely to braiding garlic bulbs producing an attractive strand of garlic, which can be hung in the kitchen. Soft neck garlic has many small inner



photos by Roger A. Kline

*From one bulb, we may only collect seven or eight cloves large enough to merit planting.*

cloves and matures two to three weeks earlier than other types.

Garlic that forms a hard stalk and a capsule on top is known as *top set* or *hard neck* garlic. This stalk represents a flower stalk but true garlic does not produce mature flowers. Instead it forms aerial bulbils in a capsule on top of the stalk. The stalk originates at the base of the bulb and does not permit interior cloves to grow, only outer cloves, which are usually large. Top set or hard neck garlic matures several weeks later than the soft neck, usually in early August.

One other type of garlic is called *elephant*. Actually it is more closely related to the leek than to garlic, but it has a garlic taste not as strong as the other types. Elephant garlic produces a hard stalk and goes on to form a round head of purple flowers. Elephant garlic's cloves can get as large as a normal garlic bulb. Usually only four or five cloves are formed in each elephant bulb.

The multiplication of garlic, such as the good strains we are selecting, can be a slow process. From one bulb, we may only collect seven or eight cloves large enough to merit planting. The process takes many years. With elephant garlic, the process is even slower, since only four cloves are produced from every one we plant after a year's time. Tissue culture may be a suitable technique for plant multiplication.

*continued*





◀ Mary Jane faces upwind of the elephant garlic.

▼ Garlic braids at market.





Mmmm — sautéed garlic set out for flavor taste tests.

### **the Garlic Seed Foundation**

The Garlic Seed Foundation, finding, testing and multiplying strains of garlic adaptive to the growing conditions of the northeast, has, to date, collected more than

80 strains. About 10 of them seem to be good quality candidates. Testing the garlics is not just a matter of growing and weighing them, but also preparing them in a kitchen, working with their pungency and having a band of hearty people taste and rate these garlics for flavor and use. This process is done annually at the Garlic Seed Foundation's Garlic Day held in upstate New York usually early to mid-September. In the morning session, commercial growers and gardeners talk about how they grow garlic and what problems they've encountered. In the afternoon, they look at all the garlic strains, choose those that will appear best at market, and the top eight strains out of that selection are used for tasting. No one goes away hungry, but many go away knowing they will be isolated from the rest of society for several days. Important judging criteria are flavor (as opposed to pungency), how easily a strain of garlic will peel, its aroma and taste after a brief saute.

The designated varieties are multiplied on three different farms in New York State. This gives a range of growing conditions and a test of how each strain performs and adapts. This is the first year some of these garlic strains will be available not just to growers, but to gardeners in the northeast. For more information write to David Stern, Director, The Garlic Seed Foundation, Rose Valley Farm, Rose, New York 14542-0149. *Garlic Press*, a newsletter for garlic

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***Because garlic is not acid, the botulism toxin can form under the oil storage conditions. So it is recommended that the peeled garlic cloves be immersed in vinegar for 12 hours before being transferred to oil.***

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lovers as well as garlic growers, is published four times a year, through the Foundation. Cost: \$8.00.

#### **pungency**

Garlic releases its typical fragrance only when its cells are injured. That can happen when garlic is cut, minced, pressed, bruised or diseased. At that time, an enzyme released from the cells reacts with another compound and produces alliin. This chemical, is anti-bacterial and anti-fungal, giving credence to the beneficial and medicinal claims of garlicologists. Other compounds in garlic are antithrombotic (protects against blood clots). These properties can be destroyed by processing the garlic, so the beneficial effects are found primarily in fresh garlic.

#### **garlic keeping**

Kitchen accessories made to keep garlic are usually containers with a lid and holes through the side. These do well for short-term storage, but the humidity is usually

too low. For long-term storage, garlic should be put in oil and refrigerated, or frozen, or at least put in a paper bag and put in the refrigerator. Storing peeled garlic cloves in oil has been preferred since the

cloves are ready to use and easily accessible at the time of use. Because garlic is not acid, the botulism toxin can form under the oil storage conditions. So it is recommended that the peeled garlic cloves be immersed in vinegar for 12 hours before transferring to oil. The acid vinegar residue will prevent the cloves from being host to the botulism-causing organism.

If you haven't had enough of garlic by now, see the movie "Garlic is as Good as Ten Mothers." It features Alice Waters of the famous Chez Panisse restaurant and other food and music treats of the San Francisco Bay Area. You can order a videotape from Flower Films, 10341 San Pablo Avenue, El Cerrito, California 94530. (Write for prices; they vary depending on whether the movie is for personal or commercial use. It may be available at your local video store; TLA Video Inc. at 4th & South has a copy for rental if you can't find it locally.)



Roger Kline works with vegetables, and their gardeners and growers in New York State and the northeast. He is a senior extension associate at Cornell University. He has developed programs to study heirloom vegetables, new varieties, and specialty crops.



# Going Gaga Over Garlic: LOVERS OF THE STINKING ROSE

 By John P. Swan

**F**or uncountable centuries garlic has been grown for food and pharmacy. Steeped in folklore, one of the earliest recorded civilizations to appreciate its wondrous powers were the Babylonians of 4,500 years ago. The fearless Phoenicians and venturesome Vikings took garlic along on their long seas voyages. Even the name Chicago apparently comes from the Indian word for "place of wild garlic." The Indians not only ate them, but treated bee stings and other ailments with the garlic juice.

With a heritage that few plants can rival, there certainly isn't any magic to growing bountiful, aromatic crops. Garlic has to be one of the easiest herbs to grow. Trouble-free, demanding little from us busy gardeners.

According to alliophile, Richard Both, who gardens in northern Delaware, and member of the "Lovers of the Stinking Rose," you can raise basketsful of garlic by catering to the clove's few cultural needs.

## *a planting time of another kind*

He recommends planting garlic cloves in mid to late September. This gives the plants the full winter to push down strong roots, encouraging fast green growth at the spring thaw. The bulbs will sprout a few green leaves in the fall. They die back during the winter doing no harm to the plant's vigor.

Garlic can be planted in early spring for the same summer, but yield is reduced, bulbs smaller.

## *planting for plenty*

Dick Both plants his sun-loving garlic 2 inches deep from the top of the clove and 5 inches apart in rows wide enough to cultivate without harming the roots. He also plants cloves in raised beds on 6-inch squares for easy reach and weeding.

About September 1st or two weeks before setting the bulbs, he mixes 10-10-10 fertilizer into well-drained, loamy soil. Along about February, he gives the plants a boost for spring by working in a light side dressing.

## *spring care is easy*

Eliminate competition. Keep your plants weed free. You want the garlic to gobble up all the available nearby nutrients. Weeds steal moisture too, so essential for fast garlic growth.

Should the plants send up flower stalks,

cut them off. The garlic should apply all its energy to producing large bulbs.

## *now it's harvest time*

Garlic is a long-day crop. It develops rapidly as the days get longer through the end of June. Then, as daylight hours shorten, the tops will start to yellow. Dick Both bends the dying leaves over and allows them to dry out for a week or two.

**Never store it in your refrigerator, he warns.**



photos by John P. Swan



Above, elephant garlic showing May flower stalk, which should be removed.

To left, single golden cloves of mild-flavored Elephant garlic measure 2 inches, sometimes more.

Then he pulls the plants while the dead leaves are still pliable and strong so he can braid the garlic for storage.

## *storage tips*

Dick hangs the braided cloves in an unheated garage where it keeps through the winter. Garlic needs good air circulation and keeps best in a cool, dry area. Never store it in your refrigerator, he warns.

If you haven't gobbled up your garlic by February, some of the cloves will start sprouting. Simply remove the bitter green sprout in the center and use the rest.

## *a gaggle of garlics*

'Silverskin' tops Both's list for vigor, flavor and succulent fat cloves. Another flavor favorite is 'Rocambole.' Elephant garlic rounds out the list. A huge, mild-flavored garlic, it should be eaten earlier since it is not a long keeper.

## **GARLIC SOURCES:**

Nichols Garden Nursery  
1190 North Pacific Highway  
Albany, Oregon 97321

Kalmia Farm  
P.O. Box 3881  
Charlottesville, VA 22903

Southern Exposure Seed Exchange  
P.O. Box 158  
North Garden, VA 22959  
(Interesting catalog — \$3.00)



Test plots of impatiens growing under shade cloth in the Penn State Flower Trials. Shade-loving tuberous begonias, grown from seed, are featured in the background.

# A Visit to Penn State's Fabulous Flower Trials

 By Derek Fell

*This unique cooperative endeavor between the seed industry and the academic world is in its 57th year.*

photos by Derek Fell



Marigolds — a specialty of about a dozen American and foreign plant breeders — are always a prominent feature of the test gardens at the Penn State Flower Trials. In the background are test plots of celosia, nicotiana, centaurea (bachelor's buttons), annual delphiniums and zinnias.

Pennsylvania has a rich heritage of growing, testing and selling garden seeds. In 1791 David Landreth Seed Company, the oldest seed company in North America, was established in Philadelphia, selling seeds to George Washington and Thomas Jefferson. By 1926 Philadelphia was the headquarters of more American seed companies than any other city. In addition to Landreth (which still exists as a small seed company in Baltimore), there was Burpee, Buist, Drier, Maule, Michell, Johnson, Stokes, Moore, Simon and Ely. Only Burpee, Stokes and Michell are names familiar to gardeners today. Descendants of the Stokes family carry on a mail order seed business out of Canada; W. Atlee Burpee is operated out of Warminster, and Michell specializes in selling flower seed to bedding plant growers from offices in King of Prussia.

An important facility for any seed company is the Trial Garden where seed varieties can be tested and evaluated from year to year, not only to ensure quality of old, established varieties, but to determine the value of new varieties. Burpee's former Fordhook Farm, located near Doylestown, was one of the most famous, at one time

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***Penn State's Department of Horticulture conducts the most comprehensive flower seed trials in North America, using mostly student help to grow thousands of flowers from seed.***

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running special trains from Philadelphia so home gardeners could visit the trials in summer.

The high cost of maintaining test plots today has forced Burpee and other seed companies either to reduce substantially the size of their trial gardens or to abandon them altogether, relying on a unique service provided by Penn State University, at State College, Pennsylvania. There, on seven acres near the football stadium, Penn State's Department of Horticulture conducts the most comprehensive flower seed trials in North America, using mostly student help to grow thousands of flowers from seed. In August the trials attract seedpeople from Europe and the Orient as well as North America for an event called The International Seed Conference, the highlight of which is a tour of the flower seed test plots. The test plots, open also to

the general public, look their most colorful from early July through early September, with the first week of August considered the flowering peak.

Plantings and demonstration plots were first established at Penn State in 1862 when a botanical garden was laid out in front of the old botany building. The present flower seed trials began in 1932 when W. Ray Hastings, founder and executive director of All-America Selections, the national seed trials, moved the AAS office from Atlanta to Harrisburg and urged the University to establish an official AAS test garden, with Dr. Earle Wilde (ornamental horticulture professor) as resident judge. Later, an AAS test garden for roses and for vegetable seeds was added.

The climate at Penn State proved ideal for evaluating flower seeds, with warm sunny summers, adequate natural rainfall and cool nights to produce spectacular displays of all the popular flowering annuals. The quality of the Penn State Trials was so good that the seed industry established a tradition of visiting there in mid-summer. Usually, a caravan of the seed dealers would begin their tour of test gardens at Burpee's Fordhook Farm, cele-

*continued*

## TO THE PENN STATE UNIVERSITY SEED TRIALS

(Open from July through  
early September)

brating the start of their odyssey with a big barbecue hosted either by David Burpee or by his nephew, Bill Burpee. Though they were competitors, the executives from different seed companies shared each other's experience and test gardens freely. From Burpee they would travel as a group to Penn State, then on to Harris Seeds in Rochester (NY) and Northrup King, in Minneapolis (MN). In recent years the test plots of Michigan State University, at Grand Rapids, have greatly improved and many seed suppliers visit there also, some crossing over into Canada to visit the extensive test plots of Stokes Seeds in St. Catherine.

The International Seed Conference is always held on a Monday in early August, starting with a tour of the flower trials in the morning, a tour of the vegetable trials in the afternoon and a banquet in the evening. Many seedpeople arrive on the previous Saturday, however, to allow several days to make careful notes on the performance of each variety. These notes not only help them decide what varieties to include in their catalogs or seed racks, but also help when writing the seed packet and catalog descriptions.

Varieties for testing are submitted to Penn State from the world's seed companies, who pay a small fee for each entry. Active participants include Sakata Seeds, a leading Japanese breeder; Royal Sluis, a big Dutch breeder; and Hurst Seeds, a British seed company that was established in 1560, four years before Shakespeare was born.

The flower seed entries are grown in 15-foot rows in rectangular beds featuring all one family, with a heavy emphasis on marigolds, petunias, geraniums, zinnias, salvias and snapdragons because of their importance for summer bedding. A special shade area features impatiens, begonias and coleus.

All the plants are now grown through plastic mulch to control weeds and retain moisture. The plants are labelled with name and source, except for the All-America entries which are given a coded number so judging can be impartial.

A contingent from the staff at Longwood Gardens, Kennett Square, normally visits the trials each year to spot new plants for their spectacular annual display gardens, and writers from several magazines generally attend to photograph and write about

Pa. Turnpike West to Route 322 (West) exit. Follow Route 322 (West) to State College bypass to Penn State Univ. exit (Park Avenue). Follow Park Avenue past football stadium. Two blocks past stadium are gardens, on the right.

For additional information call: (814) 865-2571.

***There are now seed geraniums that will bloom true-to-color within nine weeks from seed in a rich assortment of colors. They flower longer than geraniums grown from cuttings, and are not as costly to produce.***

new varieties, particularly the future All-America award releases.

Dr. Robert Fortney has been director of the trials since 1982, and he is eager to see more people visit in summer. They are free to take pictures and notes, but not to pick the flowers — not even to “deadhead” (the removal of faded blooms to prevent seed formation and encourage the production of new flower buds). None of the trials is deadheaded because seed executives, judges and home gardeners prefer to see how plants perform with minimum maintenance.

Richard “Lew” Krout heads a team of 12 students in the greenhouse who receive the seed samples in January, record names, assign numbers, start seedlings and handle transplanting, which generally occurs about Memorial Day.

Among other specialists associated with the trials are Dr. Richard Craig, who runs a plant breeding program that produced the very first seed geraniums at a time when disease was seriously affecting the production of geraniums grown from cuttings. There are now seed geraniums that will bloom true-to-color within nine weeks from seed in a rich assortment of colors. They flower longer than geraniums grown from cuttings, and are not as costly to produce.

A good showing at the Penn State Flower Trials can propel a new flowering annual into popular demand. When the seed dealers saw the deeper blue coloring of *Salvia farinacea* ‘Victoria’ over the estab-

lished favorite, ‘Catima,’ it was an instantaneous hit and every major seed house in North America placed substantial orders with Clause, the French breeder. Similarly, when Sakata Seeds exhibited an improvement over the old ‘Forest Fire’ plumed celosia, calling their Penn State entry ‘Forest Fire Improved,’ seed houses immediately dropped the old ‘Forest Fire’ in favor of the obviously superior newcomer, exhibiting shimmering crimson plumes and bronze foliage.

Conversely, when an established variety shows signs of irregularity at Penn State, seed producers can put pressure on the originator to improve it and threaten to withdraw the variety from their catalogs. There is the story of one highly reputable plant breeder, who arrived at Penn State a day ahead of the crowd, only to discover, to his horror, that his new breeding sensation — a mixture of dwarf triploid hybrid marigolds — contained a “rogue” (an off-type plant) that was spoiling the look of the planting. He quickly grabbed the offending plant, yanked it out by the roots and tossed it behind a fence. Unfortunately, he was spotted by a sharp-eyed seedman with a sense of humor, who retrieved the “rogue,” packed it in a gift box with a bright ribbon and took it to the banquet. When awards of merit were presented that evening, the breeder of the marigolds almost died of embarrassment when he was called forward to receive “the rogue of the year award.”

The road to the State College campus, at State College, is one of the most beautiful in Pennsylvania if you take the Pennsylvania Turnpike Extension to Route 80 West. It's a comfortable three-hour drive with mountain ranges almost the entire distance. Rolling hills and mountains also provide a spectacular backdrop to the colorful flower trials. Make a date to attend in 1990. It's an experience you will long remember not only for the visual pleasure of so many outstanding flowering annuals, but also for the new planting ideas and new variety selections likely to grab your attention.

Derek Fell was catalog manager with W. Atlee Burpee for six years before leaving to start an extensive horticultural picture library and to write garden books. He has rarely missed a year at the Penn State Flower Trials since attending his first 20 years ago.

photo by Gina Burnett



By Kathleen Mills, Assistant Horticulturist

## SOIL

**H**ave you ever wondered why your neighbor's garden looks better than yours even though you spend just as much time tending to its needs. Maybe your neighbor has learned the secret to a healthy garden: when the soil is in great shape, the plants above the soil line will thrive.

Hotline callers often ask questions about their plants when many of their problems are really soil-related. Putting time and effort into a garden before a single plant is placed pays off over the life of the garden, with less watering, easier weeding, healthier plants, and less disease problems.

### what is "good" garden soil?

Good garden soil maintains a dynamic relationship with the plants it supports. To enable the minerals, nutrients, and water that you add to the soil to interact effectively with both the soil and the plants, a balance between water and air in the pore spaces of the soil is essential. Nutrients available in the soil must be released to the roots.

Good soil has a pH appropriate to the plants in it, provides the roots with the right balance of water and oxygen, with nutrients and a high Cation Exchange Capacity (CEC). CEC is the measure of how well the soil holds onto the nutrients that pass through it, storing them for the growing roots.

The pH measures the acidity of the soil. In the Delaware Valley area soil tends to be slightly acidic and tends to acidify over time. So for the most part limestone will be the required soil amendment, which will raise the pH, making the soil less acid. The proper pH for most garden plants lies in the range of 6 to 6.5; for ericaceous plants such as azaleas and rhododendrons it should be in the range of 5.5 to 6.

The main nutrients plants require are

nitrogen, phosphorous, and potassium (N-P-K). Nitrogen is used in great quantities by growing plants and is stored in organic matter. Phosphorous is important in the reproduction of cells, affecting a plant's ability to grow. In strongly acid soils, phosphorous binds tightly to soil particles, plays a part in the permeability of cell tissue. This means that the ability of nutrients to move into and out of cells and be translocated through the plant is affected by the availability of potassium in the soil.

Good garden soil also has a good texture; that is the soil has enough pores to hold air and water for the roots. The texture, as well as the CEC of soil, can be improved by adding organic matter, e.g. peat moss or compost. Another important ally to the texture of garden soil is the worm. Castings from worms increase the humus content of the soil making nutrients more readily available.

### how do I get "good" garden soil?

The easiest time to improve your garden soil is before you put in a garden: test your soil. With the results of the test in hand you can tailor the soil treatment to your garden and the type of plants you will be growing. In an established bed, test the soil every two to three years.

A soil test provides you with an abundance of information about the soil's nutrients, its pH, its CEC, how much fertilizer to use, and other amendments you may want to add to the garden.

Prepare the soil before any plant is put into the ground. The fall is the best time to adjust pH, add slow-release fertilizers and organic matter. Work them into the soil as deeply as possible. Remember that double digging isn't just for the perennial bed. It takes time to dig a bed, but the rewards are great. Sowing a cover crop to be tilled in the following spring is a good way to add additional organic matter and nutrients to the soil. During the winter and early spring the amendments are integrated with the soil, so that when you are ready to plant next spring, all the plant's basic needs are present.

### what if your garden is already planted?

Improving garden soil in established beds is a slower, piecemeal process. Any time you replace a plant rejuvenate the soil in the area. Add organic matter and slow-acting, organic fertilizers.

Organic matter, whether in the form of peat moss or your own compost is the single best thing with which to amend your soil. The texture of soil is improved so that

water and air are both held, readily available to the roots. The soil's CEC is also increased because the soil can now hold onto nutrients and release them to the growing plant.

Don't wait for your plants to turn a sickly green before fertilizing them. Work organic or slow-release fertilizers into the soil around the plants regularly. A steady nutrient supply avoids the feast and famine syndrome, which can stress plants.

Monitoring the pH in established beds is another good way to keep plants healthy. At the proper pH the nutrients in the soil are readily released to the plant. The improper pH binds the nutrients too tightly to the soil, making root absorption more difficult. Raise the pH by adding limestone to the soil or lower it by adding sulphur. If your pH needs radical adjustment, don't do it in one massive application. Rather gradually increase or decrease the pH over a period of one to two years using several smaller applications.

Mulching the established garden also helps to slowly improve the quality of the soil. Mulch keeps plants cool and holds moisture in the soil; as it decays it also adds humus, or organic matter to the soil.

### soil for container plants

Good garden soil is important, but in the limited world of the container-grown plant, the proper potting mix is essential.

Plants grown in containers, either the indoor or outdoor varieties, don't have the luxury of reaching far and deep to find the water, air, and nutrients they need. The

*continued*

### READING ABOUT SOIL

*Gardening In Containers*, Ken Burke, ed., Ortho Books, 1983.

*Soils and Soil Management*, Charles D. Sophe & Jack V. Bairo, Reston Publishing, 1982.

*Soils: An Introduction to Soils and Plant Growth*, Roy L. Donahue et al, Prentice Hall, Inc., 3ed. 1971.

*Your Garden Soil and How to Make the Most of It*, R. Milton Carleton, Lancaster Press, 1961.

These books are available in the PHS library.

PHS Hotline: Mon - Fri 9:30 -12:00; Call 922-8043.

media that they are put in must provide these essentials. Soil for containers should be tailored to the plant that will grow there.

Sterile soilless potting mix is a great place to start, but don't stop after opening the bag. Most brands need to be amended either with additional perlite, vermiculite, sand and/or peat. For example, acid-loving plants should have extra peat in the mix to help keep the pH slightly acidic.

Drainage is important in a contained environment so that excess water can be released from the root zone. Because container-grown plants must be watered more frequently, nutrients are quickly leached out of the potting media, making a regular fertilizing schedule a must. It's easiest to fertilize lightly with each watering, giving the plant a steady supply of nutrients. Every few waterings eliminate

the fertilizer to insure that fertilizer salts do not accumulate to a level toxic to the plant.

A good growing environment for any plant begins with good soil. Invest the time in preparing your soil and both you and your plants will benefit.

Kathleen Mills is assistant horticulturist for the Pennsylvania Horticultural Society.

G R O W I N G I N T E R E S T S

# Camassia leichtlinii

By Toni Brinton

photo by L. Wilbur Zimmerman

This spring during the first three weeks of May many of the visitors to my garden asked about a tall blue spiky flower; it was *Camassia leichtlinii*. On a visit to the Henry Foundation in Gladwyne, I saw several species of *Camassia*, and a wide variety of coloration in *C. leichtlinii* (pale white to deep, almost violet). The flowers are star-shaped on 2½-foot sturdy stems and mine are a clear deep sky blue. They open from the bottom to the top, the bloom lasting at least two weeks. This year it was longer because of the cool weather. Native to the western part of this country and Canada, the attractive iris-like leaves were 3-feet tall this spring. No insects or diseases bother either the foliage or the flowers. My bulbs came from the Scott Foundation's sale about five years ago, and have thrived both on the north and south side of my house. They don't seem particular about soils. Until this year, I hadn't seen them advertised. Now, W. Atlee Burpee has listed them in their bulb catalog. Maybe other bulb purveyors will list them also. Try them, you'll like this camass.



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Toni Brinton is an enthusiastic dirt gardener in Chadds Ford. She's a former member of the PHS Council and former chair of the PHS Library Committee. Brinton is a member of the board of directors of Bartram's Garden.

## LOOKING FOR *GLEDITSIA TRIACANTHOS* 'BUJOTII'

Even with the generous assistance of the major arboreta and botanical gardens of the U.S., and some abroad, as well as the help of the U.S. Department of Interior and Agriculture, my research of over a year concerning the *Gleditsia triacanthos* var. *pendula* 'Bujotii' is at a baffling, vexing impasse.

There grows a breathtaking, mature specimen in New Hampshire alleged to be unique in the entire country.

Can any readers direct me to another example of this rare weeping honeylocust, and provide further information on its culture and propagation.

Evi Bossanyi Loeb  
Jenkintown, PA

## PREPARING FOR THE NEXT DROUGHT

There are some additions to Anne Cunningham's excellent drought list that appeared in the May/June issue of *Green Scene* you might want to consider.

Most of the water used by homeowners in the Delaware Valley is used on lawns. People can reduce lawn watering needs by mowing the grass no lower than 2 inches, and 2½ inches is even better. Fertilize the lawn with a slow-release nitrogen fertilizer in the fall instead of in the spring to improve drought resistance of turf.

The amount of water per week a plant actually uses is about ¼ of an inch in the spring and fall and about ½ an inch in the summer. The amount of water one must apply is directly related to the device that is used. An overhead sprinkler on closely mowed lawns and unmulched gardens requires applying an inch of water to get that ¼ of an inch to the plants. The rest is lost to runoff, evaporation and the water table.

If a homeowner uses a sprinkler on a lawn with higher grass he/she can get by with applying only ½ inch. Water early in the morning when the wind is light to reduce evaporation loss. If gardeners mulch their gardens with 2 to 4 inches of organic mulch using a geotextile liner (a cloth-like commercial fabric used between organic mulch and ground, available at garden centers) under the organic mulch where possible and they use a drip irrigation system under the mulch they need apply only ¼ of an inch of water — just as much as the plants actually use. Increase amount

to ½ inch in the heat of the drought.

Other tips: use hydrogels (water-absorbent crystal designed to repeatedly absorb and release water when mixed with soil, available at most garden centers) in containers, apply a foliar spray of a kelp or seaweed extract to all plants to increase drought resistance, and use a moisture measuring meter to control a computerized water controller. A critical step is to deeply water all shrubs and newly planted trees in the late fall before the ground freezes hard. Then use a winter mulch and antitranspirants to reduce water loss during the winter. There is even some evidence that antitranspirants are useful during the growing season for reducing a shrub's water loss, but that research is still coming in.

I am convinced that conserving water will be the gardener's number one concern in the next few years. We all need to share our ideas about how to save that precious stuff.

Jeff Ball  
Springfield, PA

## OH DEAR, THE DEER AGAIN

Alas our "Scene" is no longer quite as "Green" as it was in years past. Imagine the moustache of Groucho and you can picture the walls of our house with a tuft of ivy growing 6 feet above ground level; below are bare vines. Decades of established

ground cover under Norway maples gone. Our treasured mountain laurel, dozens of azaleas, rhododendrons, yew, even juniper and hosta all resembling barely rooted tumbleweed. These delicacies were not "on the menu" last spring.

Yes, you have guessed correctly; our beautiful, once wild, four-legged visitors have, to their utter delight, acquired such discriminating palates in our gardens that no amount of fencing, netting, repellents, even cakes of Irish Spring (someone's "last resort" suggestion) can halt their suburban assault. Short of Ruanda's emotional elephant airlift, deer in the Delaware Valley are here to stay.

I suspect that even landscape designers, in fairness to their clients, are making thoughtful reassessments of deer populations and their ever-changing horticultural "likes" and "dislikes."

In concluding, I would like to warn motorists to observe all roadside deer and speed limit signs (Bambi likes headlights). Also, it is not uncommon, for us, to hear gunshots in the early a.m. echoing from Fairmount Park. Clearly, we can't solve the problem individually; we must address the problem collectively and soon.

Mary D. Starr  
Lafayette Hill, PA

P.S. I assume everyone is aware of another "side effect": Lyme's Disease.

## An Invitation to Plant Societies

### SEND US YOUR PLANS FOR 1990



We will publish information about one major plant sale and one major event for each area plant society located in the Delaware Valley from January 1, 1990 through December 1990. Send the information to Carol Lukens (*Green Scene*, 325 Walnut St., Phila., PA 19106.) Please use the following format:

NAME OF CHAPTER AND SOCIETY: \_\_\_\_\_

	Event #1 — Major Event	Event #2 — Plant Sale
Name of Event	_____	_____
Dates of Event	_____	_____
Time of Event	_____	_____
Location (full address)	_____	_____
Fee, if any	_____	_____
Name of contact person	_____	_____
Address	_____	_____
Phone Number	_____	Publish <input type="checkbox"/> Yes <input type="checkbox"/> No

# The Plantfinder

A free service for *Green Scene* readers

If you can't locate a much-wanted plant send your name and address (include ZIP), the botanical and common name of the plant to Plant Finder, Green Scene, PHS, 325 Walnut St., Philadelphia, PA 19106.

## WANTED

*Tanacetum parthenium aurea*, *Rubus cockburnianus*, *Fragaria x ananassa* 'Variegata', *Brunnera macrophylla variegata*, variegated tansy. Contact Donna Bickley, 13712 Princess Anne Way, Phoenix, MD 21131.

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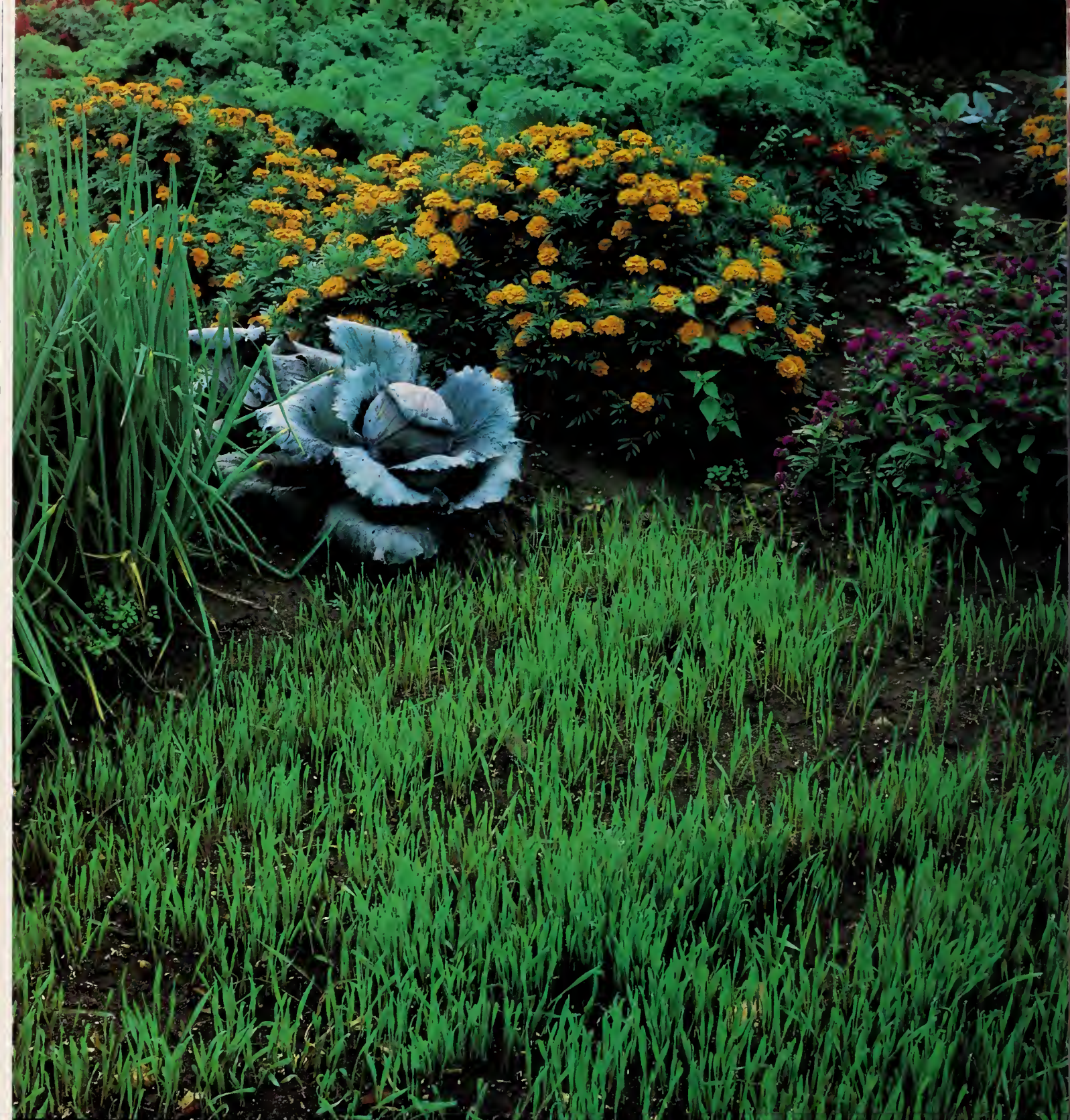
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One of the best ways to improve any soil is with a cover crop of fall-planted winter rye. As vegetables are harvested, immediately sow rye seed in the empty spaces. As the growing season winds down sow more among the still-standing flowers and vegetables. Winter rye stays green all winter but is dormant; in the spring it resumes growing. When a foot high, turn it under for a green manure. See page 4.

# GREEN SCENE

THE MAGAZINE OF THE PENNSYLVANIA HORTICULTURAL SOCIETY • NOV./DEC. 1989 • \$2.00



*A Flower Arranger's Diary at Stan Hywet Hall*  
See page 3



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### Front Cover

A festive board set for Christmas dinner. Fruits and greens complement the Val St. Lambert glassware and the handsome Royal Doulton service plates.

front and back cover photos by  
Barbara Schleuter

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# A Flower Arranger's Diary



By Jane Herron DuPree

Many special events are held at Stan Hywet during the holiday season. The 14-ft. pine tree surrounded by antique dolls and toys graces the Great Hall. Dozens of poinsettias are nurtured in the greenhouse from year to year and range in size from bushes to trees six ft. tall.

photo by Barbara Schlueter

## A Flower Arranger's Diary



photos by Barbara Schlueter

*Flowers for year-round arrangements for the elegant rooms in Stan Hywet Hall, a National Historic Landmark, come from the beautiful half-acre cutting garden, only one of the Manor's many gardens.*

Stan Hywet's cutting garden provides both annuals and perennials as well as many everlasting flowers for drying. Here Jane DuPree harvests white salvia to use during the winter. She and the 20 other arrangers keep fresh flowers in the house for six months, changing them twice a week and refreshing them in between.

### FLOWERS AT STAN HYWET HALL AND GARDENS

Stan Hywet Hall and Gardens, a National Historic Landmark in Akron, Ohio, has been recognized for its flower gardens and landscape for more than 70 years. The Tudor Revival Mansion was built by F.A. Seiberling in the early 20th century and upon his death in 1955, the estate was given to a Foundation and opened to the public as a museum and civic center.

During the past 15 years arrangements and preserved flowers have

become a special attraction of the Manor. Twenty volunteer arrangers work throughout most of the year, under the guidance of Jane Herron DuPree, bringing warmth and beauty to the museum rooms.

Stan Hywet Hall is open Tuesday through Saturday, 10 am to 4 pm. Closed Mondays and all major holidays. Phone (216) 836-5533.

For more information write Stan Hywet Hall and Gardens, 714 Portage Path, Akron, Ohio 44303.

### April 15th

It's so good to be home, even though I enjoyed the change of pace and excellent weather in Florida. Before unpacking, I drove to Stan Hywet to see if there were signs of spring underneath the light frosting of snow. I was delighted to see long sprays of forsythia showing color along the huge hedge that cascades into the brick parking well. I could visualize a large bouquet of dazzling yellow against the oak paneled walls of the Great Hall, lifting the spirits of all who long for spring.

Next — checked the daffodils, which are naturalized in a grove of hardwoods and along the edge of the Great Meadow. A profusion of early bulbs stood tall, with bright trumpets just asking to be picked — so I obliged. I'll unpack tomorrow.

### April 19th

The Flower Arrangers had a workshop in the Carriage House today, to exchange ideas on arranging spring bulbs. My sister, Meg, brought daffodils — each picked with some of its own foliage and held together with a rubber band near the base of the stems. She anchored different sized pin holders in a flat-bottomed bowl and then filled each holder with clumps of daffodils, as they grow. Very effective.

### May 1st

Today, thousands of tulips in the elliptical beds are ribbons of glowing color. They are favorites of mine and a joy to arrange. When a bouquet is left alone, however, beware. Tulips continue to grow and open after being put in water — their limber stems bend every which way, often destroying any semblance of design or composition. I usually wrap them in a tube of newspaper and plunge them into a tall container of cold water to harden until I'm ready for them. A little egg white on the edge of the petals will keep blooms from opening too far.

*continued*

*the green scene / november 1989*



The Flower Room is just as it was in Mrs. Seiberling's day. The outside door gives easy access to the cutting garden. Equipped with sink, refrigerator, stainless steel counters and tile floors, it is a busy place six mornings a week. Visiting guests often stop to enjoy the fragrance and watch the arrangers work.

# A Flower Arranger's Diary

## May 20th

Because of heavy rains during the past month, I haven't explored the half-acre cutting garden until today. Every empty bed is filled with seedlings grown in the Stan Hywet greenhouses and two long rows of perennials are large and "leggy" with few blooms. They need sun — so do we all!

Four beds of shoulder-high delphiniums are showing shades of blue and lavender, but the rains have weakened their thick stems. Since the scale of Stan Hywet makes tall flowers indispensable, I'll try to insert slender bamboo sticks into their hollow stems for extra support, before arranging them.

## June 3rd

Nothing can outshine the glorious collection of 300 peony plants given to the Foundation some years ago. I am partial to the single and Japanese varieties for cutting. Their elegant blooms and sweet fragrance herald the coming of summer.

Like delphiniums, peonies have the scale necessary for large arrangements and they are frequently used together in the Manor. The foliage of peonies must not be overlooked, for it comes in many interesting shapes — large and small, rounded and pointed and some sharply indented. In the late summer some leaves turn shades of chartreuse, ivory, pink and russet rose. All of these are excellent filler for bouquets.

## June 15th

Left for the cutting garden after breakfast wondering what I would find for tomorrow's bouquets.

The first half of June is a difficult time — the peonies are past their prime, the roses still in bud and the spring flowering trees and shrubs are through blooming for another year. I call it "scrounge" season and sometimes enjoy it more than "blooming" season because it requires a discerning eye and some imagination.

This morning I walked down a lane called Pleasure Drive, which circles the back of the estate. There, among rocky ledges, I discovered long branches of Solomon's-seal, Christmas fern, May apples, green money plant and an assortment of hosta leaves. With the addition of a few rhododendron leaves and hydrangea blooms, I have the material for a lovely green arrangement.

## July 5th

July is the month of daylilies — wondrous plants. They come in all sizes, a large

variety of colors, grow most anywhere and are pest free — even chipmunks don't bother them.

Today I cut five stems of the lily 'Hyperion,' a highly favored cultivar of citron yellow hue. Each of these had several open flowers and oncoming buds. I used them as accents in a large bouquet of field material. Tomorrow and the next day I will remove the faded blooms and redirect the newly opened flowers as needed. This seems to me a small price to pay for the use of these trumpet-shaped beauties.

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*I usually wrap tulips in a tube of newspaper and plunge them into a tall container of cold water to harden until I'm ready for them. A little egg white on the edge of the petals will keep blooms from opening too far.*

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## July 18th

The grounds crew moved through the cutting garden today removing faded flowers as they went and cutting back 13 beds of snapdragons and all the delphiniums. This rejuvenates the plants so that they will give a second bloom.

The mid-summer abundance and variety of flowers inspired me to try new colors and shapes for specific rooms in the Manor.

Since I like to pick for one bouquet at a time, I filled my first buckets with pink *Cleome*, long-stemmed wine-colored

*Cosmos*, lavender *Physostegia*, sand cherry and some pink hybrid lilies, all of which will look well against dark paneling.

In another bucket were crested and plumed *Celosia* in hot colors mixed with large yellow and coral *Zinnia*. These, with a touch of fennel, will brighten the Linen Fold Hall.

## August 3rd

As I surveyed the cutting garden to see where I would start to pick, I discovered that all the leaves of two beds of *Lavatera* had been eaten by rabbits or a groundhog — for the second year. Thank goodness they don't like *Lisianthus*, and six beds are thriving nearby. More inquiries are made about *Lisianthus* than any other flower in the garden. A fairly recent introduction as a cut flower, and now available in garden stores, this annual's popularity is well deserved.\* Flowers of lavender, purple, pink and white top graceful multiple stems with succulent leaves of greyish green. When cut, they are long lasting and especially adaptable to formal centerpieces.

## September 10th

While in the garden this afternoon, a visitor asked me what shrubs she should plant (that would be useful) for flower arranging. I suggested sand cherry, variegated golden privet and various berried

\* *Lisianthus* is difficult to grow from seed. Although not always available in potted form, it's worth hunting for. It's easy to transplant into good soil in a sunny location.



A silver urn holds a bouquet of single peonies, delphinium, Siberian iris and lunaria for a touch of bright green. Shades of blue have a tendency to disappear in a dark house. A spotlight or window is helpful.





A casual basket of flowers from field and garden include Queen Anne's lace, daisies, and sunflowers. The daylilies are used as a bright accent and the colors are grouped to make them carry well. The birch alley in the background overlooks the Cuyahoga Valley beyond.

viburnums. I also urged her to include some herbs such as fennel and dill for interesting line and curly parsley for a strong green filler in informal bouquets.

For a small shrub, which is a comfortable size for a perennial bed, I like blue mist (*Caryopteris x Clandenensis*), a graceful plant with curving stems covered with grey-green leaves and light blue flowers. It is possible to make a few flowers go a long way if you have attractive foliage.

**September 24th**

Fall is the time to analyze the successes and failures of summer: To determine what to grow and what not to next year.

This afternoon, I met with horticulturist Carl Ruprecht, who designs and implements Stan Hywet's many gardens and has a good feel for the flower arranger's needs.

How fortunate we are that he likes to try unusual plants — this makes it exciting for us, and if his choices arrange easily and condition well they'll be back next year.

This year *Echinacea* 'Bright Star', an attractive and very hardy perennial, has been widely used. Deep pink petals surround a copper-colored cone and the large blooms are fine accents in an arrangement.

**October 10th**

All good things must come to an end. The garden looks pretty seedy but the flower arrangers are "making do" with late roses, mums and assorted fillers until a killing frost puts us out of business.

After a three-week rest we will open many airtight drums filled with hundreds of flower heads and foliage preserved in silica gel. Some of the flower arrangers have

done double duty by drying in their spare time — while other volunteers work from April to October at this precise and tedious craft. When the humidity drops below 50%, the large laundry room becomes a workshop for making spectacular preserved arrangements that will last for five months and replace the fresh bouquets in the Museum rooms.

With the exception of Christmas and Easter decorations, our job is done.

We can now rest on our laurels.



Jane Herron DuPree is the author of *Inside/Outside, The Flowers of Stan Hywet*. She organized the Flower Arrangers in 1974 and has served as the volunteer chair since then. She is a member of the Akron Garden Club, which was started by Mrs. Seiberling in 1925.

# Two Pennsylvania Christmas Tree Farmers

 By *Connie McNamara*

There are between 12,000 and 15,000 Christmas tree farmers across the country. Pennsylvania has about 1,600 tree farms. Alex Kessel and Tom Balthaser are two of the faces behind those statistics.

## *Alex Kessel*

Alex Kessel is a gray-haired man with a friendly smile and a ready handshake.

He always wanted to be a "big time farmer," he says, and today, well into middle age, he has realized that dream.

His Seven Springs Tree Farm, named for the number of springs on the property, is nestled among the rolling hills of south-central Pennsylvania, a mile west of Cashtown.

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*"What you're really doing is fighting Mother Nature when you try to make a Christmas tree to satisfy the market," Kessel said.*

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Kessel is familiar with each one of the nearly 50,000 trees that grow on the scattered levels and sloping inclines of his 47-acre farm. As he takes a visitor on a tour, he keeps a wary eye on the lookout for a troublesome brown patch spotting a tree or a stray branch in need of shearing.

Kessel, who attended forestry school in his younger years, is obviously a nature-lover. He shouts a greeting to a rabbit that

scampers across the path of his truck, and he gives a hearty wave to a neighbor's horse.

"I like the trees," he says. "I like to be outdoors."

His reasons for becoming a Christmas tree farmer are a little more complicated than that.

He and Jane, his wife, have lived on the picture-perfect property, which features a variety of spectacular views, since 1961.

Then working with the Air Force, Kessel decided to buy the property and give farming a try. He is now a full-time farmer.

Over the years, the couple raised sheep and tried growing tomatoes and alfalfa. Despite the back-breaking work, they realized little profit from those endeavors.

In the late '70s, just when they were thinking about selling their farm, the Kessels decided to give Christmas trees a try.

Now they wish they had gotten started sooner.

Kessel said he planted about 42 of his 47 acres all at once with about eight different species of trees, which would mature at different times.

Today, all 47 acres are planted with 14 species. Among the types of trees growing on the farm are scotch pine, Douglas fir, Frazier fir, *Abies concolor*, blue spruce and Austrian pine.

The variety of trees gives him an edge over his competitors, he said.

Kessel said he now plants nothing younger than a 3-1 seedling, a 4-year-old seedling, which has been transplanted once. Although the older seedlings are more expensive, he has learned from experience that they have a higher survival rate.

He hopes for about a foot of growth a year on each tree. He shears the tops of the trees so that there won't be any bare spots without branches later on. The shearing is done so that the tree grows into the bushier shape the Christmas tree buyer wants.

Kessel also gives nature a little corrective help since the buyer wants a tall top branch on which to hang the angel. He puts corrective ties on branches to train them to grow upward on their own.

"What you're really doing is fighting Mother Nature when you try to make a

photos by Don Jeffrey, Gim & Bear II



Eight different species are represented among the 50,000 trees lining the sloping hills of Alex Kessel's Seven Springs Tree Farm.



After several false starts, Alex Kessel finally realized his life-long dream of farming.

Kessel starts out with four-year-old seedlings, which have been transplanted once. He tries to get a foot of growth on each tree each year.

Christmas tree to satisfy the market," Kessel said.

As the trees get older, they require less work as long as the grower has done his job right during the early years, he said.

For the past two years, Kessel has sold about 5,000 trees a year — about three-quarters of those to wholesale buyers and the rest retail.

He wants to keep that sales figure pretty constant, so he plants between 8,000 and 10,000 seedlings a year, realizing that a percentage of those trees will never make it to the market.

His love for nature combined with a

sharp sense of the market have made his endeavor a success.

During the holidays, his wife runs a Christmas shop at the entrance to the property where tree buyers can also purchase wreaths, garlands and ornaments.

Customers are permitted to wander anywhere on the farm to find the tree of their dreams.

Last year, he sold more blue spruce trees than any others. Kessel has also noticed an increase in the sale of dug trees, which buyers can then plant in their yards after Christmas.

He's also been working to educate his

*continued*

photos by Don Jeffrey, Grin & Bear It!



Tom Balthaser makes a mid-summer examination of a young tree.

customers about the merits of other trees, such as the less common *Abies concolor*, which has similar coloring to the blue spruce but with longer, softer needles.

One of the rewarding parts of the business is seeing families come back year after year, bringing grandparents and children and enjoying an age-old tradition, he said.

Because one of the main reservations a buyer has about bringing a real tree into the home is dirt from that tree, Kessel purchased a shaker, a machine that shakes dirt and loose needles from the tree.

The tree is then machine-wrapped into a narrower, more compact form for the ride home.

Managing a tree farm is a monumental task, and Kessel currently has six boys helping him with the work.

Finding good help is by far his most challenging problem, he says. Many teens aren't willing to do the grueling labor necessary.

### Tom Balthaser

Tom Balthaser is another man who turned his love for trees into a business.

Balthaser has been selling trees at his Perry Valley Tree Farm near Millerstown for about seven years.

In addition to running the tree farm, he holds down a full-time job as well as managing an orchard on the property.

His introduction to the Christmas tree growing industry seems as indirect as Kessel's.

An employee of the federal Soil Conservation Service, Balthaser and his family were transferred to Perry County from Berks County about 19 years ago.

At first, he started selling just a few trees to his neighbors. Then he started to think

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*Deer are another problem; bucks rub the trees and take all the needles off in some sections. He suspects he loses about 100 to 150 trees a year this way.*

---

about going into the business in a more organized way.

"I've been interested in trees all my life — ever since I was a little kid," Balthaser said. "I've always been able to grow trees."

A forestry school graduate, Balthaser joined the Christmas Tree Growers Association to learn the secrets of the trade.

He freely admits that the business has been a learning process, one that has not always been a success.

Originally, Balthaser decided to plant trees on steep inclines of his property which wouldn't be suitable for other types of farming. That, he now realizes, was a mistake.

It was also a mistake to plant Douglas firs on a low-lying area of the farm where the cold air seems to settle and the frost seems to hit harder. Those Douglas firs haven't fared very well, and he now plans to plant some Frazier firs, which he said are more tolerant of the cold and which need a deeper soil that will hold moisture.



Balthaser said he began planting "a little of this and a little of that." Now, as the industry grows more competitive, he plans to start growing more Douglas fir, since that species is rapidly growing in popularity. The Douglas also brings more money than a scotch pine, for example.

Like all growers, Balthaser is at the mercy of nature, and nature is not always cooperative.

Balthaser said he lost about 50 percent of the seedlings he planted in 1988 due to the drought.

He's also been having a mysterious freeze problem with the Douglas firs, which



Balthaser's Perry County Tree Farm got its start seven years ago when he started selling a few trees to friends.

other growers have also been experiencing, he said.

Something kills the buds on the trees before they open, stunting the growth of the trees. He has rows of Douglas fir which are seven or eight years old and remain about 3 feet tall.

Deer are another problem; bucks rub the trees and take all the needles off in some sections. He suspects he loses about 100 to 150 trees a year this way.

During most months of the year, Balthaser comes home from his full-time job and heads out to tend his trees. He mows the ground between the rows of trees

a couple of times during the spring and summer, sprays at various times, plants new trees and shears the trees that are growing.

January through March is the only slow season, he said.

Despite the hard work, he enjoys it.

"When you're done, you did something," he says. "You can see what you did."

Balthaser also runs a choose-and-cut operation during the holidays, and sells to two other retailers. Last year, he sold 700 trees and he would like to get to the point where he's selling 2,500 trees a year.

He plans to plant the remaining five

acres of his farm with additional trees in the near future. While he would someday like to make the Christmas tree business a full-time occupation, he's not convinced his farm is big enough to support his family.

In the meantime, he continues to work at it while also growing and selling apples and peaches.

Balthaser gets help from his wife, Audrey, his 12-year-old son, Mark, and 17-year-old daughter, Kristen.

He recently gave his son 300 seedlings to plant on a plot of land. The plan is for his son to tend the trees until they are old enough to sell so he can earn some money.

*continued*

# The Christmas Tree Industry Booms

 **Connie McNamara**

**T**he baby boom generation's attraction to the "real thing" — 100 percent cotton clothing and natural foods, for example — carries over into their choice of a Christmas tree. While that's good for just about everybody in the Christmas tree growing industry, it's especially good for those who run choose-and-cut operations.

On choose-and-cut plantations, customers walk through the rows of growing trees, select the one they want and then cut it down. Buyers get more than a Christmas tree, they get a Christmas experience.

The current fascination with the tradi-

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*Unless the seller alerts the customer, the average consumer won't know they are buying a West Coast tree. The tree looks fresh, but the family faced with needles on the floor a few days later may be a family that buys an artificial tree next year. "The problem," said one grower, "could end up ruining a whole industry."*

---

tions of the past has meant boom times for 5,000 choose-and-cut growers in the country. That number, says Dave Baumann, associate executive director of the National Christmas Tree Growers Association, is growing.

Christmas tree growing has evolved into a complex and sophisticated industry. Growers agree that the quality of the trees we now see is a dramatic improvement over years ago, but they stress that in today's market, high quality is only the first step.

Fred Strathmeyer Sr., president of the National Christmas Tree Growers Association, grows trees on 1,000 acres in Pennsylvania and has been in the business for almost all of his 65 years. When he first started out, he says, no one considered growing Christmas trees an industry.

The statistics show a sharply changed picture:

- In the early 1960s, there were about

5,000 Christmas tree producers in the United States, according to Baumann. Today, there are more than 12,000.

- These producers grow trees on about one million acres across the nation.
- About 34.1 million trees were sold last year. The number of trees sold has been increasing by 2 to 2½% annually during the last 10 years, Baumann said.
- A third of American households buy real Christmas trees, another third buy artificial trees, and another third don't buy a tree.
- Plantation growing was only getting started in the mid-'50s, Baumann says. Today, about 90% of our Christmas trees are grown on plantations as opposed to the past random cutting.

## *king of the trees*

As the industry has changed, so have the types of trees we are buying.

Nationally and regionally, scotch pine, with its medium-sized, sharp, bristly needles and blue-gray color was the king of the industry for years. Although it tends to lose its needles relatively quickly, its firm branches are good for hanging ornaments and it is usually less costly than other trees.

About 10 years ago, the Douglas fir began to nudge it from its perch, although scotch pine is still the favorite, growers say.

Douglas fir has softer-looking needles, is more fragrant and can be grown fairly easily over a wide area of the country. It has good needle retention and can command a better price.

According to Baumann, 36% of the trees purchased nationally are scotch pine and about 20% are Douglas fir. Balsam fir and white pine account for 8% each and the balance of trees include a number of other species.

In Pennsylvania and along the rest of the East Coast, however, the third most popular tree is the Frazier fir. Its needles hold well and its branches are stiff. Strathmeyer Sr. said the Frazier fir can be grown successfully in the Northeast, but it must be grown on low areas where the soil is deep. He said East Coast growers have begun planting large numbers of these trees in the past three to four years.

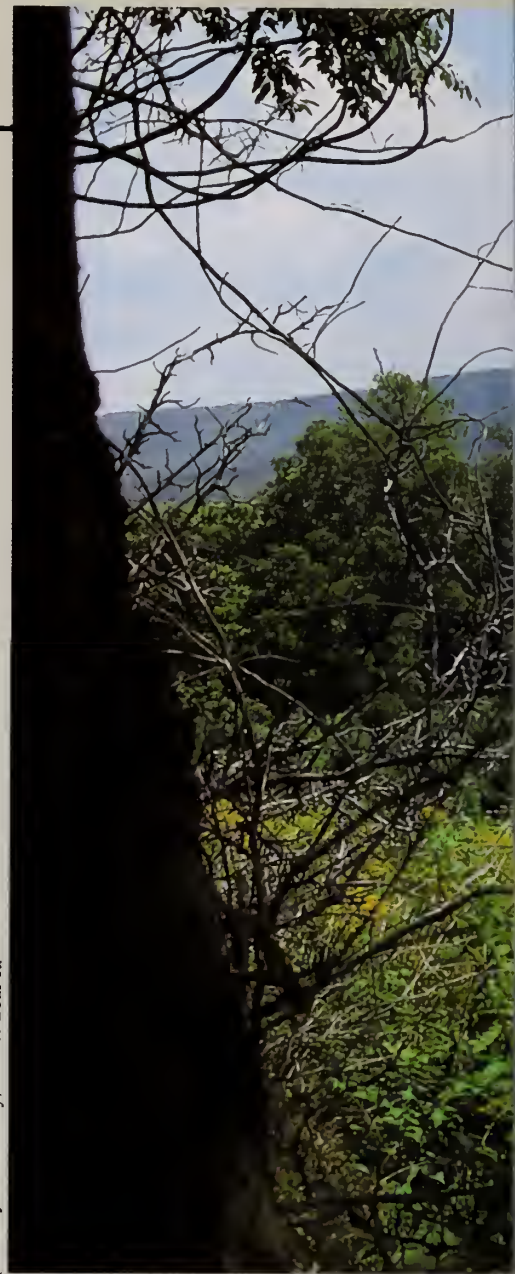


photo by Don Jeffrey, Grin & Bear It!

## *problems for local growers*

The ever-growing popularity of the Douglas fir has caused some problems for local growers. When Douglas fir began catching the fancy of the market, growers in Pennsylvania and the region found that they were not producing enough of the trees to meet the demand. That left the door wide open for West Coast growers to move into the region and capitalize on the market. Growers admit that West Coast trees are beautiful and they are sold at competitive prices. By "West Coast trees" they are generally referring to Douglas firs grown in Oregon and Washington.

Fred Strathmeyer, Jr., executive director of the Pennsylvania Christmas Tree Growers Association, said the West Coast Douglas firs are a little more lush and the



Growing Christmas trees has moved from a cottage industry to a highly competitive and sophisticated enterprise in recent years.

needles are not quite as firm as ours. The trees seem to be softer, fluffier, he said.

The strain grown in Oregon and Washington is a green variety tree that can grow in four to seven years, in contrast to the blue variety grown in the Northeast, which takes six to 12 years to grow to marketable size, e.g. 4-6 ft.

The problem is, while Douglas firs grown in the Northeast have hardened off to the frost, preparing themselves for the winter, the West Coast trees have not, Strathmeyer Jr. explained.

As a result, the West Coast trees can't withstand cold weather. When they are exposed to temperatures below 20°F, or are rapidly chilled, then placed in a warm environment, they lose their needles. Even a ride home on the roof of the car may be

enough to cause problems. Jim Finley, Penn State extension forester, says that in some extreme cases, up to 80% of the needles can fall off the tree within three days. That's a serious problem for an industry that has recently turned to savvy marketing techniques, spending big money to convince consumers to buy a real tree.

Unless the seller alerts the customer, the average consumer won't know they are buying a West Coast tree. The tree looks fresh, but the family faced with needles on the floor a few days later may be a family that buys an artificial tree next year. "The problem," said one grower, "could end up ruining a whole industry."

Others are not so pessimistic. They say the West Coast growers recognize the problem and are taking steps to remedy it.

One of those steps involves switching to another strain of Douglas fir, one better able to handle the East Coast's climate, according to Strathmeyer, Sr.

Despite the problems, regional growers can learn some things from their West Coast counterparts' slick marketing, some growers say.

#### *new marketing plans*

For years, East Coast growers had the market to themselves. Today, they face competition not only from the West Coast, but also from Canadian growers, and growers in North Carolina who are heavily involved in growing Frazier fir. In one county of that state alone there were 8 million trees in production several years ago.

## CHOOSE & CUT GROWERS' ASSOCIATIONS

For information about choose-and-cut operations in your area, you may contact:

### *Connecticut*

Connecticut Christmas Tree Growers Association  
John Olsen  
RFD 1, Box 329  
Voluntown, CT 06384 Please send a self-addressed stamped envelope.  
Phone 203/376-2370

### *Delaware*

No Christmas tree association in Delaware.

### *Maryland*

Maryland Christmas Tree Association  
Phone 301/256-5595

### *New Jersey*

New Jersey Christmas Tree Growers Association  
Charles Dupras  
Box 29, River Road  
Mays Landing, NJ 08330 Please send a self-addressed stamped envelope.  
Phone 609/625-2307

### *New York*

New York Christmas Tree Growers Association, Inc.  
Phone 315/568-5571

### *Ohio*

Ohio Christmas Tree Growers Association  
Gustave Ruetenik  
Phone 216/874-2688

### *Pennsylvania*

Pennsylvania Christmas Tree Growers' Association  
Fred Strathmeyer, Jr., Executive Secretary  
255 Zeigler Road  
Dover, PA 17315 Please send a self-addressed stamped envelope.  
Phone 717/292-7476

### *Rhode Island*

Rhode Island Christmas Tree Growers  
Rhode Island Dept. of Environment Mgt./Div of Agriculture and Marketing  
Phone 401/277-2781

"Marketing" is a word on which growers and association officials focus. In an industry facing a period of overproduction, only the highest quality trees will be sold. Growers have to be willing to go that extra mile, says Jim Zahl, a New Jersey grower who owns Hazienda Evergreen Plantation in Holmdel, N.J.

Zahl, past-president of his state's Christmas Tree Growers Association and an active member of the national association's public relations committee, speaks

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*Zahl's choose-and-cut operation features young women on horseback, brightly dressed in Canadian Mountie uniforms, directing traffic. A pig roast, hayrides in a custom-built wagon, hot dogs and apples are provided free to those who journey to his farm to select their Christmas tree.*

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throughout the country on the marketing issue. He stresses again and again that growers need "to spend money to make money."

His choose-and-cut operation features young women on horseback, brightly dressed in Canadian Mountie uniforms, directing traffic. A pig roast, hayrides in a custom-built wagon, hot dogs and apples are provided free to those who journey to his farm to select their Christmas tree.

"You have to give people an outing," Zahl says. He tries to make the trip an event, "something that people will talk about. In the agricultural area, the participants are about the nicest people in the world, but they are also probably the most backward in terms of marketing," Zahl said.

That backwardness is changing. Organizing an industry made up of some large growers and many mom and pop operations hasn't been easy, but it's happening. Last year marked the first time Christmas tree growers as a group got into advertising in a big way. They spent \$1 million on a national advertising campaign that featured Willard Scott as their spokesman.

That campaign was funded by the Green Growth program: growers voluntarily contribute for promotion a certain amount for each tree sold. Their message emphasizes that real trees can provide a safe and clean Christmas and are *not* a fire risk.

Providing a bag for the disposal of the trees is one way growers have been helping.

Groups are also encouraging recycling the Christmas trees. For example, some trees from Philadelphia are collected and used for mulch in a city park, extension forester Finley said.

Baumann said some conservation groups have put the discarded trees on beaches to try to stop erosion.

Major corporations have taken notice, and apparently see the Christmas tree as a safe product with which to ally themselves. Strathmeyer Sr. said both Kodak and the Coca-Cola company contacted the national association about a cross-promotion for Christmas, 1989.

Although there is still some resistance among growers, marketing is beginning to play a bigger role.

Baumann said the quality of Christmas trees grown in the United States is unparalleled by anywhere else in the world, and growers need to get that message out. And despite two summers of extreme weather — last year's drought followed by this summer's heavy rains — the supply of Christmas trees for years to come seems secure.

Strathmeyer Sr. said that while the dry summer of '88 wiped out a lot of trees planted that year, farmers doubled up on their planting this past year. And since trees mature at different rates, there's no reason to fear a year without Christmas trees.

●  
Connie McNamara is a reporter and columnist for the *Harrisburg Patriot News*. She has done freelance work for a number of publications, including the *Los Angeles Times*.



View down the long hall: trellis-work covered with two types of ivy. Dwarf magnolias in pots on the other side of the wall add balance.

photo by Lisa Dahlbeck

## DECORATING WITH HOUSE PLANTS

### IN A CONTEMPORARY SETTING

By Andrew M. Ducsik

My neighbor Steve's house is built in a contemporary style: large expanses of glass give bright if not direct light. The house is large by today's standards. The living room alone measures 21 x 30 ft. with 9-ft.-high ceilings. These large rooms are connected by wide, long, light-filled corridors. When Steve moved in five years ago, he found a huge and empty house, bright, kept cool by necessity and preference. He had few furnishings.

He decided to decorate with plants, and used several principles to guide his decorating. First, he chose plants for their foliage and not especially for their flowers. The plants had to look good year-round. Next, he wanted large plants with striking architectural qualities to fill the empty spaces and to dramatize the neutral background of windows and cream-colored walls. He wanted nothing too bitty. If smaller plants were used, he massed them, again to give

an impact not diluted by too much variation.

As you enter from the front door, a short hallway and a jog to the left brings you to the dining room. At the end of the room are two very large *Araucaria bidwillii* fully 8 ft. high. These are not the usual variety of Norfolk Island Pine, but a special variety bought in Florida. They are architecturally striking with their branches growing in tiers almost as a mature cedar. These plants have rather narrow pointed leaves and look interesting close up as well. They completely dominate one end of the room and blend beautifully with the furniture's clean, unfussy lines.

Leaving the dining room, immediately to the left is a long hall measuring 40 ft. in length with floor-to-ceiling glass along one side. This hall connects the dining and living rooms and contains Steve's most outstanding achievement. The side of the hall without windows is covered in light

trellis-work, that Steve made from small strips of fir. The trellis is covered with variegated Canary Island ivy and grape ivy growing from planters at the trellis's base. His wall of vegetation is delightful to look at any time of the day or season of the year, but perhaps most striking with sunlight shining through the leaves.

The stair hall, off to the right, contains an interesting plant grouping. The centerpiece is a 6-ft.-high standard Norfolk Island Pine surrounded by *spathiphyllum*. The rather inconspicuous flowers showing against the green is an extra bonus. Later in the year the orchid *Cymbidium* 'Pat Nixon', when in bloom, replaces the circle of *spathiphyllum*.

In the living room pride of place belongs to the magnificent *Ficus* tree; what a combination with the grand piano. The tree is surrounded by *Clivia* attractive with their wax-like strap leaves and orange flowers. They always offer an interesting contrast to the ficus's small leaves. To the left is one of

continued



Ficus, clivia and grand piano: a memorable combination.



A Norfolk Island pine and spathiphyllum in the staircase hall.

the largest in-house gardenias I have ever seen. Its silhouette against the window is a study in restraint, as telling in its own way as the powerful jungle fragrance of the flowers.

There are other beauties throughout the house. But by now you may be wondering how with less light and space you might use plants more decoratively.

Use species of plants right for your own conditions but also follow the principles Steve has used, tailored to your specific situation. You may have to use smaller and fewer plants or plants adapted to less light or more heat but the principles remain valid.

- Allow the plants to do much of the decoration; they dominate and are used as major elements and as focal points and are not merely accessories or adjuncts.

- Choose plants for architectural and foliage interest since most flowering is relatively short-lived. The exception, for Steve, has been the use of *Cymbidium* and *Phalaenopsis* orchids which offer wonder-

ful flowers for at least two months of the year combined with their good foliage.

- Use restraint and simplicity: use only one or two types of plants; use large groupings of the same plants for greater impact and avoid a cluttered and fussy look.

Decorating with plants is a rewarding activity. Year-round you can watch your plants grow and develop and anticipate the joy of new growth. You can try new and possibly more attractive placement rather like moving the furniture around. And finally, you'll find house plants are considerably less expensive than furniture, an extra and most welcome bonus.

Andrew Ducsik is a partner in Noble Landscaping, garden designers and installers. During free time he enjoys developing and refining his own garden in Chestnut Hill, reading and writing about gardening and visiting gardens here and in England. Ducsik's house and garden were recently featured in the *Sunday Inquirer Magazine*.

# Faces of Strawberry Mansion

By Olivia Lehman

photo by Andrew Harkins



Children of Marston Street play near the tree the author planted with the six-year-old Arthur and Ridgeway (not pictured here).

Strawberry Mansion is a section of North Philadelphia that drivers only pass through; it is an uncommon destination. Empty crack vials land next to patent leather shoes in schoolyards, surreal details from a sad dream.

Yet, while hundreds of houses are broken by poverty, fragments of a more prosperous past remain. Many of the porches that once announced homes of weight and fineness, have softened into postures of welcome. The elderly from the neighborhood hang photographs, visit and wave from these porches. At times they waved to me.

To some community people I was just one of the several "steerers" in a fleet of red Toyota pick-ups — faceless, another social worker. Others knew me, laughed at me, let me know them. As a neighborhood coor-

inator for Philadelphia Green, the community arm of the Pennsylvania Horticultural Society, I worked largely between Cumberland Street to the north and Diamond Street to the south. Fairmount Park was only five blocks away, and our favorite lunch spot even closer: the Kentucky Fried on 29th and Dauphin. With co-workers Janet, Verlone and Sydney, I met people on common ground. Literally. We made gardens on abandoned lots, filled window boxes, stuffed wine barrels. We also fought, outworked our deodorant, and ate greasy foods at the oddest hours.

When we felt tired and giddy, wondering why we weren't sitting at a desk somewhere, the silent answer was expressed in faces.

I remember two small brothers; Arthur and Ridgeway, neither one more than six-

*continued*

photo by Andrew Harkins



photos by Andrew Harkins



and-a-half years old. They were my only crew on that hot, hot day for all the adults had abandoned us. Luckily, the three endlessly tall Empress trees standing in the middle of the ugly lot told us what to do. We encircled them with flowers and that was the beginning. A park now filled with grass and abundance started as an urge contained in two small bodies. They even tried to plant sticks.

Mrs. Washington and her dog collect four-leaf clovers in the Park. It's her hobby. She also collects seeds and cats and probably the earliest light of the day. Her renovated house is historically certified; she has lived there for 50 years. Mr. Washington worked for the railroad and when he was alive loved portulacas the best of all his wife's many plants. The garden adjoining their house was always so full and healthy you had to stop and take in the flowers and vegetables, together weaving their colors and moving into the air of the

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*We made gardens on abandoned lots, filled window boxes, stuffed wine barrels. We also fought, outworked our deodorant, and ate greasy foods at the oddest hours.*

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city. Two unstoppable community women brought my days as a mere admirer of this garden to an end. "An historical house needs an historical garden," they insisted. I agreed. So, our crew came in. They reconstructed a grape arbor, built new back fencing and trellises. We created a brick path and made sure a wrought iron fence would be there to complete the picture. It took nice today. But to Mrs. Washington all the fixing up ran second to what she felt was most important — the peach tree, grape vine and herb patch, the great vegetable rows and potted annuals. Her com-

ment after the renovation: "Now we can really watch things grow."

Mary was a tough one. The day I mistakenly chopped off one of her marigolds she decided that both pruning and I were frauds. "Don't you go in my garden with those pruners" was her favorite way of greeting me. Tall, and a proud walker, she's the kind of person you need to prove yourself to. I always liked it when she smiled. Mary, bent over to introduce me to the magic of *Mimosa pudica*, a tiny fern-like plant whose leaves completely fold up when touched, enjoyed my reaction. She has the same smile as her mother, whose delicate love birds on the back patio are canopied by the cool green of a grape vine; its hanging clusters of fruit surprised me, perfect droplets.

Jim Norris would rebuild the world if you asked him to, and he'd do it for little more than a good story, never for pay. Standing in a summer garden, with a crude bird

# Faces of Strawberry Mansion



photo by Andrew Harkins

Far left: Behind elegant wrought iron fencing thrives the glory of Isabelle Washington's flower and vegetable garden. Here, at the Diamond Street entrance red salvias, begonias, Japanese hollies and junipers invite passers-by to linger for a moment.

Left: Jim Norris has a delicate touch when it comes to the garden he has helped to create on the 2900 block of Arizona Street. Artistic touches, like this star filled with impatiens, pop up all through the large garden.

Below: Whether it's a grand sunflower or a subtle wash of color in celosias, zinnias and hyacinths, the tall and proud Mary Parker leaves her caring touch in the garden on the 2900 block of Gordon Street.

Bottom: Lady and Ridgeway on 2400 Marston Street enjoying coleus and gem marigolds they helped to plant.



photo by Olivia Lehman

feeder in my hand, I realized too late that without a hole for seeds a bird feeder "ain't gonna feed no birds." Jim looked at the hopeless object and lifted it with a large arm. The next thing I knew he was breezing down the street on his bicycle, carrying the feeder. In his mind he began the search for that saber saw that would free dinner for the feathered crowd. "Jim, we need a fence up." "Jim, how about a bigger hole?" "... and the marble — maybe closer to the tree. Jim, Jim, Jim . . ."

Little boys kissing the flowers of cacti and paying for it later. Men and women digging in rain and heat. Music, food, gossip. If you're passing through Strawberry Mansion, stop at a garden and look in. Look up towards a porch. Someone may wave.

Olivia Lehman is a freelance writer. She was a neighborhood coordinator for Philadelphia Green until June of this year.

# SEED EXCHANGES: SEEDS FOR THE ASKING



*Some gardeners lust after plants that are rare and hard to find — often those familiar only from descriptions in garden literature.*

*For such plant rarities, for unusual forms of plants that are familiar, or for momentarily out-of-fashion plants, the seed exchange is the answer.*

 *By Tam Hartell*

A seed exchange is an organized form of the normal give-and-take among gardeners: the exchange moves the seed from those who contribute to those who want it. Seed exchanges are almost always services provided to the members of specialist plant societies. If one's passion is rhododendron, iris, penstemon, lilies, hardy plants or alpine, there is a plant society with its own seed exchange.

## *a lottery*

Participating in a seed exchange is almost always an opportunity for the gardener to find *something* he dreams of seeing in his garden. A seed exchange is also something of a lottery. No one can be sure that what he wants most will be available, or if available, that he will be the one to get it. Some seeds are contributed in tiny quantities, and fairness dictates distributing on a "first come, first served" basis. Further, it is not always certain that the donor has correctly identified the parent plant, or even that the seed will germinate.

While gardeners whose interests lie within a single genus will have no trouble finding a seed exchange to suit, those with wider-ranging interests may look to the Hardy Plant Society or any of the societies specializing in rock and alpine plants (see list accompanying this article); all have extensive and varied seed lists. The expense involved is minimal, the costs being only

those for membership and a small fee to cover printing, packaging and mailing.

A seed exchange — any seed exchange — is a remarkable thing. Members contribute seed according to stated rules and deadlines. The group in charge repackages seed and distributes a list to society members, usually near the end of the year. Members order by number, giving a generous number of choices and marking their favorites, and orders are filled according to availability. It sounds simple, but it entails thousands of hours of effort each

season and would never work without the devotion of many people who contribute time and energy, all for love.

Because participating in the yearly seed exchange of The American Rock Garden Society had given me so much pleasure, I volunteered to be the director for the standard two-year stint. I thought it would be fun and looked forward to the opportunity to learn about plants and people.

## *setting up shop*

In the spring of 1985 I was inducted. That is, UPS delivered at my door some boxes containing, among other things, thousands of numbered manila cards that had at one time been in order and bound by rubber bands, number stamps caked with the years' accumulation of dried ink, a postage scale that probably had not given any weight for at least 10 years, and early contributions of seed for the coming season. I set aside the cards for future need and put the stampers into hot water to soak. I threw away the postage scale. I gave each donor a number and sent a postcard of thanks to each. We were in business.

That first summer Joyce Fingerut, Ruth Goluboff, Mary Ann Ulmann and I got together every Tuesday to sort and alphabetize the seed that had arrived during the week, and to check nomenclature. We sat at the dining room table with copies of *Hortus III*, *The Seed List Handbook*, and dozens of regional floras and other refer-



illustrations by Lauren Baxendell

ence works.

Every week or two brought another shipment from Donor #1 in Ithaca, NY, who sends approximately 500 species each year. Almost as often we received a massive packet from Donor #7 in Washington state who was an enthusiastic collector of seed in the wild; she cleaned and packaged her seed while she “ran” her husband’s dialysis. Donor #47, in East Germany, frequently sent glassine envelopes of seed glued so close together on their paper backing that it was almost impossible to separate them for filing, many with species names we never found in any horticultural reference.

Seed came in from members all over the United States and Canada. Fascinating species we knew nothing about arrived from New Zealand and Australia, and an enormous variety came from gardeners in Great Britain. Japanese donors sent seed of choice native plants. Everything new was exciting, especially seed of the rarer plants, and often the postage stamps were almost as exciting as the seed.

In early September our leisurely pace began to pick up. On Tuesday’s we began to push ourselves a little harder; the cut-down Pepsi boxes that we used for seed storage began to fill up faster and to require longer periods of reorganizing.

The previous director had turned over the listing to a chapter member with a computer, and we realized that a computer should become a permanent addition to the Seed Exchange. We persevered. The American Rock Garden Society approved the purchase and Chuck Ulmann, who functions as the organization’s computer “consultant” selected the machine and the software we were to use, and taught me how to use it.

### *seed arrives*

In October we entered a period of frenzy that set the tone for the next five months. Seed came in by the boxful (more than half the seed arrives after the middle of October), and bundles of acknowledging postcards went out. Checking nomenclature was no longer a one-day-a-week job, and sorting and filing seed packets became a major undertaking. No matter how quickly we cut down the Pepsi boxes and stapled in dividers, it was never fast enough. When a box of carefully alphabetized seed packets fell and spilled all over the floor, I became almost hysterical at the thought of starting over.

By this time we had selected someone to print the list when it was ready, and the search for suitable packaging envelopes became urgent. I had tried for months to find a supply of small coin envelopes constructed so that the seeds would not

leak out at the corners. In the process I learned more than I ever wanted to know about the manufacture of envelopes. I now know how they are cut and folded, what kind of glue is used and how it is applied—but I *still* don’t know where to find leak-proof coin envelopes. We did find envelopes that worked fairly well, and in the quantities we needed.

I had for some time refrained from

and then 12 feet up the other side. If furniture was in the way, we just stretched the tables over it. The array continued into the dining room, with tables down one side, and a walk-around arrangement at the dining room table. We added a card table for work space. For at least four months our dining room table was available for nothing but seeds, and a great cheer went up when, finally, the remaining seeds were



calling on volunteers too often, knowing that very soon they would be needed all too frequently. The time had come, however, to call for help, and lots of it. Mountains of seed packets still had to be sorted and listed, the actual list required constant proofreading, and it was about time to start

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***Often we received a massive packet from Donor #7 in Washington state who was an enthusiastic collector of seed in the wild; she cleaned and packaged her seed while she “ran” her husband’s dialysis.***

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packaging seed. Our dining room table, having for months been Control Central, was no longer adequate for work or workers, so the first work tables went up in the living room. We began to find out just how much room a seed exchange requires.

It sounds so simple — 55,000 packets of seed — but it is truly awe-inspiring to see them stretched end-to-end. With a combination of card tables and trestles made of lumber resting on saw horses we organized the living room. The tables went 12 feet down one side of the room, across the end,

so reduced that the surface of the table became visible once more.

While the Seed List was being prepared for the printer, packaging began. How it works: all seeds of a single species are combined from donor’s packets, then divided into as many packets as possible; each packet is stamped with its listed number. Decisions, decisions, decisions! How much seed do we have? How many packets do we need? How do we balance what we’ve got with what people want? Usually not very well. Really popular choices, such as *Aquilegia jonesii* (or, one year, *Jankaea heldreichii*, the all-time favorite) will receive perhaps 10 or 15 first choice requests for each packet of available seed. More common garden plants, for which we have abundant seed, will be little asked for. Some seed is obviously not viable, and packaging it is a waste of time.

We received a surprising amount of mislabeled seed. The only reason I can think of for that is the donors take someone else’s word for the parent plant’s identity — “Aunt Minnie gave this to me, and she’s been a whiz of a gardener for 50 years.” All of us who were there remember the three donor packets of *Iris gracilipes*. Few people who own the plant ever see seed on it, and

*continued*

when we opened the packets we found three distinctly different kinds of seed. Fortunately, having many volunteers did mean usually someone knew if a batch of seed was mislabelled. Two hard-working members, Anita Kistler and Roxie Gevjan, have grown so many different species themselves that they could be called on for help in moments of doubt. The rest of us learned.

### packaging parties

The completed seed list went to the printer, and seed packaging went on. Volunteers came to package, and took home seeds and envelopes, along with the by now unpleasantly familiar Pepsi boxes. They brought back their repackaged seeds, then took more home. Bob Way organized packaging parties at his home in Kennett Square, ensuring that those who were unable to get to the center of activities had an opportunity to participate. All over the Delaware Valley seeds took over dining room tables, kitchen tables, and dens.

Husbands helped, wives helped, grandmothers helped. We were beginning to wonder if we would ever finish. The list came back from the printer, and addressing, stamping and mailing had to start. The intense phase of activity started right after Thanksgiving and continued through the New Year — not the best accompaniment to holiday plans. When my husband Alan

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*For at least four months our dining room table was available for nothing but seeds, and a great cheer went up when, finally, the remaining seeds were so reduced that the surface of the table became visible once more.*

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and I left to spend Christmas with my parents our car carried little luggage, but boxes of seed lists, address labels and stamps. It is wise never to miss an opportunity to get the job done.

By New Year's Day the piles of still

unpacked seed were appreciably smaller, but there was still much packaging to do. Each day I prayed the first order would not arrive until we were ready. One Sunday, early in January, an insistent ringing of our front doorbell awakened me. I groped my way to the door to greet the mailman who had brought a special delivery letter from Holland. Our first order had arrived.

From that point everything began to overlap everything else, and whole new sets of muscles began to ache. We *did* get the seeds packaged and the lists addressed and mailed, and in some ways order filling was the greatest fun of all. It meant a lot of walking and bending, but there was a great camaraderie among us. We all swore at the people who hadn't filled out their requests in strict numerical order (*anything* out of the ordinary slowed us down). We gritted our teeth at members who wanted only the rare, and often unattainable. Each of us, I think, felt a special warmth for members who wanted some unappreciated item that we loved. Also there was the terrible feeling





of guilt when we were unable, due to the laws of supply and demand, to give a member a full order of seeds. The enclosed apologetic note somehow seemed so inadequate for what we knew to be a disappointment.

Most of us were neophytes that first year. It seemed that no matter how hard we worked we could never catch up. It was a little like being the frog in the well — each day three steps up, then two steps back down! At times the only thing that kept me going was the cheerful help of friends and the little notes of thanks that came in with the seed orders.

There were times, too, when we were forced to realize that no matter how tired we were, our correspondents had problems too. "My seed booklet was passed over by the cars in the snow as the wind blew the cover open on mailbox . . . Could you find seed for Warley Rose, Townsend Daisy and *Dianthus neglectus*, plus any seed left over?"

One member had had surgery for a brain tumor at about the same time she had lost her husband, but she was forging ahead with her garden. Another member wanted only seeds of cyclamen because his gardening had to be conducted from a wheelchair. What was to me the most touching note came from a New Zealand member of long standing, "Sadly this will be my last (seed exchange), due to advancing years and limited gardening activities!! I've had great pleasure both donating and receiving seeds over the years. Best wishes!"

There were occasional letters complaining because someone had not received some seed he wanted. The most puzzling of these came from a Danish member who was "very sad, receiving seeds, I have never wanted . . . this year all the seeds are wrong and to be cast away." A list of the names of the genera that interested him did not match the numbers he had included in his order, leading us to the inescapable conclusion that he had compiled his order from a previous year's list.

#### *donor's bonus*

Any seed exchange fills donors' orders before attending to the wants of the membership at large, and in the ARGS all donors receive 10 extra packets as a bonus. By the end of January the donors' orders have been filled, and the volunteers go on to the remaining orders. At first it seems such a breeze. Just the 10-packet difference makes it possible to fill many more orders each day. Inevitably, however, the law of diminishing returns starts to function; what people want we do not have, and what we do have almost nobody wants. By the end of February it can be so difficult to fill an

order that a cheer will go up for anyone who has gotten more than half his first choices, and any member who has not included a generous number of choices is almost certain to be disappointed.

Packaging seed is, after a time, tedious and seems never-ending. Filling orders is tiring, and accompanied always by a sense of urgency. The work is, however, lightened by the good company of the volunteers who believe the job to be worth the time and effort. Once in awhile, however, major disaster threatens.

During our first Seed Exchange season I discovered, to my horror, that the printer had sent 500 fewer copies of the list than we had ordered. There I was, 500 address labels in my hand, and not another copy of the list to be found. It took two weeks to convince the printer that I was not mistaken and to get the necessary copies printed. When the lists did go out, they went with instructions for marking them so that they could be moved forward to compensate for delay. I had guessed, apparently correctly, that only those who normally send in their orders within 48 hours of receiving the list would care. One member, however, was terribly angry, and none of us could blame her; she thought we should have notified all members missing their lists. I was sorry she got the short end of the stick that year, but I don't know how I could have gotten any more hours out of a day.

#### *our work winds down*

At the beginning of March the Seed Exchange, technically, has finished for the year. After a few stragglers' orders have been filled the leftover seed (and there is plenty) is divided and mailed to the individual chapters for their members to share. The accounts of expenditures and receipts, as well as the bank statements must be readied for the ARGS treasurer. The trestle tables are dismantled and removed to the basement, along with all the Pepsi boxes. For a few months it will be possible to sit on the living room sofa and eat at the dining room table. Even then we can't quite relax — already seed contributions for the following year have started to arrive!

After months of effort the cheerful band of volunteers begins to run out of steam. We had helped to make the winter brighter for many people. But as we were reminded by a Japanese member, "Spring coming, getting warmer day by day," the time had come for us to attend to our own seed sowing and gardens. Soon the cycle will start over, with us or with another chapter.

*"Most can raise the flowers now,  
For all have got the seed."*

The Flower, Alfred Lord Tennyson

## SOME SOCIETIES WITH SEED EXCHANGES

### *Alpine Garden Society*

The Secretary  
Lye End Link, St. John's,  
Woking, Surrey, England  
Membership \$15; list by request

### *American Iris Society*

Jeanne Stayer, Secretary  
7414 E. 60th Street  
Tulsa, OK 74145  
Membership (special interest groups) varies.

### *American Rhododendron Society*

Paula Cash, Secretary  
14885 S.W. Sunrise Lane  
Tigard, OR 97224  
Membership \$21; list by request

### *American Rock Garden Society*

Buffy Parker, Secretary  
15 Fairmead Road  
Darien, CT 06820  
Membership \$20; list sent to all members

### *Hardy Plant Society*

Joanne Walkovic  
(Mid Atlantic Group)  
539 Woodland Ave.  
Media, PA 19063  
Membership \$11.00  
(international), \$6.00 (local);  
combined \$16.00; list sent to all members

### *Royal Horticultural Society*

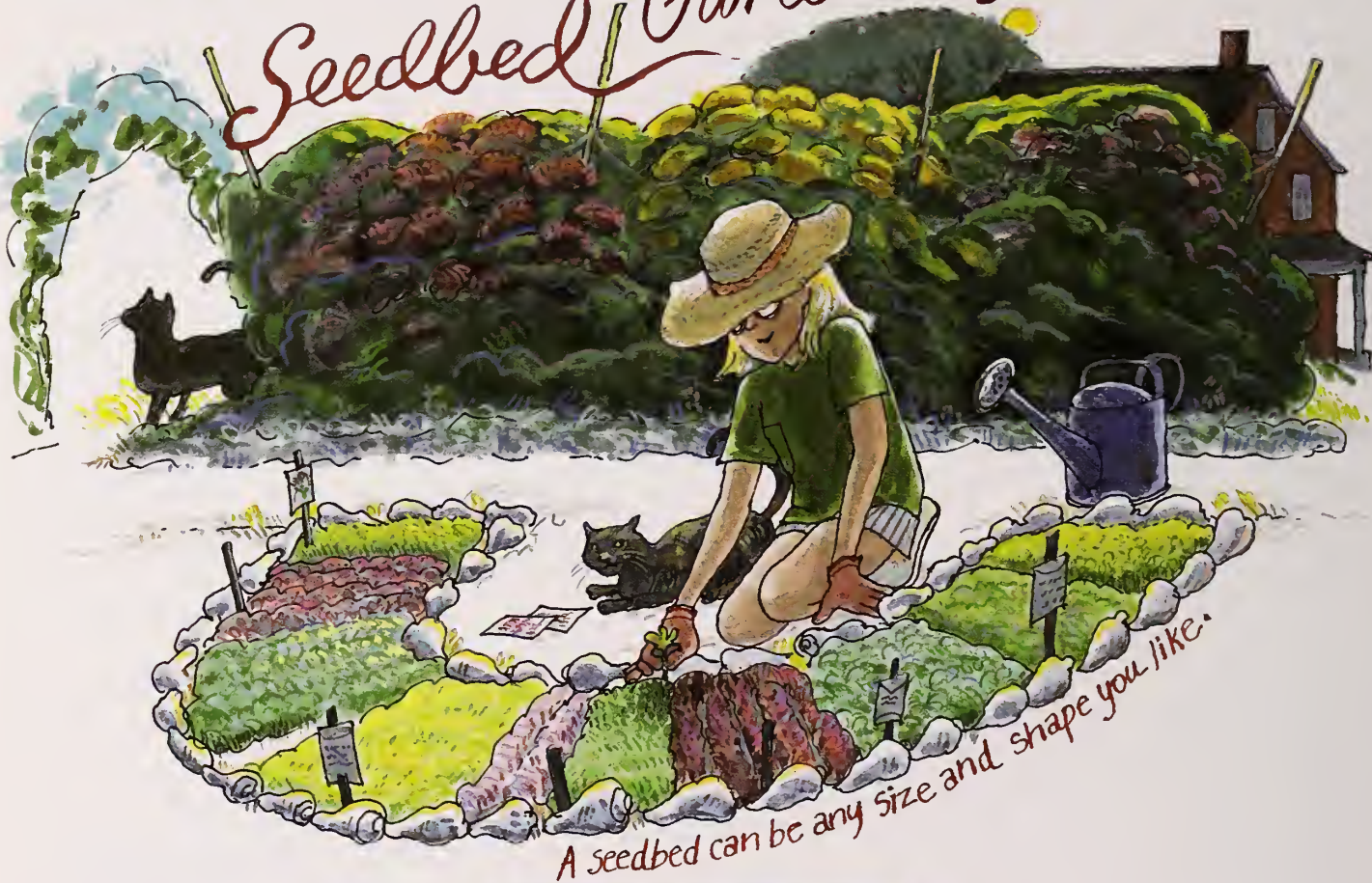
Donald Hearn, Secretary  
80 Vincent Square  
London, SW1P 2PE, England  
Membership cost: write for information. List sent to all members (distribution, not an exchange)

### *Scottish Rock Garden Club*

Miss K.M. Gibb, Secretary  
21 Merchiston Park  
Edinburgh, EH10 4PW, Scotland  
Membership \$20; list sent to all members

Tam Hartell's enthusiasm for seed exchanges has been undiminished by her participation in one of the largest in the world. She has retired to her own garden to sow her own seed, to write, to draw the plants she loves, and to watch the weeds grow.

# Seedbed Gardening



Illustrations by Barbara Bruno

 By Barbara Bruno

Although I'd grown plants from seed in pots for years, my first seedbed freshly impressed me with the beauty of seedlings. Not only did this method turn out to be easy and practical, but the possibility of a new type of gardening dawned as I eyed those blocks of bright, contrasting sprouts.

I had turned to the seedbed because I wanted plants in larger quantities. Of course, sowing seed in pots works wonderfully well, but those few pots of seeds expand enormously at transplant time. Many packs of seed require an armada of flats, flats that clutter the landscape, dry out, and may need twice daily waterings in hot weather. As I had hoped, the seedbed required less time for care, and as a bonus produced sturdier seedlings.

A sunny area of the vegetable garden makes an ideal seedbed. An airy end of a flower border or a special, separate bed will work as well. The area should be well dug. Soil preparation is a good fall chore; the earth will be settled and ready for spring.

***Seedbeds accommodate more seedlings, require less watering and produce sturdier seedlings. They also are more pleasing aesthetically than flats or small pots.***

Adding ample organic matter assures steady moisture that encourages success. Fine tilth is necessary for seed sowing, so any compost or leafmold is best sifted through a hardware cloth screen before adding it to the bed. Raised beds would give the gardener with heavy soil a better chance at success.

The only rule for laying out the seedbed as far as I can see is that you must have access to all parts of the bed. The area can be any size or shape that you like. I chose

an "E" configuration of beds set along a garden path, with two short paths between the arms to provide access to the edge, back, and center beds. The beds were the width of some wooden screens I planned to use for shading newly sown seed. Newspaper topped with wood chips covered the paths to inhibit weeds. This organic mulch also boosted the humidity in the nursery. That first year, I hastily rounded up some scrap lumber to edge and delineate the paths. I've since replaced the makeshift edging with straight, trimmed saplings for an unfussy rustic look that suits my garden.

A seedbed has year-round uses. I seed winter lettuce in September, to remain here until harvest next spring. In April I start a second crop of lettuce for transplanting. Flowers that need a chilling, such as perennial coral bells or annual bells of Ireland, get planted now. In June I sow my current pick of perennials and biennials for next spring bloom.

I've come to think of seed sowing as a design opportunity and enjoy sowing short



Wire fencing nicely protects newly emerged seedlings.

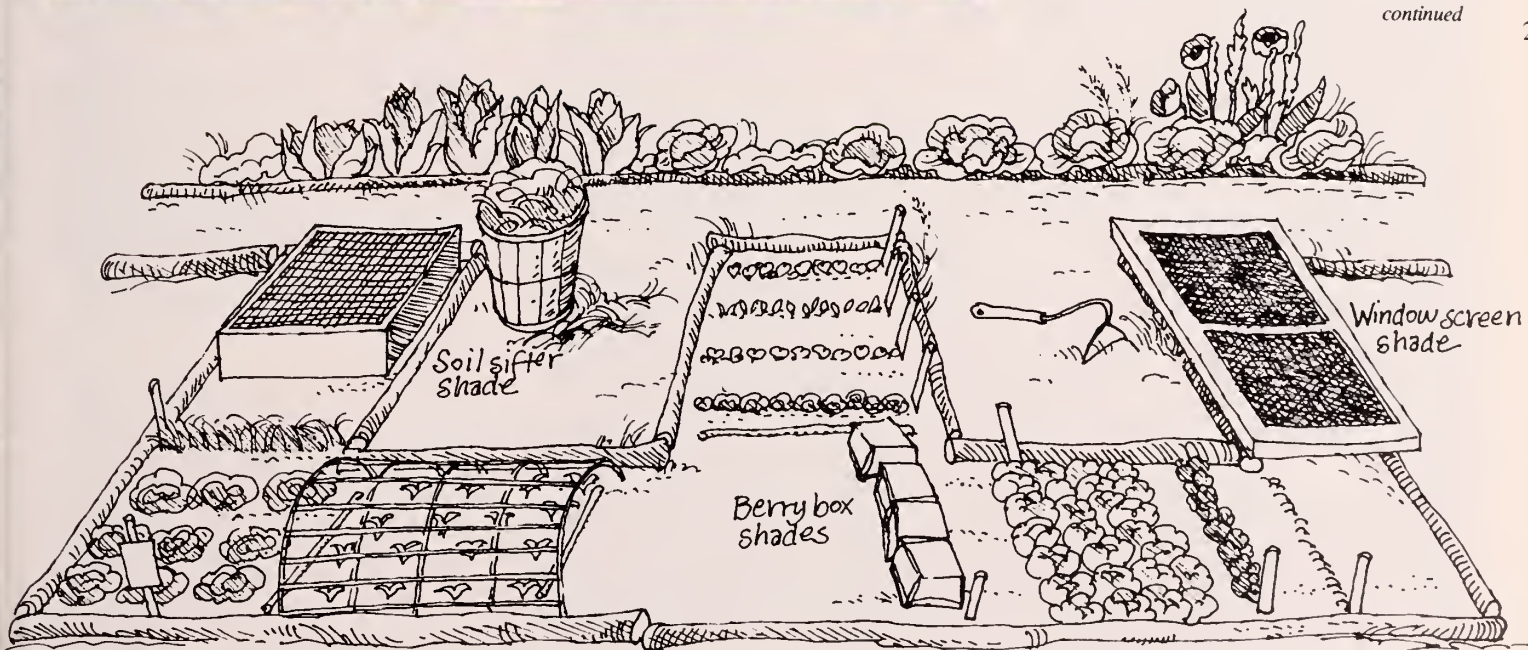
rows or blocks of seed arranged with the future patterns of color and texture in mind. Lettuce is fun and easy. Spacing seed  $\frac{3}{4}$ " apart I've laid out checkerboards and diamonds using the many varieties of lettuce I grow annually for transplanting, a short-lived but pretty effect. Frilly mounds of yellow-green matricaria backed by ferny, plum-colored bronze fennel were so mutually flattering as seedlings that I've continued the duo in the garden as mature plants.

In the closely planted seedbed, vigorous growers must be kept well away from slow growers. For example, low, slow-growing verbascum rosettes could be smothered by an expanding clump of mallow seedlings.

I avoid the chores of digging and separating crowded seedlings, by thinly sowing, which produces the best and sturdiest plants. I seldom sow a whole pack at one time, storing unused seed with other packs in an airtight jar in the refrigerator. Except for impossibly small seed, patient sowing of one seed at a time is the best method of producing stands of plants that need minimum thinning. And unless the variety is rare or the germination spotty, I use scissors to thin crowded seedlings.

Old window screens make fine protection for fresh sown seed. Plastic shade cloth would work as well. Some protection to

*continued*



An "E" configuration of beds set along a garden path.



conserve moisture and break light rain is desirable until the seed sprouts. If heavy rain threatens I may staple on a shower cap of plastic sheet, raising the screen on bricks to allow air to circulate, removing after the rainfall.

The screen comes off only when germination is complete and before seedlings soften and grow leggy in search of more light. At this point, an arched piece of wire fencing protects against missteps and outwits rabbits, as well as foiling the family cats who regard any loose earth as a sweet-smelling substitute for kitty litter.

I still occasionally have seed that doesn't

germinate, but I've had no damping off despite the unsterile soil. I finish the seed sowing with a watering of dilute seaweed fertilizer, which some experiments have shown to promote trouble-free germination. Compared with flat-raised seedlings, seedbed-grown plants in general seem tougher, healthier, need less watering and are more forgiving when I must be away for a long, hot day. The organic soil mass, with its unrestricted root run to moisture reserves, gets credit for this measure of plant flexibility.

A cloudy day is best for transplanting, when the seedlings are large enough to

survive in the open garden. If the young plants grow faster than expected or if I wish to save all plants, I may move the lot to an interim nursery bed to grow on before planting in permanent quarters.

Seedbed plant rearing works best with unfussy varieties that don't need an early start. Vigorous perennials like yarrows, campanulas, mallows, and daisies of all sorts, biennials such as wallflowers, foxgloves, and pansies, or fast-maturing annuals are good candidates. A seedbed is not a suitable home for all seed. Seed with long dormancy may be lost to repeated showers. I have had success with fine seed such as verbascum and foxglove, but there is always the chance that it will be swept away by an ill-timed downpour. Of course, rare seed deserves the coddling and close observation possible in an undercover pot or flat. Seedlings started in the seedbed must also tolerate root disturbances at transplanting. This method, however, can be used to create a bed where you want unmovable plants to grow.

I greatly increased my success with annual poppies planted in a seedbed. On my first try I simply prepared a soil strip beyond the seedbed border, sowing the seed at winter's end, covering it with a screen, and caring for it as part of the seedbed. Once established, the poppies carry on the sowing each year on their own if the soil is left undisturbed, or I save seed for a clump in another spot (using again the seedbed technique).

A seedbed is an easy way to improve soil. Move the bed to a new location each year and use last year's well-prepared site for a crop. A disadvantage with this method is that it is too easy to delay transplanting overcrowded clumps of still vigorous seedlings, as compared to the can't-be-ignored plight of rootbound seedlings in pots or flats. Still, some might consider even this an advantage.

A seedbed can be many things to many gardeners. For the new plant lover it is an easy and successful way to get acquainted with the joys of seed sowing. Its design can be a new challenge to the experienced gardener. Its inclusion as a garden feature gives the garden designer a new avenue to explore.

photo by Barbara Bruno



Yellow woad and iris bloom as composting and seed growing go hand in hand in the organic garden. A screen protects the expanding area of sowing.


Barbara Bruno, a writer/artist, is a frequent contributor to *Green Scene*.

photo by Fred McGourty



One of the perennial borders featured in Fred McGourty's *The Perennial Gardener* features *Artemisia schmidtiana*, *Chrysanthemum parthenium*, *Astilbe 'Fire'* and *Lilium regale*.

## Books For Holiday Giving And Reading

 By Julie Morris and Virginia Shuster

*I was heartened to read, some years ago, a book by Vita Sackville-West in which she wrote that she always kept labels from plants that had died in her gardens lest she become too swell-headed with her successes.*

Giving a garden book to a friend for the holidays is giving the promise of future growing seasons. By nature, most gardeners are optimists who quickly realize that if something in the garden didn't work out this year, there will always be another spring. Books and gardeners are a natural combination. We all like to read how someone else has solved a problem, grew a special plant or designed a grand garden scheme.

I was heartened to read, some years ago, a book by Vita Sackville-West in which she wrote that she always kept labels from plants that had died in her gardens lest she become too swell-headed with her successes. Gardening does keep us humble, so it is always a treat to read of the possibilities. I once read somewhere that gardening is the art of the possible and sharing that art is what good garden books are all about.

Julie Morris

***The Perennial Gardener***  
 Frederick McGourty  
 Houghton Mifflin Company, Boston, 1989.  
 \$24.95

*"Some gardeners take losses personally and become fiercely determined to succeed in growing a plant they have failed with previously. Not me. I normally escort a draped wheelbarrow to the compost pile and toss the deceased on it with equanimity, sometimes almost with relief, in the knowledge that there are plenty of other good perennials to grow. I almost always have a shortage of garden space, and almost never a shortage of plants to fill it."*

Frederick McGourty  
*The Perennial Gardener*

One of my cats and I fought over who would have possession of Fred McGourty's new book, *The Perennial Gardener* for nearly two weeks. Skipper, perhaps mistaking the cover photo of *Aster x Frikartii*

*continued*

for catnip, perched on the book at every opportunity and hissed loudly when I pushed her away. I was re-reading McGourty, something that is easy to do since there is enough information to keep the average gardener thumbing through it for years to come. After reading only a few pages, I felt the author was an old friend. He hands out gardening advice as easily and generously as another gardener might share extra seeds or cuttings.

*The Perennial Gardener* is the book American gardeners have been waiting for, now that the British invasion of gardening literature has died down a bit. Books from

***Books from abroad certainly have a place in our gardening schemes but they serve up inspiration rather than perspiration. It is wonderful to have a book written for our growing conditions by someone who gardens in the sometimes harsh climate of northwestern Connecticut instead of the south of England.***

abroad certainly have a place in our gardening schemes but they serve up inspiration rather than perspiration. It is wonderful to have a book written for our growing conditions by someone who gardens in the sometimes harsh climate of northwestern Connecticut instead of the south of England.

Soon after I read *The Perennial Gardener* for the first time I lent it to a friend who is in her second year of serious gardening. She looked at it and asked, "Where are the pictures?" I told her to take another look. There are lots of photographs but they are secondary to the text, which is a relief after the number of books that have been published recently containing little more than illustrations with lengthy captions. The photos in this book take us on a tour of the perennial borders that comprise Hillside Gardens, the gardens and nursery that Fred and Mary Ann McGourty own, maintain and share with hundreds of gardeners who visit them each year. Favorite plants and plant combinations are illustrated along with detailed plans for several borders including two of the McGourty's own.

The book is carefully organized so the reader learns how to put together a perennial border almost without realizing it. The author writes a lot about his own experiences with individual plants always mentioning how he uses them or giving useful cultural tips. He helps us set goals for ourselves with plenty of advice on how to reach these goals without falling into too many nettle patches along the way.

There is little that has not been included in this book. Ornamental grass enthusiasts, novice meadow gardeners, container fanciers will all find something to grow on. The author bravely wades into all sorts of trouble spots, for example how to design the middle of a border. This is usually the part of the garden we delay on planning because it's so much easier to decide on the tall and short of it first.

There are frank discussions about garden thugs and ruffians such as gooseneck (*Lysimachia clethroides*) and bee balm (*Monarda didyma*). Rather than dismissing them we are encouraged to wield a heavy hand when it comes to dividing, but also to use them in the right place. Much of perennial gardening is about finding the right plant for the right place. Fred McGourty's years of growing experience help make our choices easier. He guides the reader without patronizing and skillfully uses his good-natured wit so we won't take ourselves too seriously or be afraid to challenge ourselves with the wonders of growing herbaceous plants.

Julie Morris

Frederick McGourty will give the Lois Woodward Paul Memorial Lecture at the Pennsylvania Horticultural Society on Tuesday, November 7, at 5:45 pm. Topic: Designs on a Border. Members: \$8.00, guests: \$10. Registration forms available in PHS News (Oct. & Nov.) or call Betsy Gullan or Linda Davis 625-8257.

***The Poetics of Gardens***

Charles W. Moore, William J. Mitchell, William Turnbull, Jr.  
The MIT Press, Cambridge, MA, 1988.  
\$35.00

*"Today we survey and inventory a site's assets, then speak even more aggressively of 'environmental impacts.' Mother Nature is to be mugged, it seems, and we cold-bloodedly analyze the old lady's chances of surviving the blows.*

*Underlying all these metaphors and mythic constructions is the simple fact that each site has its own special qualities of stone and earth and water, of leaf and blossom, of architectural context, of sun and shade, and sounds and scents and breezes. Seek these out, and you will discover promises of formal order or of artful naturalism — the beginnings of your garden."*

*The Poetics of Gardens*

***Sunlight and Shadow***

*"Gardens exist in sunlight. Without it the plants would not grow, the water would not sparkle, and the shadows would not fall. So the qualities of the sunlight that a site receives — its intensity, color, movement, and angles, its filtering by atmosphere and foliage, its reflections off ground and water — create cadenced patterns that may sometime recall but will never be quite like those of any other place."*

*The Poetics of Gardens*

In a time of easy answers and snap decisions it is heartening to find a book that makes us think and stretch our minds the way *The Poetics of Gardens* does. It is the history, sociology, psychology, and most of all the art, of garden making. There is an element of high tech in this book, exhibited by the many axonometric\* drawings, which is counterbalanced by the historical context of much of the writing. The authors begin by reminding us to consult the genius of the place, an axiom attributed to Alexander Pope in 18th Century England: "Nature's places, no matter how beautiful and moving

***"Nature's places, no matter how beautiful and moving we may find them to be, are not yet gardens; they become gardens only when shaped by our actions and engaged with our dreams."***

we may find them to be, are not yet gardens; they become gardens only when shaped by our actions and engaged with our dreams."

*The Poetics of Gardens* is an important book for students of architecture and landscape architecture as well as any serious gardener who has an interest in the how and why of our gardens. The authors, three architects, invite us to see gardens as works of art while never letting us forget the importance of architecture in the overall landscape scheme.

From the gardens of Chinese emperors to Disneyland, the Alhambra and Sissinghurst with scores of gardens between, the authors guide us by means of a set of pre-determined steps to an understanding of the vision that inspired the creation of each garden. Hundreds of drawings and illustrations make our lessons easier. In a way this

\*Axonometric: being or prepared by the projections of objects on the drawing surface so that they appear inclined with three sides showing and with horizontal and vertical distances drawn to scale by diagonal and curved lines distorted.

*Webster's Ninth New Collegiate Dictionary*

book is a broader, deeper version of May Watt's wonderfully provocative books on reading the landscape. The first sentence in *Poetics* connotes a similarity: "The Romans read places like faces, as outward revelations of living inner spirit."

Several years ago comedy writer Steve Allen produced a series of programs based on hypothetical conversations between the great "movers and shakers" from the past. On a given evening one might hear Leonardo DaVinci, Einstein, Queen Elizabeth (the First), Theodore Roosevelt and Madame Curie discuss a given topic. A similar device appears in *The Poetics of Gardens*. The authors organized a series of dialogues between great garden makers of the past and gave each group a part of a garden to design. So we find Frank Lloyd Wright battling it out with Capability Brown, Francis Greenway, Gertrude Jekyll, Prince Genjii and Sir Edwin Lutyens. After reading through these conversations to which even more luminaries are added one is tempted to join in and take sides with Edgar Allan Poe, Margaret Mead or Vita Sackville-West.

These voices from the past remind us how subjective garden making really is, based in each person's own history and experience. The last sections in the book bring it all back home by examining the development of gardens in America. Gardens are never static so the process of change in garden design continues. "Making our own gardens is a pastime, a civility, a game, an obsession. But we cannot rely on a single comprehensive, authoritative set of rules to guide our actions. In an era like our own, with its dizzying intricacy of connections and its fast-forward pace, though our gardens may be simple and focused, any rules for them won't be, can't be, probably shouldn't be."

Julie Morris

Julie Morris is horticulturist at Blithewold Gardens and Arboretums in Bristol, Rhode Island. She originated "The Books and the Green World" feature when she was PHS librarian from 1970-76, and is a frequent *Green Scene* contributor.

### 35 Garden Blueprints

Maggie Oster

Simon & Schuster, New York, 1989.

\$14.95

Like many a beginning gardener, I have liked everything from rock gardens to fruit orchards. As I went from one enthusiasm to another, my garden looked as though five uncommunicative gardeners, each with

different tastes, were competing for space. An English garden, with a hint of Japanese, annual shrub and herb garden with a cutting border thrown in is garden chaos.

A garden plan! Yet I want to be outside with my hands in the dirt not at a desk. A plan seems too confining. I want to know and grow it all.

Like so many of us, I can resist good advice, but *35 Garden Blueprints* makes it difficult. Distilling the essence of various garden styles into separate plans of moderate-size gardens, Maggie Oster does a great deal of the leg work for the impatient gardener. She realistically assesses the amount of care and cultivation that any choice requires. Oster makes the likelihood of the successful transition from a current enthusiasm to a well-realized garden much more probable.

Whether the choice is a Spanish, a bird and butterfly, or a container garden, Oster's designs include a nice variety of recommended plants in her lists. Oster's container garden design, for example, lists 34 separate kinds of plants. She specifies the cultivars best suited for each garden's requirements.



Following the advice in this book can prevent another significant beginner's misjudgement. Often I have used one plant in a situation that needed three or more to make any visual impact. The plans list the number of each of the plants needed to cover the area in the scale drawings.

Oster's plans offer a choice among designs based on cultural conditions such as a particularly dry area, partial shade, shade, or a hillside. Plans of plant collections include designs for an herb garden, a cacti and succulent garden and an ornamental grass garden. Oster shows that even gardens with a utilitarian purpose can be quite handsome. She designs a vegetable garden, a fruit garden, and both a perennial and an annual cutting garden. Chinese and Italian gardens are two of the six international garden themes. The formal perennial garden, the informal annual garden, and the whimsical hanging garden round out the design selection.

Approximately one-third of the plans are suitable for a small city lot. The other two-thirds are equally divided between areas of a small suburban back yard and a moderate suburban lot.

Virginia Shuster

### A Year of Flowers

Peter Loewer

Rodale Press, Emmaus, PA 1989

\$21.95

Peter Loewer values flowers and thinks they should be an everyday part of our lives. To this end, he wrote *A Year of Flowers*, which is organized with a chapter for each month of the year. He explains how to grow wonderfully diverse flowers for all 12 months.

During his 20 years of gardening experiences, he personally grew the more than 150 plants included in this book. He obviously took his plant selection very seriously because he invites readers to correspond with him about their experiences, both good and bad, with the plants he writes about.

Not surprisingly, the winter months section deals primarily with indoor flowering plants. As one way to counteract the bleakness of February, for example, Loewer recommends growing goldfields, *Lasthenia glabrata*. This annual produces bright yellow daisies six weeks after germination when grown in a sunny window.

To brighten another window in winter, he revives the turnip basket. First published in 1873 in *Window Gardening*, the idea is to hollow out the root end of a turnip and plant morning glory seeds in the hole. The morning glory grows up a string, by which the turnip is suspended, and the newly sprouted turnip leaves disguise the vegetable as a charming, living basket.

Loewer makes interesting bulb recommendations for different times of the year. One of the most convenient is the calla lily, which includes all four species of the genus *Zantedeschia*. The calla lily's ability to produce flowers is not dependent on day length or temperature. This feature makes these plants a potential indoor display any time of the year.

Even in the chapters for the summer months, which focus on growing flowers outdoors, Loewer keeps an eye on flowers for the house. In August the garden plan presents a cutting garden of both annuals and perennials. The September garden plan is also a cutting garden, with some flowers suitable for dried winter bouquets.

Acknowledging that a greenhouse expands gardening possibilities, Loewer relates in an appendix how he built a greenhouse in a Manhattan apartment by adding a frame to the window and using an old storm window. In addition to his initial effort, he offers several window greenhouse plans from which to choose. All of the greenhouses can be made from readily available material.

Virginia Shuster  
*continued*

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**Perennials for American Gardens**

Ruth Rogers Clausen and

Nicholas H. Ekstrom

Random House, Inc., New York, 1989

\$35.00

With more than 3,000 perennials covered in their book, *Perennials for American Gardens*, Clausen and Ekstrom have created an extensive perennial reference. Ekstrom is director of The Horticultural Society of New York and Clausen is a well-known lecturer at the New York Botanical Garden. The book passed my litmus test for completeness when I found *Buphthalmum speciosum* (oxeye daisy) cross-referenced under *Telekia speciosa* accompanied with a color photograph. I had looked in several references without any results. Besides learning the preferred name, I was warned that the plant is quite invasive.

A convenient feature of the book is its "rapid reference lines." In this section, the authors designed a quickly and easily read code to indicate each plant's flower color, flowering time, the height/space needed, sun/shade requirements, hardiness, and propagation/availability in the United States. Extreme heat and high humidity in the summer are seriously limiting factors in growing perennials in certain part of this country. In addition to the U.S.D.A. zones, the hardiness code also indicates with the letter T those plants that are especially tolerant of these conditions. The letter H denotes those plants that are particularly intolerant of high heat and humidity. The climate in the Delaware Valley makes this code relevant to gardeners in this area.

Detailed in the text is information as diverse as recommended cultivars, warning of potential problems, country of origin and other authors' definitive works on individual plants.

Virginia Shuster

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**In Search of Lost Roses**

Thomas Christopher

Summit Books, New York, 1989

\$18.95

Thomas Christopher's readership should include more than rosarians. In *In Search of Lost Roses*, you not only share with him his development as expert rose sleuth, you enjoy his sensitivity as a great storyteller. His search for the four roses, whose introduction from China revolutionized rose breeding, takes us on a journey from the Chinese scroll, "The Hundred Flowers," at the Metropolitan Museum in New York to Charles Walker, Jr. of Raleigh, North Carolina, who is known for his scrupulous care in botanical identification of roses,

through a brief history of imperialism and rose collecting in China. He talks to Mike Shoup, proprietor of the Antique Rose Emporium, and ends at a yellow climbing rose, 'Fortune's Double Yellow,' next to his kitchen door in central Texas.

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**Christopher takes up with an energetic crowd that initiates him into the art of rose rustling in Texas.**

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In a delightful interview with Graham Stuart Thomas, an eminent English gardener, Christopher captures Thomas's struggle to explain the discrepancy between the musk rose, *Rosa moschata* described by John Gerard in his 16th Century *Herbal*, and the musk rose Thomas knew. Ultimately Thomas established that another rose, *Rosa brunonii* had been mistakenly identified as *Rosa moschata* for more than 50 years. The true musk rose with its fabled scent had been grown in England for hundreds of years. *Rosa brunonii*, a relative from the Far East, had become popular in England around the turn of the century, when the two roses' identities had become confused. The disruption in the nursery trade, caused by World War II, firmly established the mistake. *Rosa moschata* stopped being grown, and *Rosa brunonii*, a vigorous grower, became the musk rose in the public's mind. Although Thomas publicized his rediscovery of the true musk rose, he still finds *Rosa brunonii* displayed as the musk rose. This only fueled his determination "to put things right."

In another chapter about rose sleuthing, Christopher takes up with an energetic crowd that initiates him into the art of rose rustling in Texas. Grub hoe collecting has given way to gathering cuttings, but there is still the same spirited search in old cemeteries, abandoned homesteads, or anyplace that roses brought by pioneers have proven their hardiness. The old roses that thrive in the inhospitable Texas climate are not always identifiable in the routine references so the rustlers have developed a system of study names until they establish the formal identity. These study names, "Buglar Rose" or "Highway 290 Pink Buttons," are as colorful as the roses themselves.

Some of the old roses' recent history has eluded Christopher. He bemoans the passing of the generation of Black gardeners that were a large source of the old roses reintroduced to the nursery trade in this country. Over a decade ago when old roses were just regaining their popularity in gardening circles, the new collectors south of the Mason-Dixon Line realized the older women in the Black community had been

more constant in their appreciation of these roses' beauty. Christopher feels he was too late to gather the "hows" and "whys" of this group of rosarians. Social change and death thwarted his efforts. His last attempt to get their story ended in a "swept dirt" yard edged in 'Old Blush' rose standards when Miss Lily Mae declined to be interviewed.

Interspersed among the people and their stories is practical rose information. Lydia Shohan, northeast regional coordinator for The Heritage Rose Group, describes her technique for growing cuttings of her old rose finds. Carl Cato, another founder of The Heritage Rose Group, demonstrates a methodical appraisal of rose thorns, stipules, sepals, and fragrance. All are crucial to positively identify roses.

Virginia Shuster

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**Monet's Passion**

Elizabeth Murray

Pomegranate Press, Petaluma, CA, 1989

\$24.95

When Elizabeth Murray wrote *Monet's Passion* she did one of two things. Her superb photos, drawings and insights made a personal visit to the garden at Giverny redundant. Or, she made two pilgrimages there imperative. One to experience the spring garden firsthand, and one to visit the summer and fall display.

Elizabeth Murray, the only American woman to garden at Giverny, made very good use of her time there. Her book includes detailed drawings based on her measurements of the gardens. She absorbed Monet's painterly use of color in the garden. She explains, for example, how the use of bright colors in front of a border backed by pastels creates an illusion of distance in a mist. She describes how Monet had the lily pond groomed so the lilies were the solids in the negative spaces of the clear water.

In the third section of the book Murray adapts the ideas of Giverny into garden plans for the readers' use. These designs include an island bed, a pond design, and double monochromatic borders. The highlight of these designs is the marvelous interpretation of the allee. Her petite allee has the perennials and the rose arbors for permanent structure and the seasonal variations inspired by Giverny.

Virginia Shuster

Virginia Shuster is a 20th century gardener, who worked in the past as an 18th Century Garden volunteer at PHS. She has worked part time in the PHS Library and has been a volunteer in the Horticult at the Philadelphia Flower Show. She is currently a garden volunteer at Morris Arboretum.



# LION'S EAR GOES TO THE ZOO

By Lorraine Kiefer

A few years ago I volunteered to improve the garden at the entrance to the zoo in Historic Bridgeton, NJ. My design included leopard's bane, goat's rue, wormwood, catnip, snake root, bug bane, foxglove, cardinal flower, butterfly weed, bear's breech, dog tooth violet, horseradish, parrot tulips and lion's ear.

Most of these plants were growing in my own garden at our retail nursery. Lion's ear, however, was a new one for me; I found it listed in the Logee catalog, as well as in the

list of Sal Gilbertie, a New England herb grower from whom I obtained my original plants. (Although it was one of the few herb plants not hardy in our area, I was willing to make cuttings to insure plants for the following spring.)

I particularly wanted lion's ear or *Leonotis leonurus* because Bridgeton's small zoo housed a pair of lions. When the cutting arrived I planted a few in my display herb garden. Throughout the summer, the plant was rather nondescript,

sturdy and green, but without blooms. At the end of the summer, I noticed that the stems all began to show a bit of bright, rusty orange color. By September the plant was magnificent. Its blooms were like a starburst of velvety color.

There was a flower on the tip of almost every stem, giving the plant a stately and colorful appearance. I decided that this plant had been well worth the summer-long wait. We enjoyed that first plant until the frost.

*continued*

photo by Rick Darke



*Leonotis leonurus*



*L. leonurus* in a garden in Hockessin, Delaware.

During the last warm, humid days of August, I made some cuttings to keep over the winter. They seemed to root quickly in small flats of Pro Mix. The weather was rather warm and humid, which probably helped the rooting process. During the winter, the cuttings seemed to stand still in my cool greenhouse. Around Valentine's Day they responded to longer days and started to thrive and look healthy again. Once the danger of frost had passed, they were placed back in the corners of the herb garden. It's important to make cuttings from this plant because some years it's not available in the trade.

Except for *Hortus* and *Wyman's Encyclopedia*, I found very little written about lion's ear. I called the few growers that I know who grow the plant to find out what they knew. One grower told me that the plant, a native of S. Africa, is often used in conservatories in England.

Last year lion's ear was shown at the Chrysanthemum festival in the conservatory at Longwood Gardens. Joe Hannas, foreman, greenhouse production at Longwood, told me that it would be a part of the harvest display again this November. He also said that the stock plants are kept in large tubs and put out for the summer, with cuttings taken in May. These are kept from year to year as a source of new plants. This showy, tender perennial is a good choice for gardeners with a greenhouse or Florida room who want to use it as an indoor plant. Given a cool, bright, protected spot, it will bloom well into winter.

Since that first year I found that lion's ear looked spectacular in my herb garden. They are so striking when in bloom, everyone stops to feel the velvety flower or to ask

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*Last year lion's ear was shown at the Chrysanthemum festival in the conservatory at Longwood Gardens. Joe Hannas, foreman, greenhouse production at Longwood, told me that it would be a part of the harvest display again this November.*

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"what is that?" They are fresh and bright when many other herbs are spent. I'm fond of growing them near the blue sages, azure and pitcher's salvia. These plants will insure great bloom up to and even a bit after a light frost.

Lion's ear is not too particular about soil, and really thrives in my sandy loam. It also responds well to an occasional feeding, alternating Peter's and Miracle Gro bimonthly. I found that the plants in full sun bloom best, with those in semi-shade being a little more sparse. The ones that got at least five hours of sun did well, but were not as vigorous as those in full sun.

One of the bonuses of growing lion's ear is that the blooms dry well. Their wonderful deep harvesty rust color stays true if they are dried correctly. Pick the blooms at midday when they are dry. I hang the branches near an air vent in my drying room. I arrange them with bittersweet, silver-king artemesia, brown pods, golden yarrow and tansy, in a country-style basket or wreath.

Lion's ear is not usually noticed until it blooms in the fall and then the plants are not available, or the customer doesn't want a plant that's not hardy. Since it's such a colorful fall plant, I don't see why more people don't grow it just for the

harvest show of bloom.

For those who always want to have something different in their garden, and who are patient, lion's ear might be just the plant.

#### Sources

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Lorraine Kiefer recently wrote a chapter on indoor fragrant plants for the *Brooklyn Botanic Garden Record* edition "Gardening for Fragrance" due December, 1989. Lorraine and her husband Ted, of Triple Oaks Nursery in Franklinville, New Jersey, host a call-in garden show "Get Ready, Get Set, Grow" for WSNJ on Monday during the spring growing season. Lorraine also writes a garden column by that name for the *Franklin Township Sentinel* and *Elmer Times*, as well as an herb column for *Jersey Woman Magazine*.



## Here's To A Healthier Lawn in 1990

Lawn care is entering a new era. The days of fertilizing three times a year, mowing weekly during the summer, and chemical control of pest or disease problems are ending. People are becoming increasingly aware that what they do in their own backyard affects the larger environment around them. They are demanding less harmful products, and companies like Ringer and the Natural Gardening Research Center are filling the demand for environmentally safe products including ones for lawn care.

Turf grasses are plants, just like the trees, shrubs and perennials they surround. They have similar requirements for good health. Remember, a healthy lawn is more resistant to disease and insect problems and to weed invasions.

### What is healthy turf grass?

A plant's health depends on how well suited the plant is to its environment, and how well its need for air, water, nutrients and sunlight are met. Healthy turf is a mixture of turf grass types adapted to the region you live in and the specific conditions it grows in, namely sun or shade. When seeding, read labels carefully. Purchase a mix suited for the growing conditions. Remember that you get what you pay for. Inexpensive mixes have a high percentage of annual grasses and fillers, which you don't need.

Air and water are also needed for healthy grass. Both are essential for proper root development. Compacted soil, lack of water, or improper watering create many turf problems.

*the green scene / november 1989*

# H O T L I N E



By Kathleen Mills, Assistant Horticulturist

## WAYS TO A HEALTHY LAWN

### Mowing

In a normal growing season maintain the lawn at a height of 3-4 inches. In the spring when water is adequate, keep the grass at the short end of the range (3 in.). As summer approaches, rain is less frequent and the temperature increases. Grass should be cut higher, near the 4 in. side of the range. Higher grass casts shade on itself, helping to keep moisture in the soil longer, and keeping weed seedlings at a minimum. Cut shade turf higher than grass growing in the full sun.

When mowing a lawn, never cut more than 1/3 of the height off in any one mowing. If grass gets to 6-8 in., don't try to cut it back to 3 1/2 in. in one mowing. Giving the grass time to recuperate between cuttings, places less stress on turf plants.

Each time you mow, alternate the direction and pattern you use. If you cut in the North-South direction the last time you mowed, cut East to West the next time. That keeps the blades of grass standing straight. Not only will the grass look healthier but air can circulate better and the turf will be healthier.

If you do not collect grass clippings then a mulching mower is a good idea. This type of mower cuts the grass clippings into small pieces before they are dispersed back onto the yard hastening the decomposition of the clippings. The smaller size keeps a thatch layer from building.

### Thatch

When clippings don't decompose and build up over time, you have a thatch layer. As this layer thickens, water, air and fertilizers cannot penetrate into the soil where the grass roots are. In response, the roots begin to grow up into the thatch layer where they can easily get what they need to live. Cutting grass too short and using pesticides and fungicides add to the thatch layer. The worms, insects and microbes, which normally aid in the decomposition of the thatch, cannot live in a soil poisoned with chemicals.

If your lawn has a heavy thatch layer, aerate the turf so that oxygen and water can penetrate the thatch layer. You can rent a dethatching machine or an aerator at most good rental centers.

### Watering Your Lawn

As with any plant, a good gardener wants to encourage deep, healthy root systems that aren't dependent on frequent

watering. A shallow-rooted lawn wilts easily, shows footprints, and often takes on a bluish haze. To encourage deeper rooting:

- Do not let thatch build up from year to year on the lawn.
- Don't mow grass shorter than 3 in.
- Improve watering practices.

Ten minutes of watering here and there will not penetrate the soil deeply enough. Water less frequently and for longer periods. If you use a sprinkler, it will take three to five hours to do a section of lawn correctly, depending on the water pressure, the amount of rainfall, your soil type, and whether you are tending a shady or sunny spot. Shady locations high in organic matter, thatch free and healthy require the least amount of water.

Watering during the heat of the day will not hurt turf plants, but you will lose a lot of water to evaporation. For this reason, it's best to water in the early morning or the early evening hours. During the summer, turf grass can cope with little water by going dormant. If turf dries out in fall, it can be dangerous. Careful watering is essential during any dry autumn season so the plant can prepare for winter.

### Fertilizing Wisely

Chemical fertilizers can upset the delicate balance between the grass and the soil it lives in. Chemical fertilizers are quick acting and rapidly leach through the soil past the root zone. Often, most of the nitrogen fertilizer is never used by the plant, but is carried away in runoff. The lush growth created so quickly by chemical fertilizers and repeated over time, weakens the plant. If you must use these types of fertilizers apply them frequently, in small quantities to have the best effect.

Read labels carefully before purchasing any pesticides, herbicides, or fertilizers. Good fertilizers will have a high percentage of water insoluble nitrogen (WIN). This type of slow release nitrogen lasts longer in the soil and is more beneficial to the turf grasses.

A fertilizer with a 4-1-2 ratio applied once a year, in the fall, is adequate for a healthy lawn. It helps the grass to prepare for winter by increasing root production and later, storing energy for the following spring.

For the gardener sensitive to the use of chemicals, organic fertilizers are a wise alternative. They fit into a program of building good soil and healthy plants. Organic fertilizers may cost slightly more, but over time they are more economical.

*continued*

Organic fertilizers work with the animal life in the soil, they do not make the soil uninhabitable. They are slow acting. Available to the plant over a longer period of time, they supply a steady stream of nutrients. Clippings left on a healthy lawn will decompose returning nutrients and organic matter to the soil.

The proper pH will help to insure that grass plants are getting needed nutrients. If kept between 6 and 7.5, nutrients are readily released from the soil particles to the roots. At a higher or lower pH the nutrients may be present but are bound too tightly to the soil particles. In the Delaware Valley, soil tends to acidify over time. To raise the pH, spread lime following the directions on the label. Lime is slow acting, so apply, over time, in two smaller applications rather than in one large one. Avoid using quick lime which will disturb the soil environment too abruptly for the animal life you're trying to keep there.

To find your soil's pH, call your local extension service. For a nominal fee, they will test your soil and mail you the results. Call PHS Hotline (922-8043) for your extension service location.

### Problems in the Lawn

Disease, insect and/or weed problems are symptoms of unhealthy plants, e.g. the

balance between soil and plant has been upset.

Disease easily attacks a lawn trying to grow in compact soil, where no air is available to the grass roots. This compaction can be caused by excess water, by people, or by lack of animal life. The improper pH can hurt grass growth yet be just right for disease's growth. If a disease becomes a problem, reduce watering and increase air flow. Aerating the lawn, removing the thatch layer, and even pruning thick plantings that border turf areas, helps to increase the air flow above and below the soil. Remember diseases select the type of plant they will attack. By using a mixture of grass types, even if the disease becomes bad, chances are it won't destroy your entire lawn.

Insect pests tend to attack weak and damaged plants. Healthy grass will not invite pests to your lawn. Weeds are also a sign that something is out of balance. If you research the weed or weeds invading the grass, you can determine what it is about your soil that's so inviting and change it. Perhaps adjusting the pH would benefit the turf while making the growing conditions intolerable for the weed. Some weeds like wet, anaerobic conditions. Improving the air flow will force them to move elsewhere.

By creating an environment favorable to

the grass and unfavorable to the disease or weeds you can solve most lawn problems given time. Only when the problem is severe, are chemical controls needed.

Take the time to build a healthy relationship between the soil and the turf grass, just as you would in a flower bed. You will be rewarded with healthy plants that require less effort and money to maintain.

This is Kathleen Mills's last Hotline column. She's moved on to become the horticulturist at the Wilmington Garden Center. We wish her luck and look forward to her continued *Green Scene* contributions.

## The Plantfinder

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# GREEN SCENE

THE MAGAZINE OF THE PENNSYLVANIA HORTICULTURAL SOCIETY • JAN./FEB. 1990 • \$2.00



*Winter  
Salad  
Greens*

See page 4

BYMO



4



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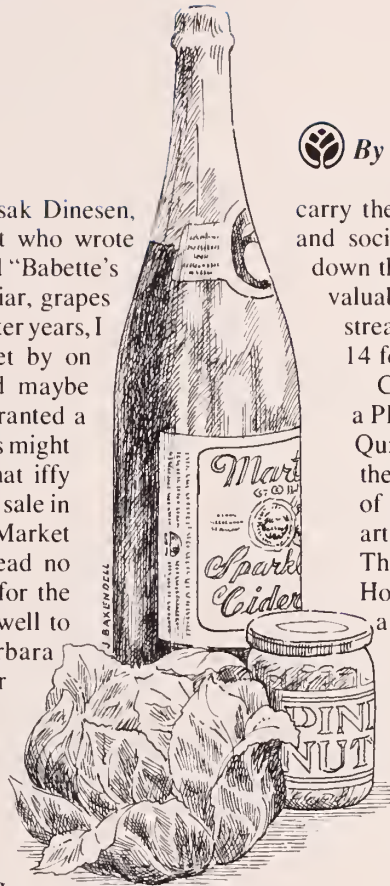


# Radicchio, Styer Awards and a Writer Goes With the Wind...

 By Jean Byrne

In her later years, Isak Dinesen, the Danish novelist who wrote "Out of Africa" and "Babette's Feast," subsisted on caviar, grapes and champagne. In my later years, I like to think I could get by on radicchio, pine nuts and maybe some sparkling cider. Granted a stable Social Security, this might be possible, but somewhat iffy — I've seen radicchio for sale in the Reading Terminal Market for close to \$4 for a head no bigger than my fist. So for the good life, we would do well to have a friend like Barbara Bruno or to heed her advice on pages 4, 5 and 6 about growing salad greens, including radicchio, through January.

Speaking of friends, there's nothing like having a close-to-home group of crack horticulturists scouting out the underused and unusual landscape-sized plants in this area for the Styer Awards. It's like having your own gardening talent scouts. The committee not only checks out, confirms and publicizes the winning plants, they



carry the word to plant associations and societies, and nurseries up and down the Coast to ensure that these valuable plants get into the mainstream. Check pages 7 through 14 for the 1990 awards.

Congratulations to Ed Peeples, a PHS member who won a 1989 Quill and Trowel Award from the Garden Writers Association of America for his *Green Scene* article, "Kathleen K. Meserve: The Woman Who Shook the Holly World," (Nov. 1988). Ed, a retired writer, who once wrote for the *Saturday Evening Post*, now writes regularly for *Country Journal Magazine* about trees and shrubs. In his article about *Mahonia* in this issue of *Green Scene*,

Ed refers to growing up in Atlanta. Well, he grew up around the corner from Margaret Mitchell, who wrote *Gone With the Wind*, and he was lucky enough to attend the movie's premiere 50 years ago. For Ed's reminiscence about this gala event, which included Clark Gable, Vivien Leigh and Olivia de Havilland, check the December (1989) *Town and Country*.

# WINTER SALAD GREENS

By Barbara Bruno



illustrations by Barbara Bruno

I've been surprised at the variety of winter salads a New Jersey garden can produce — and for how long a season. I served my last homegrown salad a year ago on February 16, and I'm sure that later crops are possible.

I start winter salad crops mostly in midsummer after early crops, carrots, peas, onions, have been harvested. They can also be used to fill in after later crops like corn, cantaloupe, or cucumbers. With light protection most of these greens can be harvested at least into December, and many can be successfully stored. Some even improve with storage.

## lettuce

With a little effort during summer's dog

days you can have lettuce superior to most spring crops from September to early December, or longer with protection or careful storage. Mid-July is about right for a first planting. That will give a first picking in about six weeks, mature heads a bit later. I plant two or three varieties at a time, each in a 12-celled flat. Ideally I aim to plant every two weeks until early September, but seldom succeed and still have lettuce non-stop. I think of August 21 as the last date for mature heads, but I have planted later with good results. Mid-September is not too late to gamble some seed, and small plants for picking may still survive when mature ones succumb to frost. A plastic tunnel used as a mini-greenhouse will hurry on these latest crops.

## pre-chill seed

Germinating lettuce successfully in hot weather requires prechilling the seed. Count out two or three seeds for each pot, stir them in some water, and spread them on a damp paper towel. When you roll up the towel, include a name label for each variety. Refrigerate the roll in a plastic bag. Check the seed daily until signs of germination, anywhere from three days to a week for older seed. Pot up the lot when small shoots are visible at seed end, and place them in bright but indirect light until the seedlings emerge.

The trickiest time with summer-reared lettuce is the few days after seedlings emerge. The young plants need full sun for compact growth, but summer sun may

scorch this tender cool-weather crop. I've had success with young seedlings in bright shadow north of a pole bean row or in moving dappled light at tree's edge.

If some of the seed fails to germinate, I may divide and replot the successful seedlings. This is also a good way to slow growth on some plants. Otherwise I trim to one seedling per cell before setting the lettuce out, a few at a time as space becomes available.

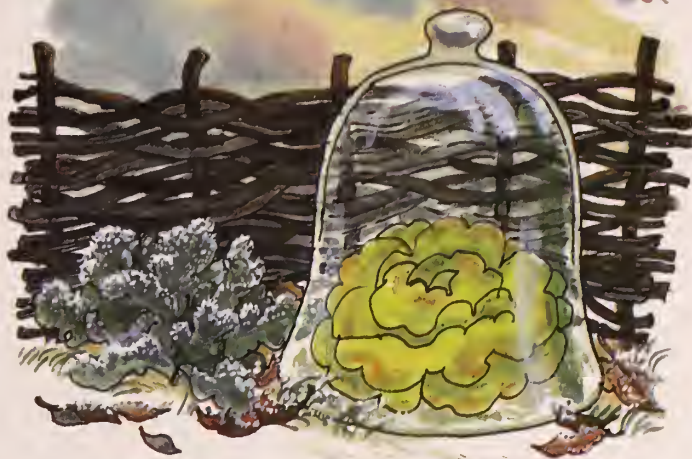
Soil enriched with compost or aged manure gives the best and quickest results. Lettuce works especially well as a succession crop in a rich cucumber bed. Plants must not lack for water for even a moment. I get superior results on my sandy soil by hand-watering lightly every sunny morning. A long-wanded spray head allows me to quickly put the water at the roots, keeping the plants dry.

When frost threatens, I cover the plants with reemay, removing this spun plastic covering when not needed. For latest crops I choose hardy kinds and use a plastic tunnel, sometimes over reemay.\* I have cut lettuce as late as December 5 with only reemay covering, however.

### ZESTY SALAD GREENS

In late fall the more robust salad greens come into their own: escarole, chicory, radicchio, chinese cabbage. These crops come to us from far global corners where they were selected in antiquity for their ability to withstand cold or to survive long storage. These biennials thrive on fall cool, but germinate naturally in summer heat so need no prechilling. Most spring into growth so quickly that they could easily be row-sown but work equally well in pots, avoiding the increased perils of seed sown in the summer garden. Besides, I like the flexibility of potted plants. They are easily popped into bare spots, and these seedlings hold well, giving the possibility of staggered plantings without the fuss of a second sowing.

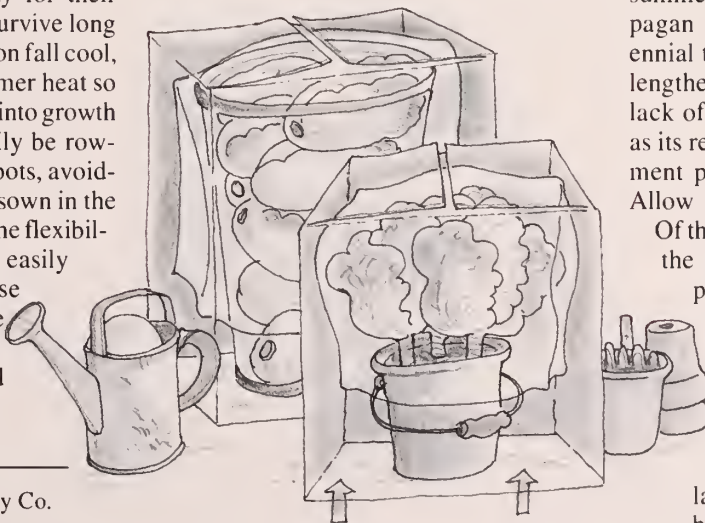
\* Available from Gardener's Supply Co.  
128 Intervale Road  
Burlington, VT 05401



### Escarole/Chicory (Curly Endive)

These related plants share the same culture. Start them like lettuce. I am for an August 7 planting, with maturity coming two months later. At second leaf I set the plants out in two rows to my 36" beds. Try three rows if slugs are no problem. While single heads may be blanched under a bucket a week or so before needed, I get good results with close planting on 5" centers. These pale, self-blanched plants are less hardy than widely spaced specimens, but last under a plastic tunnel until mid-December. Remaining plants, cut and refrigerated, were sweet and mild — far superior to market kinds. The cut heads held until January 8. An insulated cold-frame would provide salads all winter.

*Loose plastic bags cut evaporation*



*Bottomless boxes allow ground heat in*

### Chinese Cabbage

Start plants around July 24 for largest heads, but they can be started as much as a month later with good results. Plant on 15- to 20-inch centers.

This refined mustard called "cabbage" is my winter salad staple. Although 'Michihli,' a tall elegant variety, kept surprisingly well, the best for long storage is barrel-shaped 'Napa.' I'm trying a special keeper selection of this variety. Will it surpass last year's, which reached the salad bowl on February 16? I wrote, "Last heart of 'Napa'! Perfectly fresh."

These succulent heads rank surprisingly high on the hardy list, but prolonged cold will take its toll. When nights reach 24°F some cover is necessary, plastic sheeting or peach baskets for individual plants. In mid-November I usually cut and store most heads under a large cardboard carton in an unheated garage. As winter deepens I move the lot inside to an unheated basement stairwell where I try for just-above-freezing storage with various arrangements of a plastic shower curtain and styrofoam panel to block interior air flow.

For an even more prolonged harvest, uproot enough heads to fit snugly in a plastic tub. Trim away largest leaves, pot with garden soil, and water just to prevent wilting. Store the pot as above.

### Radicchio

Pricey radicchio is one of the easiest crops to grow, if you're careful to plant it at summer solstice. Nothing to do with some pagan rite; it is a daylength-sensitive biennial that will run to seed if provoked by lengthening days (and also if stressed by lack of water). Radicchio grows as lustily as its relative, the dandelion. Luxury treatment pays off, however, in larger heads. Allow 15" or more between plants.

Of the baker's dozen I've tried, including the better-known red, heading type, I prefer the tall, tightly folded and lettuce pale heads of the 'Sugarloaf' type. It is a remarkably useful crop, easily grown and stored, and available when the wealth of fall lettuce is passing. Outside of chinese cabbage it is the most lasting of all winter salad greens. It has been the classic winter salad in Italy for centuries, and it comes

*continued*

## WINTER SALAD GREENS

seasonally late to table here also since, like all radicchio, it needs long exposure to cool temperatures to rid it of its bitter principle.

As in Italy, if you can afford to wait long enough the heads will blanch and sweeten on their own in winter's waning light. This is chancy in our climate. I try for the latest safe harvest, pushing the date each year farther into deepening winter. Two trial plants survived under plastic until harvested in early January. They were the sweetest I've yet tasted, with only a slight, pleasing hint of bitterness. I'll chance more plants next year, but I'll harvest my main crop along with chinese cabbage and store it in a similar fashion to mellow for several weeks before its salad debut.

Besides being superior to what the market offers, one's own garden salad served in the teeth of winter offers a rare gardening satisfaction. Since last March 15 when I found immature but quite usable chicory and napa in the garden, I've been convinced it's a satisfaction within a Delaware Valley gardener's reach the whole winter through.

### windbreaks and shelters

If you have time, ancient methods of crop protection make charming garden features: rows of twiggy brush called pea sticks give wind protection, and straw woven between sticks form a low wind barrier and heat trap beside a row. Other natural materials to use include pine boughs and large stones or bricks placed to gather solar heat near plants. Less time-intensive modern innovations include bags of *dry* leaves, plastic mulch, tunnels and spun plastic row covers.

### what to do with winter salad greens

Winter greens can be combined with milder lettuces, but I prefer their chewy zest in a repertoire of winter salads the equal of any spring salad masterpiece. They do require an assertive dressing to balance their robust taste and textures, or they may be combined with old-fashioned winter salad root crops. Here are some of my favorites:



Illustration by Barbara Bruno

### Winter Greens with Beets and Jerusalem Artichokes

Greens: Should be chewy like chinese cabbage, radicchio, or creamy heart of escarole (save rest for soup)

Beets: Fresh baked are superb or use canned chunked beets  
Sweet onion, sliced  
Jerusalem artichokes (optional), peeled and raw, sliced

Dressing: Any plain, herby vinaigrette made with sweet balsamic vinegar, if possible

### Winter Greens with Grated Carrots and Cheese

Greens: Chewy greens  
Cheese: Freshly grated semi-hard and tangy, such as Asiago  
Dressing: Vinegary vinaigrette flavored with a touch of garlic and celery seeds

### Mixed Greens with Mustard Vinaigrette

Greens: chinese cabbage mixed with others and scallions, if desired

Dressing: Mix 1 tsp. tangy mustard like Grey Poupon's grainy Country Dijon, 1 tsp. mayonnaise, 1 1/2 tsp. fresh lime or lemon juice

Slowly beat in 2 tbsp. fruity virgin olive oil (don't substitute for this flavoring)

Add 1/4 tsp. tarragon, freshly ground black pepper. Taste before adding salt.

Barbara Bruno's idea of getting away from it all is to paint in her garden. The artwork for this article is based on some of her observations there.

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### Temperature Hardiness Chart For Fall Vegetables

Sustained Low Temperature (24 to 48 hours without damage)		Minimum Low Temperature (8 to 10 hours)	
	Degrees F		Degrees F
beets	28	beets	24
spinach	27	spinach	25
lettuce	27	lettuce	26
endive	27	endive	26
broccoli	29	broccoli	27
cauliflower	25	cauliflower	21
Brussels sprouts	24	Brussels sprouts	20
cabbage	24	cabbage	20
carrots	26	carrots	24

Chart courtesy of Tim Sharp, horticultural consultant, Cumberland County Extension, N.J.



# SIX OUTSTANDING PLANTS

 By Jane G. Pepper and Judith D. Zuk

*1990 Winners of the  
Pennsylvania  
Horticultural Society's  
Styer Award of Garden  
Merit*

Exfoliating bark on a  
young *Betula nigra*  
'Heritage.'

photo by Larry Albee

## *Betula nigra* 'Heritage'

photo by Larry Albee



A young *Betula nigra* 'Heritage' in full flower at Scott Arboretum.

In mid-winter gardeners dream of the new leaves to come on the oak in the neighbor's yard, of beefsteak tomatoes in August, and of the landscaping jobs they hope to accomplish in spring. Selecting plants for these projects is always a challenge. Those that dazzle us in a garden center one spring may prove a disaster in our gardens several years later. Alternatively, we may be looking for diversity in our plant palette and are unsure about the virtues of some lesser-known plants.

To assist home gardeners in these decisions, The Pennsylvania Horticultural Society initiated the Styer Award of Garden Merit. And in 1988 and 1989 our evaluators made awards to plants with outstanding garden merit, currently not widely used in the mid-Atlantic states.

For 1990, their selections include a birch that presents an alternative to the canoe and European white birches that flourish in more northern climes but have significant problems in this area; a shrubby dogwood with variegated leaves for summer color; two blues, a fothergilla and a hydrangea; a fragrant daphne and a *stewartia*.

At the end of this article, in addition to the previous Award winners, we've included information on purchasing Styer Award winners, and also how you can enter a plant for an Award. Please join us in letting other gardeners know of these good plants.

### The 1990 Winners

#### *Betula nigra* 'Heritage'

If you've admired birch plantings in New England it's hard to resist adding one to your home landscape, but you're bound to be disappointed when the tree dies because it's susceptible to bronze birch borers in the mid-Atlantic states. *Betula papyrifera*

(canoe birch) and *B. pendula* (European white birch) are the commonly grown species, but unfortunately in the mid-Atlantic states, in the South and in the Midwest the climate is perfect for heavy borer infestations.

*Betula nigra* (river birch) presents a long-lived alternative, and the cultivar 'Heritage,' selected by Earl Cully in Illinois, has the added bonus of keeping its attractive bark as it ages. According to Michael A. Dirr, professor in the Department of Horticulture, University of Georgia and author of the highly acclaimed *Manual of Woody Landscape Plants* (Stipes, Champaign, Ill. 1983 3rd ed.), 'Heritage' has proved itself by performing well in a variety of situations from Minnesota to Florida. It's the most heat-tolerant of all cultivated birches and is resistant to birch borer.

The bark, although not as dazzlingly bright as that of some other birches, is

creamy white, and when 'Heritage' trees get a little age on them the appearance is mottled as the older pieces exfoliate. According to Styer Committee Chair Judith Zuk, 'Heritage' has grown "like nobody's business" at the Scott Arboretum, and Dirr estimates that trees will mature at 40 to 60 ft. They look best when grown in a group and can be trained as a single stem or grown with multiple stems, which would be more natural.

River birch grows naturally in moist soils but it is adaptable and will also grow in drier areas. Acid soil is necessary because chlorosis will develop in areas with a pH of more than 6.5.

Phil Normandy of Brookside Gardens recommends careful siting because 'Heritage' is susceptible to aphids who secrete honeydew, which attracts sooty mold. That can be a problem if the trees are growing near parking lots.

## *Cornus sericea* 'Silver and Gold'



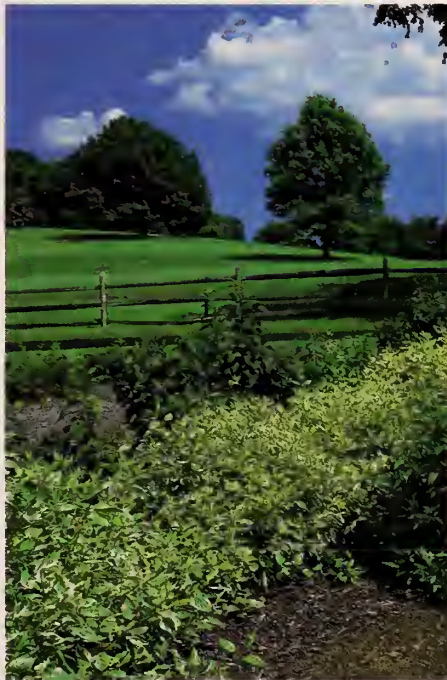
photos by Larry Albee

*Cornus sericea* 'Silver and Gold' at Mt. Cuba Center for the Study of Piedmont Flora in Greenville, Delaware.

### *Cornus sericea* 'Silver and Gold'

For color in wintertime, the red- and yellow-stemmed dogwoods are valuable additions to the garden, but they are of little interest for the balance of the year. A sport of *Cornus sericea* 'Flaviramea,' discovered a few years ago at Mt. Cuba Center for the Study of Piedmont Flora in Greenville, Delaware, offers not only yellow stems in wintertime but also leaves with white variegations, which can brighten up a dark spot in the garden. Named 'Silver and Gold' by the staff at Mt. Cuba for its summer foliage and winter twig color, this shrubby dogwood withstands the heat and humidity of the mid-Atlantic states better than variegated forms of the red-stemmed *Cornus alba*.

Claire Sawyers, administrative assistant at Mt. Cuba, recommends planting 'Silver and Gold' with some of the selections of *Cornus sericea* with red stems, such as



'Cardinal.' All shrubby dogwoods grow enthusiastically, some might say rampantly, maturing around 7 ft. if left to their own devices. To get the best winter color, Claire recommends cutting the stems back to the ground in early spring when they're two to three years old, to encourage suckering of new stems, which will have brightly colored bark.

*continued*

## *Fothergilla gardenii* 'Blue Mist'

photos by Larry Albee



*Fothergilla gardenii* 'Blue Mist' photographed in early May.

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### *Fothergilla gardenii* 'Blue Mist'

Dwarf fothergillas (*F. gardenii*) are as restrained in their growth habit as the shrubby dogwoods are exuberant. They are popular with gardeners not only for their

circumspect growth (mature height, 3 to 3½ ft.), but also for their white bottle-brush shaped spring flowers and brilliant fall color. The cultivar 'Blue Mist' has the added attraction of handsome blue/green

foliage in summer.

The original plant of this cultivar was identified at the Morris Arboretum of the University of Pennsylvania, where it had been growing for more than 50 years. According to Paul Meyer, the Arboretum's chair of Horticulture, after 10 years of careful observation they decided to register it as 'Blue Mist' in 1987. Propagation is easy, Meyer notes. "Take three-inch soft-wood cuttings in July and treat them with 4,000-8,000 parts per million of Indolebutyric Acid in talc or quick-dip solution. After placing in a medium of equal parts peat and perlite, overwinter the cuttings in a bench or flat and do not transplant until growth resumes the following spring." The Morris Arboretum recommends 'Blue Mist' for foundation plantings, massing as a groundcover and as a small accent plant. All fothergillas prefer full sun or light shade and moist, well-drained soil.



## *Hydrangea macrophylla* 'Blue Billow'



photos by Larry Albee

*Hydrangea macrophylla* 'Blue Billow' in late June.

### *Hydrangea macrophylla* 'Blue Billow'

Richard W. Lighty, director, Mt. Cuba Center, spotted this plant in an open glade on the slopes of Mount Halla, on the island of Cheju-Do, Korea, in 1966. Later he introduced it in this country where it has received rave reviews from growers such as Steven Hutton of The Conard-Pyle Co. because of its large quantities of flat-topped (lacecap) flower clusters in summer and because it's reliably hardy in the mid-Atlantic states.

Dick Lighty recommends growing 'Blue Billow' under the shade of trees with an open canopy in soil with a pH no higher than 6.5. In soil with more lime you'll find the flowers are more red than blue. Timely pruning is necessary to keep 'Blue Billow' in shape. As it blooms on year-old wood he recommends pruning these shoots that have flowered to the ground anytime after bloom from late summer to spring.

*continued*



## *Daphne caucasica*

photos by Larry Albee



*Daphne caucasica* in mid-May.



### *Daphne caucasica*

Fragrance is such a bonus in plants that this elegant daphne got lots of merit points from the evaluators for the delicately scented white flowers it puts out from April until frost. Heaviest bloom is in early spring and again in September, but Judy Zuk has found flowers on the Arboretum's plant in the Theresa Lang Garden of Fragrance at Swarthmore even in December. Phil Normandy also values the plant for its compact size and recommends the plant be used near the front door or patio, where you can enjoy the fragrance, or mixed with perennials and small shrubs. The leaves are thick and leathery and the plant's habit is informal — almost billowy.

Judy cautions that daphnes like good drainage and will grow in full sun or partial shade. Many daphnes are short-lived, but Dick Lighty's *Daphne caucasica* has persisted for more than eight years in his home garden.

## *Stewartia pseudocamellia* var. *koreana*



Photos by Larry Albee

*Stewartia pseudocamellia* var. *koreana* in late June.

### *Stewartia pseudocamellia* var. *koreana*

With 14 ardent horticulturists as evaluators, the discussion about potential Styer Awardees is sometimes lengthy and involved. However, everyone agreed that although *Stewartia pseudocamellia* can be found in arboretums and home gardens in the mid-Atlantic states, it should be even more widely grown, especially var. *koreana*. As Paul Meyer says, if he could grow only one small tree in his garden it would be *Stewartia pseudocamellia* var. *koreana* because it has interest so many seasons of the year. The white camellia flowers occur from mid-June through early July, a season when few other trees or shrubs are in flower. It has excellent orange to red fall color, and its smooth beige and white exfoliating bark is especially notable throughout the winter. Paul had a chance to see this species growing in rich loamy soil in sheltered valleys in Korea this past spring, where mature trees were 50-60'

tall. In our gardens, he says the tree will seldom exceed 30' in height.

According to Paul, the botanical nomenclature for the species has been a source of controversy in recent years. The species *Stewartia pseudocamellia* occurs naturally in both Japan and Korea. The Korean plants differ from their Japanese counterparts in their more saucer-shaped flowers, their extended blooming period, and coloration of the leaves in fall. The Japanese plants become a deep burgundy red while the Korean plants turn a bright yellow or reddish orange.

Stewartias are understory trees, so some shade is preferable. They make beautiful accent trees and although they grow best in soils with a low pH, they seem to be able to tolerate less acidity.

*continued*





## Hardiness zones for the 1990 Styer Award winners:

### Zone 4

*Betula nigra* 'Heritage'  
*Cornus sericea* 'Silver and Gold'

### Zone 5

*Fothergilla gardenii* 'Blue Mist'  
*Hydrangea macrophylla* 'Blue Billow'  
*Daphne caucasica*  
*Stewartia pseudocamellia* var. *koreana*

Grateful thanks to Sally Reath for research. Sally Reath was awarded a PHS Certificate of Merit in November, 1989. Jane Pepper is president of the Pennsylvania Horticultural Society; Judith Zuk is director of the Scott Arboretum of Swarthmore College.

## HOW TO ENTER A PLANT FOR THE STYER AWARD

We hope you and your gardening friends will let the Pennsylvania Horticultural Society know about plants that merit a Styer Award. Brochures and entry forms can be obtained by calling the Society at (215) 625-8299.



The schedule for the program is as follows:

### December 1st —

Deadline for entrants to submit suggestions with entry form and slides (3-5) to the Society.

### January —

Evaluators review entries and select plants for further evaluation in the field during the upcoming months.

### Summer —

Evaluators meet to make final award selections. Winners are announced in *Green Scene* at the beginning of the following year.

When making recommendations for the Styer Award, please remember the following specifications:

- for each entry, a minimum of three landscape-size plants must be accessible to evaluators in a botanical garden, arboretum or nursery located within 150 miles of Philadelphia, in the area extending from Washington, D.C. to New York City;
- a program of propagation and distribution should be underway for all entries to ensure that plants are available so growers, retailers and mail order sources can obtain stock for distribution.

## WHERE TO BUY STYER AWARD PLANTS

As with all production operations, both wholesale and retail nurseries walk the delicate tightrope between supply and demand. Their situation is further complicated by the long lead-time needed to produce plants large enough to attract demand in the retail nursery.

As part of the Styer Award program, the Society has attempted to make those involved in the production and sale of plants in the areas covered by *Green*

*Scene* readers aware of our activities. And we distribute information on the upcoming award winners to the trade.

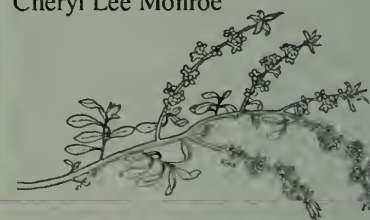
We hope you will be able to find these plants in your garden centers. If you cannot, a source list is available and can be obtained by sending a stamped, self-addressed business-size envelope to Styer Award, Pennsylvania Horticultural Society, 325 Walnut Street, Philadelphia, PA 19106. Both retail and wholesale sources are included in the list.




## EVALUATORS

Judith D. Zuk, *Chair*  
Darrel Apps  
Tom Dilatush  
William H. Frederick, Jr.  
Richard Hesselein  
William Heyser  
Steve Hutton  
Richard W. Lighty  
Paul Meyer  
Philip Normandy  
Sally Reath  
Bradshaw Snipes  
J. Franklin Styer  
Charles Zafonte

*Staff Coordinator*  
Cheryl Lee Monroe



# MARTIN BROOKS'S GREEN GALLERY

 By Jody Petersen

*In 1955 Martin Brooks started his nursery of dwarf and unusual woody plants. These plants, many unheard of and unappreciated 30 years ago, are today mature and valuable works of art.*

photo by Jim Thompson



Martin Brooks shows off his 35-year-old prize-winning weeping Alaska cedar, the Nootki — to the author.

**W**hat kind of plant is worth a half-million dollars? And what kind of man would *turn down* such an offer?

“Yeah, I know, people say I should have sold it; they say I’m crazy,” says Martin Brooks, owner of Brooks Rare Plants, a nursery of dwarf, weeping and other rare woody plants. “And what is it worth, really? I love this plant, it is worth more than \$500,000 to me just to be able to come out here every night and look at it,” he says matter of factly.

Brooks is speaking of The Nootki, as he calls it, a towering, graceful, 35 ft., 75-year-old weeping Alaska cedar (*Chamaecyparis nootkatensis* ‘Pendula’), a plant native to the northwestern United States. This particular plant is Brooks’s favorite. Brooks Rare Plants is a botanical art gallery where the works are for sale, and Marty is the personable, enthusiastic, overzealous agent for the Artist who is reluctant to part with the old masters, but will — if the price is right.

A walk around this former Campbell  
*continued*



Who says conifers are only green?

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soup tomato farm, especially with Brooks as a guide, is a walk in Eden. Nothing is for sale unless it is at least 15 years old, so magnificent mature specimens are common. Some dwarf plants here are more than 20 ft. tall. In Marty's opinion, a dwarf is one-half the size of the mother plant at the same age. A dwarf giant redwood (*Sequoia gigantea*), could be 150 ft. tall, if the mother plant, at the same age, was 300 ft. Dwarfs, and some weeping plants, are genetic variations in nature, like a club arm or hair lip in a human. These oddities cannot be reproduced sexually through seeds, only asexually by cuttings or tissue culture. Sexual reproduction is almost always fruitless among dwarf conifers. Many of these plants are difficult to propagate, or extremely slow growers, which increases their scarcity and so their value. A three-foot plant may be 30 years old. Some are unique, only one or two of a kind.

Brooks has a fondness for weeping cultivars, and though some weepers, especially younger ones, can look awkward or out of proportion, many of the Brooks specimens display such a rightness and majesty, it is as if any other form of the plant were a mere trial run. A weeping blue spruce, if seen in a

crowded suburban foundation planting, surrounded with white stones, is obnoxious. But here, a magnificent weeping blue spruce (*Picea pungens glauca* 'Kosterpendula') planted in a rock wall built for one of its arms, is a cascading waterfall that halts a visitor in astonishment. "Yeah," says Marty, "that's worth a couple of Rolls Royces!"

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***In Marty's opinion, a dwarf is one-half the size of the mother plant at the same age. A dwarf giant redwood (*Sequoia gigantea*), could be 150-ft. tall, if the mother plant, at the same age, was 300 ft.***

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#### **at the nursery**

A visitor to Brooks's nursery must negotiate through the burgeoning upscale development in Doylestown, Pa. The land here is fast being scooped up into front-end loaders, but Marty manages to hang on to his 45+ acres. Marty and his wife Rebecca have lived and worked here for 36 years, ever since he graduated from Delaware Valley College of Science and Agriculture (then called the National Agricultural

School) with a B.S. in Ornamental Horticulture. Though his interest in plants started as a Boy Scout — all that camping on soft, fragrant pine needles — the real botanical bug bit him while at college. A professor brought in a book by New Jersey landscape architect David Rhodes, which contained a picture of a weeping mountain ash, and "it really turned me on," says Brooks. At that time, the mid-1950s, little was known about dwarf and weeping plants; the only book was *Dwarf and Slow Growing Conifers*, by Murray Hornibrook which was, and still is, out of print.\* Hornibrook was an important influence on the student Brooks.

As a young landscaper just out of college, Marty decided to specialize in dwarf and unusual plants, but sources for such plants were scarce. Brooks theorized that around the turn of the century there was an influx of top gardeners to the U.S. from all the best gardens in Europe and Japan. These gardeners had apprenticed for 10-30 years at all the old world arboretums, and, as Marty says, "They were real horticulturists, they

\*Published by Country Life, London 1923. Available at PHS Library.



Martin Brooks ties a branch in a knot to demonstrate the twisting flexibility of the limber pine (*Pinus flexilis*).

for \$9 each, and as he was planting them in his own nursery, he sold *one* of them to a knowledgeable colleague for \$350! But, as Marty points out, "I paid the guy what he wanted." And he rescued the dwarf orphans, which are now many of the mature beauties in the nursery.

### **Brooks meets the 'Rariflora' collection**

Other plants in the rare collection come from the famous Bergmann 'Rariflora' collection. This Feasterville (Pa.) nursery had one of the finest selections of dwarf conifers in the U.S., if not the world; the collection was auctioned in the late 1970s. Mr. Bergmann was apparently rather eccentric, and it took Marty nine years to get into 'Rariflora.' Every time Marty arrived, Bergmann threw him out. Bergmann felt educated horticulturists didn't know anything about 'real' work, so he had no use for Brooks. Marty finally won him over after jumping in a hole Bergmann was digging and silently, competently, helped Bergmann tie up a plant. Getting dirty. Ever since then the two were friends, and Brooks was

*continued*

loved plants. They came to this country with two suitcases — one filled with clothes, and one with plants." With no quarantine regulations at that time to stop the flow of European and Asiatic greenery, these gardeners imported healthy, choice specimens. When Brooks graduated from college these gardeners were 70-90 years old. Each great gardener's unfortunate demise was noted in the obituary column of *The American Nurseryman Magazine*, a biweekly magazine for the nursery trade (or the 'bible' as Brooks calls it), which Brooks diligently read. This resourceful, if slightly gruesome, technique put Brooks in the right place and the right time when the heirs of the deceased growers took over the businesses. These young, ambitious and impatient new growers had little use for the slow-growing, expensive, odd dwarf conifers their fathers brought with them from Europe and Asia, preferring the 'bread and butter' yews and junipers. Marty, following the lead in the obituary column, found the nurseries and asked the new owners the prices of the special specimens. He always paid what they asked. In one case, Brooks bought a group of dwarf Colorado blue spruce (*Picea pungens* 'Glauca Globosa')



This weeping spruce, an oddity in itself, threw a 'skirt,' another oddity.

treated like a son. So much so that Brooks was given permission to propagate anything in the extensive collection (except the patented Bergmann cultivars). After Bergmann became gravely ill with cancer and 'Rariflora' went to auction, Marty was hired as a consultant to help inventory and price the 5,500 plants. He took his fee in plants. The auction was a tour de force, with many of the plants going to major arboreta around the country such as the Arnold Arboretum, and the National Arboretum. A Bergmann cultivar *Pinus parviflora* 'Bergmanii' sold for \$35,000, set a world record on price, for a single plant, at that time.

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**Marty believes chemicals do more harm than good, and admits if he used them he could knock \$20,000 a year off his weeding bill.**

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#### customers who's who

Brooks's customer list is a Who's Who with Longwood Gardens, Central Park, Philadelphia Zoo, the infamous Watergate, and Rockefeller Center among his clients. Many of his plants end up on Long Island estates, where plants may become status symbols, and the rarer or more outrageous the better. One giant weeping ginkgo will be flown to the site by helicopter because it won't fit through New York's Holland Tunnel. Brooks and his crews dig every specimen by hand to protect the extensive root systems, and can take days to do what could be done in hours with a machine. His root balls are 20% larger than industry standards. Everything is hand weeded. Marty believes chemicals do more harm than good, and admits if he used them he could knock \$20,000 a year off his weeding bill. Nothing is pruned; everything is "the way God wanted them to be."

As is often the case with successful people, Marty Brooks is a somewhat controversial figure. As he flies by on his Cushman golf cart, with his two-day beard, dozer cap, and ever-present cigar between his teeth, he greets a visitor with a cocky confidence, a gruff directness that can be refreshing or off-putting. One or two students a year from nearby Delaware Valley College, his alma mater, come by to ask for a job, and according to a professor there, the first reason why is that they are "fascinated by Marty, and second is the plants."



Weeping blue spruce, a cascading waterfall.

On one student tour, as the group stopped at an 18-ft., 20-year-old giant redwood, Marty explained that he didn't intend to die until he could drive his tractor through the tree trunk, like they do in California. He gleefully reports hearing a disgruntled student in the back mutter "You'll probably make it, too."

His prices, also, are called 'outrageous' by some in the business. One story goes that two identical trees were purchased by Marty and another nurseryman, and planted in their respective nurseries at the same time. Years later, a landscape architect needed a pair. The architect bought the first plant from the other nursery, and then to get a matched set bought the second plant from Brooks, at twice the price. The architect did pay the price, a lesson for all the hardworking nurserymen who only make pennies on the dollar.

With rare vision and foresight, enthusiasm, a love for plants, and a willingness to set his own standards and stick by them, Marty Brooks has created an empire, and a good living, in the obscure and chancy business of dwarf and rare woody plants. He has done it in his own way, in his own style. At Brooks's Rare Plant Nursery you will not only see exceptional plants, but, with Marty as a guide, you will *remember* the visit.

Marty Brooks welcomes visitors to his nursery, but please call first. (215) 348-4309.

Jody Peterson is a landscape designer in Quakertown. She has just planted a 2-ft. weeping Alaskan cedar in her garden, hoping to make her fortune in 70 years.





# THE VINELAND COOPERATIVE PRODUCE AUCTION

 By Jane G. Pepper

*Led by Charlie Bylone, 550 farmers  
band together to market their produce at  
auction quickly and profitably.*

*continued*

By midday the Vineland Auction house is a bustling, noisy place. In front are produce samples; behind a dozen simultaneous phone conversations go on between produce buyers and their head offices in Boston, Toronto, Philadelphia and New York.



Charles Bylone's workday starts before sunup. Here he examines beets to select samples for the vegetable auction.



Red Sails lettuce on an early fall morning.

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**O**n a cool fall day there's no better late-morning break than a bowl of escarole soup at Tony's Lunch behind the Vineland Cooperative Produce Auction. Around you in this friendly establishment in New Jersey you'll find farmers waiting for their numbers to come up for sample sales; inside the small auction house are the buyers, purchasing produce for shipment to New York, Cincinnati, Philadelphia, Toronto and Montreal.

Charlie Bylone, farmer and president of the Auction, treated me to lunch at Tony's as we chatted about his farm and the Cooperative. In 1895 Charlie's Italian grandfather, Dominic Bialoni, received a grant of 20 acres near Vineland. Bialoni's son was a miner in Hazelton, Pennsylvania, but his grandson Charlie Bylone took over the family farm and today cultivates 100 acres with his wife and two sons. For the summer market the Bylone family grow peppers and tomatoes in profusion, but my favorite time in the fields is an early fall morning before the dew dries from the leaves of the bright green Boston or Red Sails lettuce. In the next field is a huge

patch of dill, rows of mustard greens, turnips grown for their tasty tops and acres of kale, collard greens and cabbage for market in late fall. In spring you'll find more salad greens, spinach and radishes, as well as leeks grown to maturity in the fall and then mulched well to hold them for spring sales.

For any farmer, half the challenge lies beyond the field in getting his produce to the customer. In 1930, to meet their needs and those of other farmers in southern Jersey, a group joined to form an auction association. By 1962 the cooperative's gross sales were \$2.5 million; in 1988 the turnover was \$46 million, with 7 million packages sold. Bylone has been a cooperative member since he started farming, and he's been its cheerful, long-suffering president since 1976. This is no easy job with 550 members to keep happy, not to mention some 30 to 40 produce buyers.

Charlie's day starts in the field at sun up, but on those days when he has produce to sell he has to arrive at the Auction no later than 10:45 a.m. with his sample sales. If he has peppers, escarole and dill to sell, for

example, he'll show up with a package of each. From these and samples from other farmers the buyers will bid on the day's produce. In the early '50s the Association's board of directors standardized its packaging methods. All produce is packed in standardized containers and marked with the grower's name and address, quantity and quality.

In the early days, the Auction gate was closed in the morning and the farmers lined up outside on the road. At 11 a.m. they edged and squeezed their horses, carts and trucks into line, eager to be the first to make their sales and head back to the farm to get the rest of the produce ready for the buyer by 4 p.m. Hundreds of fender benders later, the Auction initiated a system of random numbers, with each farmer drawing a slip of paper each day from a bag. When it became obvious that some farmers were ending up at the top of the line with regularity, the Auction board decided it had to find a more equitable system.

Assigned the job of finding a new system, Charlie talked with machine manufacturers across the country, but no one could pro-



Each time a sale is made, auction manager Gino Coia stuffs a copy of the sales slip into an old tennis ball and tosses it to the buyer.

vide one that turned out random numbers. Eventually he found an operation in Vineland that agreed to make one and finally the number troubles were over. As soon as a farmer arrives at the Auction he picks a number from the machine, then waits his turn till it's time to load his sample sales packages into the Auction house for the bidding.

Although it's sometimes tiresome for the farmers to have to wait around with their samples, the Auction is, according to Bylone, an excellent sales method for them, providing a true picture of prices and, in addition, this Auction is especially economical. At some auctions, the farmer must pay 15% of his sales to the center; in Vineland the farmer only pays 3%, 1.8% of which he recoups later. Another valuable feature is that the Auction house pays its farmers on a weekly basis, although the produce buyers don't settle with the Co-operative for 4-5 weeks.

Bylone is fortunate because his farm is only five miles from the Auction, minimizing the time he must spend commuting with sample sales. Some farmers travel 40 to 50 miles daily with their commodities. The average size of these farms in South Jersey is small (75 to 100 acres) compared to many vegetable farms in California, for example, but this smallness has enabled the farmers to meet the needs of the marketplace, and diversity is one of the key elements of Vineland's success. Another feature is its ability to produce enough high-quality merchandise to attract buyers five days a week from the second week of April until Thanksgiving.

Looking towards the future, Auction president Bylone cited several issues the farmers must grapple with if the Auction is to thrive in the coming decade. Speed of sale is important to everyone because according to Charlie, the faster the sale, the happier everyone is. Currently, each sale at Vineland takes 20 seconds; automated sales in places such as the huge flower auction house at Aalsmeer, Holland take only four seconds. As a first and large step towards automation, Charlie believes the Auction must computerize many of its records.

Continuing diversification is another issue. Today peppers make up the largest volume of sales, green beans are second and parsley a close third, with \$4 million in sales per year. Throughout the season farmers offer the buyers 60 crops. Many of the recent introductions have been additional salad greens and herbs. Dill, coriander, thyme and basil are field grown for summer and fall sales, and basil is also

*continued*



Crew loads sample headed for the auction.



Bylone's workers harvest kohlrabi in October.

grown in greenhouses for spring sales. As restaurateurs and homeowners become enthusiastic about different crops, Bylone noted, New Jersey farmers must figure out how to produce these in quantity and of top quality for the market.

The demand for quality produce with the longest possible shelf life will shortly lead the Vineland Auction to install vacuum pre-coolers to keep their produce competitive. Operations in California and Florida have installed these huge coolers, and farmers rush their produce into them straight from the field so the heat can be drawn out before the produce is placed in a truck for shipping. Fortunately, the Co-operative owns sufficient land on which to build the coolers, but the investment will be substantial.

When you're next in South Jersey, try a bowl of Tony's escarole soup and meanwhile, if you're not going in that direction, try the recipe below, given to me by Mary Durinzi, the mother of Denise Flores, a PHS staff member who has cheered us on winter days with bowls of her mother's soup.

●  
Jane Pepper is president of the Pennsylvania Horticultural Society. She writes a weekly column for the View section of the *Sunday Inquirer*.

## Mary's Own Original Escarole Soup

### Ingredients

3-4 lbs escarole (smaller heads more tender than large)  
2 lbs ground beef  
9 eggs  
1 ½ cups grated cheese (parmesan or romano)  
grated rind of 1 ½ lemons  
salt, pepper and garlic to taste  
5 quarts of good chicken stock

1. Clean each escarole leaf *separately* under cool water to remove the grit and sand. Put escarole in a large pot of boiling water and cook for about 40 minutes. Drain, cool and cut into pieces. Put aside until rest is complete.
2. Put a 5 qt. pot of water on to boil while mixing together the following: 2 pounds of ground beef, 2 eggs (one egg per pound), ½ cup grated cheese (parmesan or romano), grated rind of ½ lemon, salt, pepper and garlic to your taste. Mix all ingredients together. Roll into meatballs no larger than the size of a cherry. Drop meat balls into boiling water and simmer on med. high for 35 to 40 minutes. Drain and put aside for the next step.
3. Put a 5 qt. pot of good chicken stock on to boil. Beat together in a bowl seven eggs, grated rind of ¾ of a lemon, and one cup of grated parmesan or romano cheese. Pour egg mixture into boiling stock, stirring constantly for about 10 minutes so that the eggs crumble into little pieces. Stir in the drained cut up escarole, and the tiny drained meat balls. When all this is completed cook on low boil for about one hour stirring frequently so that nothing will stick. Serve hot, topped with grated cheese (parmesan or romano) and croutons if desired.

# PRAIRIE PLANTS FOR MID-ATLANTIC GARDENS

photo by Patricia A. Taylor



 By Patricia A. Taylor

The word *prairie* brings to my mind two mutually exclusive pictures. The first is of amber waves of grain — rustling wheat fields drenched in golden sun and topped by a picture-perfect blue sky. The second scene is of a huge oriental carpet come alive in the form of an untamed vista of exotic flowers bursting with golds, purples, reds, blues, and yellows.

Both pictures are true ones. Luxurious plains of flowers did greet homesteaders as they trudged across our continent. These pioneers, however, were not able to gratify their need for beauty and make a living. To grow the waves of amber grain, they had to destroy the prairie, to plow it away so they could plant wheat and corn.

Today, only rare vestiges of true prairie remain. Fortunately, the flowers that once so freely populated our midwest have survived. Savvy garden marketing people have recognized their colorful beauty and are now touting these American natives. One of the more popular approaches is that of the “garden in a can”; pop open a container of seed, sprinkle it about your garden, and soon you are rewarded with a gorgeous array of flowers requiring little or no care.

True gardeners know that life in the plant world is not that simple. In the first place, the term “prairie” describes a broad area of grassland — from the cold winds of Canada to the lush humidity of Mississippi. About the only thing this great expanse has in common is a lack of dense forest cover. Otherwise, soil, moisture, temperature, and even sunlight conditions vary tremendously.

Thus, one cannot indiscriminately fling prairie seeds or transplant seedlings about

*continued*

*Allium cernuum*, a most neglected native plant. Elegant and tough.

# PRAIRIE PLANTS FOR MID-ATLANTIC GARDENS

photos by Patricia A. Taylor



*Allium stellatum* grows in difficult spots.

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a garden and expect success. It is crucial to examine each plant's environmental requirements.

One major consideration is that prairie plants cannot grow in raw clay or pure sand soil. The original prairie, after all, was a grassland and over time the decaying grasses considerably enriched the earth and gave it its renowned fertility. Prairie flowers need organic content in the ground to survive.

Still one can find many prairie plants that grow under climatic conditions similar to those of the mid-Atlantic region. These are the flowers that I'll address here. While the majority prefer full, open sun, they will also grow in part shade, defined as a minimum of six hours of high-summer sun.

## Prairie plants that sound great but do not do that well in my garden.

It is not unusual for a gardener to see a plant thrive in a neighbor's garden and wilt in their own. Such is the case with cardinal flower (*Lobelia cardinalis*). According to one catalog, this late-season plant with tall spikes of brilliant red flowers "responds



Seedpods of the *Asclepias tuberosa* emerge in September.



*Liatris aspera*, rough blazingstar, is a standout in author's flower beds.

magnificently to cultivation." Well, it does so in Jean Woodward's garden across the street, but it only survived two summers in my flower bed. Other garden books, however, do refer to this as a short-lived perennial and I, personally, do not want to take the time to deal with such plants.

The regal *Filipendula rubra*, aptly dubbed queen-of-the-prairie, does grow over 6 feet tall in my flower beds and is crowned with

large peach-pink plumes that are reminiscent of fluffy cotton candy. Japanese beetles weren't around when this plant evolved on the prairie but they are today and love it. My drastic approach to their unsightly infestation is to cut the plant to the ground once the flowers are gone. So far the plant has survived, but I would not recommend it to anybody in my neighborhood.

Three other prairie flowers — pale purple

coneflower (*Echinacea pallida*), stiff goldenrod (*Solidago rigida*), and culver's root (*Veronicastrum virginicum*) — are all supposed to be easy to grow and to do well in soils with a heavy clay content. The first is an ethereal version of the well-known purple coneflower (*Echinacea purpurea*); the second is a handsome plant with greenish-yellow leaves and bold yellow flowers; and the third features bluish-white flowers that resemble those on speedwell (*Veronica spicata*).

With these encouraging descriptions in mind, I ordered each of them last spring. What a disappointment! The most they could muster was a few sickly green leaves. While some could argue that the continuing rain of this past summer and no fertilizers and pesticides created exceptionally harsh growing conditions, other introductions thrived in my flower beds. Perhaps these prairie plants need more than a year to settle in. If they do not return next spring, however, I shall not replace them.

**Prairie plants that sound great, do well in my garden, but about which I have mixed emotions.**

My flower beds are located on a small, in-town lot. While I have long, narrow borders, I do not have grand open spaces. In my kind of setting, three prairie flowers just do not shine. These are white penstemon (*Penstemon digitalis*), yellow coneflower (*Ratibida pinnata*), and mexican hat (*Ratibida columnifera*). The penstemon, for example, can drench an open field with its white, tubular flowers. The few plants in my flower bed are rather meager and lacking in appeal. The yellow coneflower, with drooping lemon-colored petals, sparks up many a picture of prairie flowers but somehow seems to exhibit a sad attitude in a flower border. I plan to keep both plants because they are care-free and do add color, but they are not among my favorites.

The mexican hat also looks great — and more robust — in an open field. I remember seeing its sombrero-like flowers, with rich, velvety red petals, pepper the meadow by the LBJ ranch outside of Austin, and I've seen it featured as a prominent member of a summer cutflower bed. Unfortunately, the petals are so small in my garden that they are rather lost. I have to give this plant its due: it is a long bloomer — from late June through frost and requires no care, being both drought resistant and able to handle all the rains of summer 1989. And yet, it doesn't make the spectacular contribution that it does elsewhere.

*continued*

Two more plants that provoke mixed responses from me are native not only to the prairie but also to the northeast. The first, American columbine (*Aquilegia canadensis*) is well known and rightly loved for its delicate red and yellow flowers in early spring — about the only wildflower boasting such a color combination at this time of year. The foliage on this plant, however, is so delicate that it succumbs easily to leaf miner attacks.

The second (*Ceanothus americanus*) has two contradictory popular names: New Jersey tea or California lilac. It's hard to believe that both refer to the same prairie plant and yet they do. Not only that, this semi-shrub is a favorite with British gardeners, who have grown it for over a century. It is supposed to be covered with white clusters of flowers in July and early August and is classed among the most rewarding shrubs for growing against walls, including those located in shore areas. The problem with this plant is that it takes about three to four years to exhibit all these traits. I have two years to go before I can render a proper verdict.

Two other prairie plants also receive mixed reviews. These are a black-eyed susan (*Rudbeckia hirta*), and meadowrue, (*Thalictrum dasycarpum*).

I like this black-eyed susan because it can bloom earlier and longer than the sturdier *Rudbeckia fulgida*. In years when mildew is rampant, however, this is among the first plants to succumb. Its leaves eventually turn a ghastly gray and the whole plant is an eyecore in the garden.

The meadowrue has much in its favor: it will grow with only four or five hours of sun and it has lovely foliage. Caterpillars like this foliage, however, and you have to keep a sharp eye out to detect these pests before they can devour the leaves. The flowers are nowhere compatible in size or attractiveness with the Asian thalictrums. Yet, if you have shade and want to plant an all-American garden, this meadowrue should certainly be in it.

### Prairie plants that are great in my flower beds and that should do just as well in yours.

The following, in my opinion, represent an all-star cast of prairie flowers. They are good looking, readily adaptable to many different growing conditions, require a minimal amount of attention, and all contribute some interest to the fall garden.

In alphabetical order by botanical name, here are my choices.



*Lobelia siphilitica*, although suitable for bog places, easily survived the drought of '89 in the author's Princeton garden.

### SOURCES:

The best single source is:

Prairie Nursery  
P.O. Box 365  
Westfield, Wisconsin 53964  
(608) 296-3679

Two other good sources of prairie plants are:

The Crownsville Nursery  
P.O. Box 797  
Crownsville, Maryland 21032  
(301) 923-2212

and

Milaeger's Gardens  
4838 Douglas Avenue  
Racine, Wisconsin 53402-2498  
(414) 639-2371

The only source that I can find for *Allium stellatum* is through the seed exchange program of the American Rock Garden Society. For information on joining this group, write Buffy Parker, 15 Fairmead Road, Darien, CT 06820, or ARGS, Delaware Valley Chapter, Joyce Fingerut, 2106 Pennsylvania Ave., Ft. Washington, PA 19034.

Nodding onion (*Allium cernuum*). This has to be one of the most neglected natives in our country. It graced the Jardin du Roi in Paris in the late 1700s and is featured at Vita Sackville-West's Sissinghurst, yet few Americans are aware of the charms of this tough, yet ever-so-elegant plant. The gracefully arched flower heads form as large white droplets in late July and then begin to open as a lacy spray in August. This wonderful plant then produces a bonus: a seed head that turns upward to face the sun and then lasts through most of winter, catching light snow to form delicate garden sculptures in bare winter beds.

Prairie onion (*Allium stellatum*). This flower closely resembles garlic chives (*A. tuberosum*) and blooms at the same time, late August and early September. It will, however, grow in more difficult spots, being able to handle a hefty dose of dry shade, and often has a light pink in its flower head.

Butterfly weed (*Asclepias tuberosa*). A popular plant, and rightly so. Its orange flowers hold their own in any sun-washed garden. Even more striking, in my opinion, are the gorgeous seed pods that flare up on the September branches. These then provide a further visual treat by opening and scattering seeds borne on silky white threads.



## Vital statistics for prairie plants (mentioned in this article)

Botanical name	Flower color	Approx. bloom time	Height	Soil*
<i>Allium cernuum</i>	White, pink	Mid-summer	1' - 2'	Average
<i>Allium stellatum</i>	White, pink	Late summer	2'	Average
<i>Aquilegia canadensis</i>	Red and yellow	Spring	2' - 3'	Sandy to average
<i>Asclepias incarnata</i>	Intense pink	Mid-summer	4' - 5'	Average to moist
<i>Asclepias tuberosa</i>	Orange	Summer	3'	Sandy to average
<i>Aster novae-angliae</i>	Purple-blue	Fall	4' - 6'	Average to moist
<i>Ceanothus americanus</i>	White	Early summer	2' - 3'	Average
<i>Echinacea pallida</i>	Pink	Summer	3' - 5'	Sandy to average
<i>Echinacea purpurea</i>	Rich pink	Summer to fall	3'	Average
<i>Eupatorium maculatum</i>	Palest purple	Late summer	6' - 8'	Average to moist
<i>Filipendula rubra</i>	Pink	Mid-summer	to 7'	Average to moist
<i>Liatris aspera</i>	Pink	Late summer	3'	Sandy to average
<i>Liatris pycnostachya</i>	Purple	Summer	3' - 5'	Average to moist
<i>Lobelia cardinalis</i>	Red	Late summer	2' - 3'	Average to moist
<i>Lobelia siphilitica</i>	Blue, white	Fall	3' - 5'	Average to moist
<i>Monarda fistulosa</i>	Lavender	Summer	to 5'	Sandy to moist
<i>Penstemon digitalis</i>	White	Early summer	3' - 4'	Average
<i>Ratibida columnifera</i>	Red	Summer to fall	1' - 3'	Sandy to average
<i>Ratibida pinnata</i>	Lemon yellow	Mid-summer	4' - 5'	Sandy to moist
<i>Rudbeckia hirta</i>	Golden yellow	Summer	3'	Sandy to moist
<i>Solidago rigida</i>	Golden yellow	Fall	3' - 5'	Sandy to moist
<i>Thalictrum dasycarpum</i>	White	Late spring	5' - 6'	Average
<i>Veronicastrum virginicum</i>	Bluish white	Mid-summer	3' - 6'	Average to moist

\* Average soil is well drained and has a medium fertility. Sandy soil is dry and nutrient-poor. Moist soils are quite fertile and border ponds and streams.

New England aster (*Aster novae-angliae*). I was surprised to discover that this familiar plant ranged as far west as Colorado in the wild. While there are many attractive cultivars, the species version with its violet-purple petals and yellow centers is handsome enough to give them competition.

Purple coneflower (*Echinacea purpurea*). A stalwart in European gardens since the end of the 17th century, this plant is only just now becoming appreciated here. It starts to bloom in early July and, if dead-headed, will continue to do so through October. Its rich pink (I think the name "purple" is misleading) goes well with every color but red. In an early fall garden, it combines stunningly with the softer color of *Aster novae-angliae* 'Harrington's Pink.'

Rough blazingstar (*Liatris aspera*). A distinctive member of the *Liatris* genus. Most have flower spikes uniformly covered with small blossoms. This plant features larger flowers that form clumps up and down its spike. In a smaller garden setting, such as my flower beds, it is a standout. And it becomes truly exquisite when its

pink strands are bathed in late afternoon sun.

Big blue lobelia (*Lobelia siphilitica*). A serendipitous addition to my garden. I received it in the form of tiny seedlings identified as red cardinal flower. I was, therefore, quite upset to see a few white blossoms on the plant the first year. Through inertia, I left it in the garden and was rewarded the following September with magnificent flower spikes of blue and white (on the rarer 'Alba' form). This is a plant often described as suitable for bog places, but one that easily survived the drought of 1988.

### A final foursome

I cannot resist citing four other prairie plants that I do not grow, but which appear to be quite suitable for mid-Atlantic gardens. These have what I refer to as "eastern cousins." Thus, the Kansas gayfeather (*Liatris pycnostachya*) has a close relative in the east-coast native *Liatris spicata*. The only difference of note is that the latter is

shorter. Similarly, there is a pale violet bergamot (*Monarda fistulosa*) that bears a close resemblance to the red, purple, and pinks of the *Monarda didyma* scattered about my garden. One will also find a pinkish milkweed (*Asclepias incarnata*) that is taller than the popular butterfly weed (*Asclepias tuberosa*). And then there's Joe Pyeweed (*Eupatorium maculatum*), which is taller and pinker than the blue of my *Eupatorium coelestinum*.

These attractive plants are not to be found in my flower borders because their "cousins" have settled in first and taken up the available garden space. If you don't have the eastern relatives or if you have extra room, you might want to try one or more of these prairie flowers.

Freelance writer Patricia A. Taylor's favorite subject is gardening. Her book on *Easy Care Perennials* (Fireside/Simon & Shuster) was published in spring, 1989. Her garden articles have appeared in *The New York Times*, *American Horticulturist*, and many other publications.

# Rhododendrons From Seed:

 By Howard Roberts

Ten years ago a visiting friend remarked to my wife and me that our freshly planted young rhododendron shrubs “won’t stay two feet tall forever.” We knew he was right, and as our interest in rhododendrons has grown along with the plants themselves, that remark recurs frequently. Today space seems at a premium, and the lawn, which we happen to value, is losing a battle to the increasing rhododendron population.

Some of the original dooryard plants have been moved to distant corners of our lot and replaced with smaller varieties. But the real space problem lies ahead because after joining the local chapter of the American Rhododendron Society, our enthusiasm for these broad-leaved evergreens shifted into high gear. When I told the chapter president that we were contemplating growing our own

rhododendrons from seed, he said “Then you’ll never have to buy another plant.” Well, it just doesn’t work that way. Each year nursery catalogs offer new varieties, and equally tempting is the stock displayed at the mid-May rhododendron and azalea sale at Tyler Arboretum. Random purchases, when added to one’s own crop of seedlings, only exacerbate the problem. Even on our very small scale, and allowing for a season of unusually high losses, 50 or 60 seedlings are certain to become part of the landscape.



(Skipper x Fawn Crest) x Lionel’s Triumph. Our first rhododendron to bloom from seed. Though it has a strong yellow ancestry, flowers are almost pure white with pale yellow center, opening from dusty pink buds.

The greatest enjoyment in raising rhododendrons so far has been anticipating what a plant grown from seed will develop in the way of flowers and foliage. Since we are working without grow-lights, a greenhouse or cold frame, all of which help to accelerate maturity, it has taken us at least six years to see a new flower. I have spoken with people who have been raising rhododendrons for many years longer than we and who are unwilling to wait that long for a bloom. With the proper equipment and environment they have managed to produce

We set aside a 3” clear plastic drinking glass for each variety (no drainage holes), fill it about two-thirds with plaster-grade vermiculite, and dampen the medium without allowing any water to accumulate in the bottom of the cup (in other words, damp but not saturated). We sprinkle the seeds on the surface and cover the top with clear plastic wrap, held in place with a rubber band. The result is a miniature “greenhouse” ready to be placed on a window sill. Within two weeks after sprouting, we transfer the seedlings into 3” plastic

photos by Howard Roberts

blooming-size plants in much less time; in fact some commercial growers can obtain flowers within 18 months of germination. Perhaps fortunately, we are limited by a more primitive set-up: two long window sills facing east for starting the seedlings and an area in front of a south-facing window that will accommodate a table of three flats in the winter-time. If we had a greenhouse, propagation could really get out of hand.

## seed exchange

The American Rhododendron Society’s Seed Exchange makes available to ARS members at a nominal charge some 1,500 varieties of species and hybrid rhododendron seeds each year from donors around the world. The seeds are very small and, from our experience, generally take from two to four weeks to germinate. Each grower seems to have a preferred method of sowing seeds.

# Class of '96

*1990's seedlings should bloom by 1996*



First planting stage: plastic glass partially filled with vermiculite, "greenhouse," and seedlings transplanted into potting soil in plastic pot.



Flat of hybrid seedlings from author's crosses. Seedlings are wintered indoors in the flat.

pots filled with potting soil. Since the seedlings are extremely small at this stage, we don't let the soil dry out. From the small pots, they move to larger pots or flats and finally to a protected area of the garden. We have had unexpected success in wintering first-year seedlings outdoors under a pine needle mulch. Tender and slow-developing varieties have spent their first winter indoors in flats. We've lost some, both indoors and outdoors, but many young plants survive to face their second season, after which we don't expect to bring them indoors again.

Other members of the Philadelphia Chapter have told me about a more common method of seed germination. They

mature enough to have flowered for us. The results have not been uniformly pleasing. For example, last spring the large, healthy-looking buds on one plant produced severely distorted blossoms in contrast to a sister seedling whose flowers were well formed and gratifyingly beautiful. If the same grotesque flowers appear this spring, we will at least have room for one more variety. We have also had the interesting surprise of a white flower, with purple markings in its early stage, on a plant whose parents (Odee Wright and Letty Edwards) are both yellow. A sister seedling is cream colored, with purple markings in the early stage.

Our own hybridizing efforts, which began

only four years ago, have not yet produced their eagerly awaited results. The colors we have primarily concentrated on are the warm tones — oranges, yellows, apricots, ambers — colors not generally associated with rhododendrons in this climate. Unfortunately they are not generally as hardy as the purples and whites, but with adequate protection and a modicum of good luck, a number of them can be grown successfully in this region. Commercial growers are striving to increase the hardiness of warm colored varieties, so that in the future we can raise them in the eastern states. Hybrids that have done well for us so far are: Evening Glow, Odee Wright, Hotei, Skipper, Cheyenne, and Ming Toy (yellows); Autumn

*continued*

---

*Some commercial growers can obtain flowers within 18 months of germination.*

---

sow seed in containers filled with an inch or more of evenly mixed peat moss and perlite, and top with a thin layer (1/4 inch or so) of milled sphagnum moss. The top layer of sterile sphagnum moss is essential to satisfactory germination. If growing on a window sill, they place the container in a clear plastic bag or cover with clear plastic to create a humid atmosphere and keep the medium moist at all times. By waiting until the seedlings are 1/2 inch tall, it is possible to transfer them directly into flats of peat moss and perlite mixture, eliminating the small pot stage. I discovered that although most seeds germinate within four weeks, some varieties have required several months. We are considering trying this approach to see how well it succeeds in our environment; it is possible, however, that without a greenhouse or controlled atmosphere, our method may prove safer for us.

## *flowering*

Of the more than 70 varieties we are currently growing from seed, eight are



Brilliant cherry red with a hint of yellow in the throat. The product of red, yellow and orange-red parentage. Vulcan x (Golden Star x Whitney's Orange).



Hotei, one of the truest yellows available anywhere.



Moonwax, pink, yellow and white.

Gold, Whitney's Orange (orange tones); Old Copper (orange-pink); Moonwax (pale yellow, pink and white); and Mary Belle (peach, yellow and pink tones). Most of these represent parents of crosses that we are now hybridizing.

Our three primary sources of seed are the ARS Seed Exchange, fellow members of the local chapter, and our own plants. If any readers are interested in joining or obtaining further information about the American Rhododendron Society, they can write to Barbara Hall, ARS Executive Secretary, P.O. Box 1380, Gloucester, Virginia 23061, or can contact Betts Layman, President of the Greater Philadelphia Chapter at (215) 642-4437.

### SOURCES

Plants we are using in our hybridizing "program" have come from the following nurseries:

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Howard and Joan Roberts live and garden in Rosemont. Howard has moved from advertising to free-lance writing and is a realtor in Haverford. This is his third *Green Scene* article.

# A PRICKLY JEWEL

 By Edwin A. Peeples

*Call it Mahonia  
or Berberis, it's  
a survivor and  
worth the effort.*

*Mahonia bealei* at Colonial Park  
Arboretum in Somerset County,  
New Jersey.



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photo by Carl Suk

**T**he hedges and border plantings in Atlanta, Ga., when I grew up there before World War II, were mainly privet, spirea, buddleia and rose of sharon or shrubby althaea. After the war, gardeners and estate planners, growing more sophisticated, sought greater novelties and found, among other delights, *Mahonia*. They called this plant Oregon grape holly and generated a wide supposition that it was *Mahonia aquifolium*, or, more properly, according to *Hortus Third*, *Berberis aquifolium*, for it has finally been settled that the mahonias are a form of barberry and belong to that family. The Oregon connection came from the Lewis & Clark expedition.

Lewis & Clark described two shrubs they found in the west on the Grand Rapids of the Columbia River on their 1804-1806 expedition. From their description those shrubs sound like the *B. aquifolium* later found to be native to Oregon and widely prevalent in the west.

*continued*

## A PRICKLY JEWEL



photo courtesy of Tyler Arboretum

*Mahonia bealei* at the Tyler Arboretum in June.

The Lewis & Clark material concluded its journey at the Philadelphia shop of Bernard M'Mahon, the pioneer seedsman. Thomas Nuttall, his friend and fellow botanist, named the plant *Mahonia* in 1818, after M'Mahon died.

The name *Mahonia* got some acceptance, for Robert Fortune, the plant hunter, sent back from China to England, in 1848, a plant he called *M. bealei*. Fortune's *M. bealei* was the one that prospered in our northeast. A plant made its way, in 1860, via the Joseph Hoopes nursery in West Chester, to the Tyler Arboretum where, after more than 100 years, it is about five feet tall and ten feet wide.

One would think that the passage of nearly 200 years would assure a wide use and knowledge of a novelty like mahonia, but the spread of horticulture is much faster in the earth than it is in the literature. The 1950 edition of *Gray's Botany*, for example, does not even mention mahonia, although it does describe the other members of the *Berberidaceae* family. Other writers at later dates know *M. bealei*, but not until *Hortus Third* do we find a thorough description of 15 of the nearly 100 mahonias, among them, *B. aquifolium* (all now called *Berberis*). Of them all, only *B. aquifolium*

and *B. bealei* offer much promise.

The *B. bealei* that mother and all of her peers planted in Atlanta and called Oregon grape holly is neither a grape nor a holly. It is a thornless shrub, native to Asia, that gets its name from spiny leaves that look somewhat like holly leaves, except for being flat to convex, rather than corrugate or crimped. These leaves are so spiny and punitive that the plant needs no thorns for armament.

---

***The B. bealei is, so far, one of the few shrubs that the white tail deer don't eat.***

---

My mother planted *B. bealei* around her house. The plants, easily mistaking Georgia for Asia, prospered and begat seedlings in droves. These mother bundled carelessly in wet cotton batting and plastic bags and shipped to us in the northeast in wholesale quantities, often using the plants as packing for Christmas and other gifts. Treated so rudely, most of the seedlings died, but, as the great plant hunters of the 16th, 17th and 18th centuries demonstrated with shipments treated even more harshly, a few individuals will always survive. Seven of ours, potted and nursed, lived to be planted

on our farm in Chester County. Three of these still live and flourish a quarter-century later.

*B. bealei* is pretty and novel all year. Its blossoms, which appear in May, are densely clustered goblets of chrome yellow, gathered on their stalks as if they had been squeezed directly from a tube of oil paint. They have a slight shine that gives them the aspect of an expensive, enameled jewelry. As they are pollinated, their petals shower the earth with small, yellow flakes. The fruit, which forms and ripens late in June, resembles clusters of small grapes: blue/black covered with a light blue bloom. To birds they must be caviar, for they all disappear quickly.

The leaves begin tinged with bronze, change to a bright yellow green and mature to a darker green that they retain all winter.

*Mahonia* can be propagated by seeds, either deliberately or, as mother managed it, accidentally, or from suckers or cuttings or by layering. Like most such plants, mahonias are shallow rooted and need regular watering on both roots and leaves. They are said, by several writers, to be tricky to transplant. We did not find this to be true of *B. bealei* so long as we managed to get most of the surface root structure.

Although our shrubs are all in rich, acid soil, one writer tells us that they are not particular as to soil and can thrive even in dry, sandy places.

There is also confusion about how hardy mahonias are, the *B. aquifolium* being reputed much harder than the *B. bealei*. We are in Zone 6 and have found *B. bealei* tricky except in special mini-climates. Our most robust, now nearly five feet tall, dwells behind blue hollies and under paper birches. A building also blocks the rays of winter sun. At first we had the bush completely shielded by forsythia. This proved too much protection. The mahonia didn't thrive until we removed the forsythia. Our mahonia that does least well is on the north

side of our house and gets only late afternoon sun. Once more, too much shade.

Our third plant inside the edge of a wood, is protected from full winter sun but open to broken sunshine all year. It prospers. Near it, we planted, nearly a decade ago, two *B. aquifolium* that have become two-foot shrubs. They thrive in the shade of our wood and remain evergreen, but they haven't bloomed because the white tail deer constantly eat the blossoms as they also decimate rhododendrons, azaleas, mountain laurels, primroses and a good many wild flowers.

The *B. bealei* is, so far, one of the few shrubs that the white tail deer don't eat. For our wood, anything as pretty as mahonia

and deerproof is very attractive.

Even in our special situations, though, the cycle of *B. bealei* is not reliable. Many cold years stunt its blossoms or discourage them entirely; other years fruits do not form, but the foliage is always lovely, and, in its flourishing year, *B. bealei* is so startling and unusual that every formal garden from Zone 6 up should have a few shrubs.

Edwin A. Peebles, author of *A Professional Storywriter's Handbook*, and of the PHS 15 year history, *Summary for a Sesqui*, writes frequently for *Green Scene* (see editorial on p. 3). He writes a regular column "Landscape" for *Country Journal*.

## LETTERS TO THE EDITOR



I added them to the tulip beds, the hosta, then the daylilies, and it works like a charm. The stakes with the soap aren't that unsightly. It's a cheap, one-shot deal and effective. Hope other readers will have similar success.

Sherley Hollas  
Wayne, PA

P.S. The deer still come through every day.

### Oh deer, Lifebuoy to the Rescue.

Lifebuoy soap keeps deer away! I promise.

During the spring of 1988 I lost all 300 tulips, my *Taxus baccata repandens* were bonsaied, the azaleas without bloom, likewise the hosta. I didn't garden for a month; I was too depressed.

I tried salt licks at the four corners of the property, hair in strawberry boxes (green plastics). I bought a spray that had to be resprayed after every rain.

Then I heard about Lifebuoy soap: divide a bar in two, put each piece in a part of an old stocking and tie it onto a stake. Place the stakes at height of a tempting morsel. Time doesn't seem to weaken the effect. Last winter, I had stakes all through the *Taxus*, azaleas, mountain laurel. This spring

### Re: *Leonotis leonurus*

To Lorraine Kiefer

Dear Lorraine,

I don't know how many South African members of PHS there are, but I am one of them, and I was most interested in your article on *Leonotis leonurus* in the November *Green Scene*. As you said that you wanted to find out more about the plant, I'm enclosing a photostat of the relevant passage from *Wild Flowers of Table Mountain* by Prof. W.P.U. Jackson.

However, now you will know more about the plant, including its popular name is S.A., i.e. wild dagga (marijuana). I'm also enclosing a small account of the plant from *Ornamental Shrubs & Trees for Gardens in*

*Southern Africa* by Una ver der Spuy, from which you can see that this plant, although native to S.A., is appreciated as a garden plant there too. I definitely want to try some *Leonotis* next year in a large tub on my deck for our hummingbird (assuming that she made it safely through Hurricane Hugo on her way south). I have two *Geranium Stadt Bern*, which is a brilliant single red which she adores and visits several times a day, so I figure that *Leonotis* will survive the heat out there and provide good pre-migration food.

My father was a journalist with the *Cape Times*, the morning paper in Cape Town, for which he wrote a gardening column, rather similar to yours in the *Star Ledger*, giving himself the pen name of The Wayward Gardener. On his death I inherited quite a lot of gardening books from him, so if you come across a South African plant in the future and want some information on it I'd be delighted to help you.

Hope I'm the first to get this information to you and best wishes with your nursery. By the way I saw the plants at Longwood and nearly passed out they were so gorgeous, so was delighted to learn of a local source!

Helen du Toit  
Pittstown, NJ

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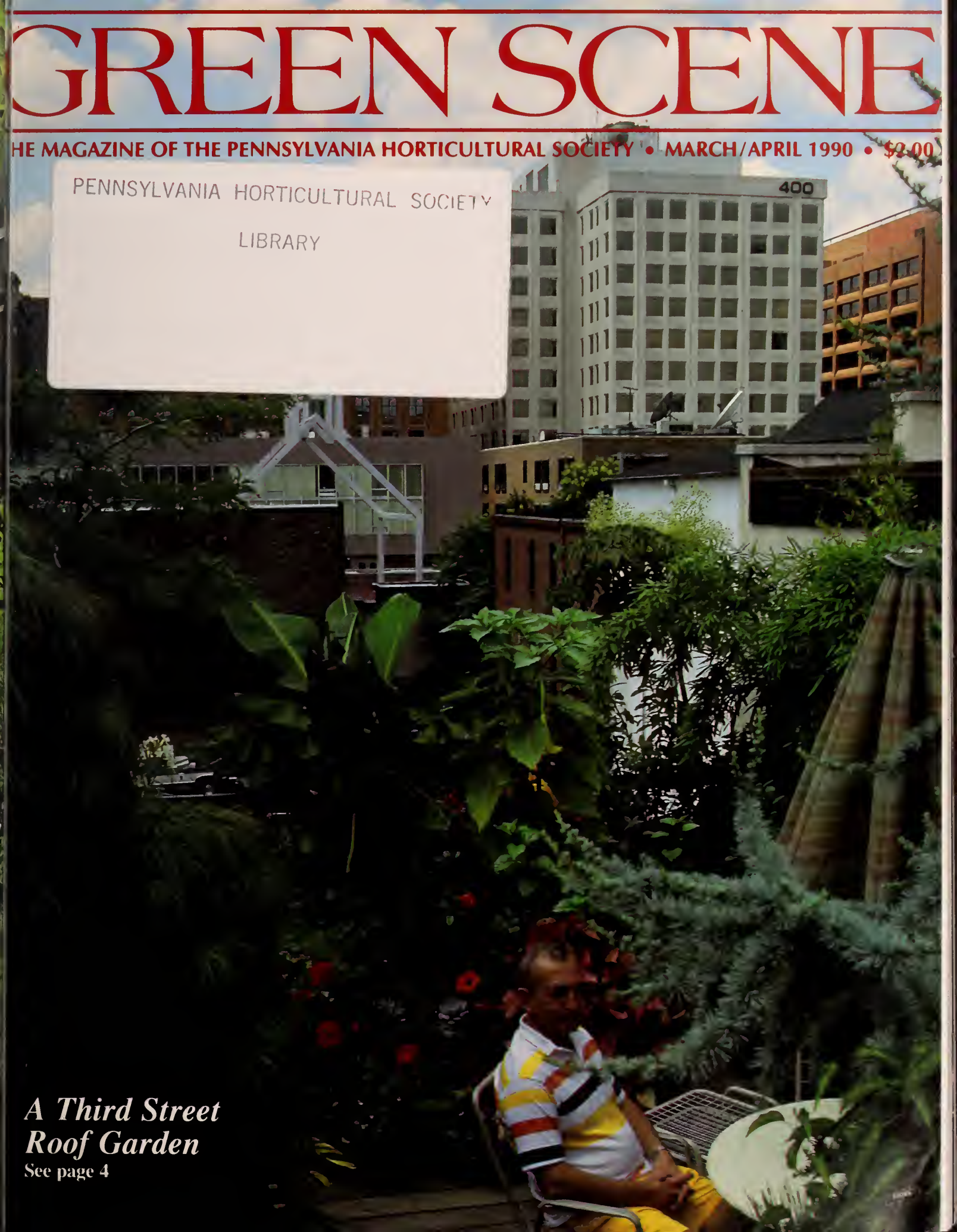


*Daphne caucasica*, one of the six outstanding winners of the Pennsylvania Horticultural Society's Styer Award of Garden Merit, blooms in mid-May in the corner of a garden.

# GREEN SCENE

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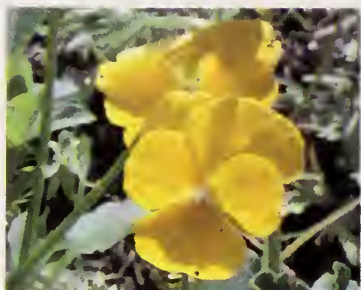
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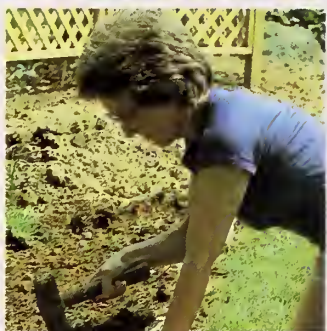
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**Front Cover**

Matthew Drozd relaxes on his third floor city roof garden amidst a collection of plants with a heavy emphasis on tropicals.

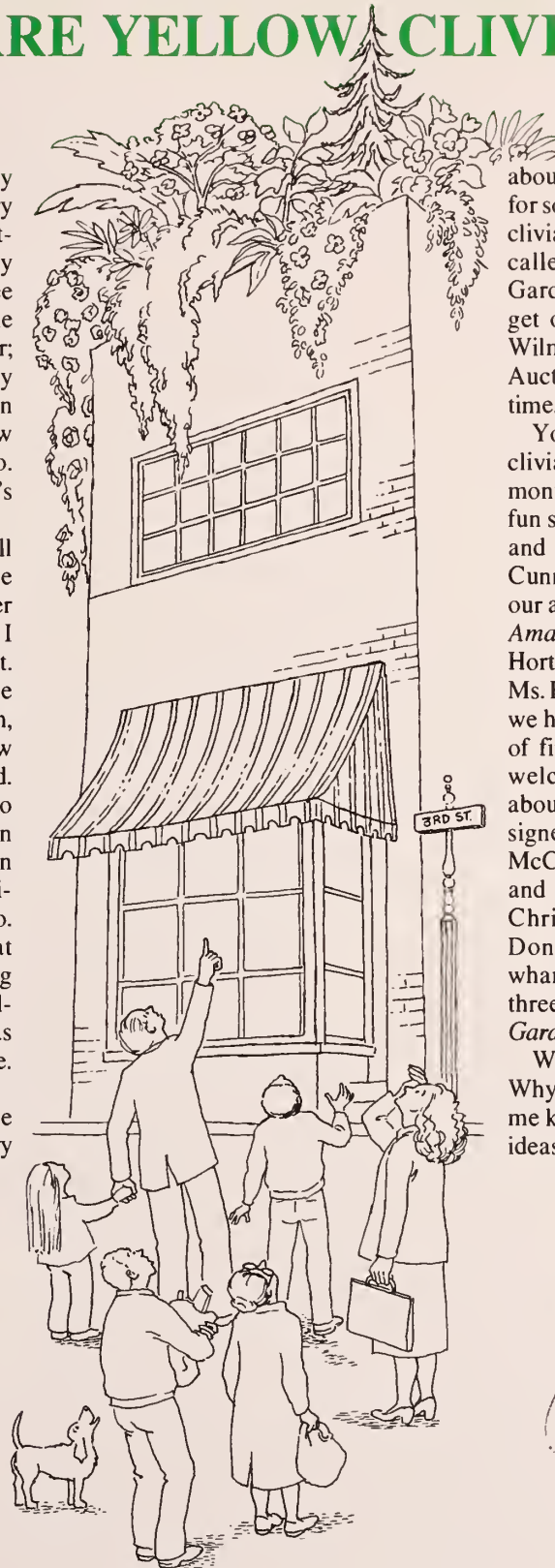
front and back cover photos by  
Mary Lou Wolfe

# TROPICALS IN THE CITY AND THE RARE YELLOW CLIVIA

Many city gardeners relentlessly seek out every flower, every unusual tree, every stand of fluttering grasses in their neighborhood. They will walk a block out of their way to see how a garden is doing. They talk about the gardens or trees they see with one another; they celebrate talent and skill where they see it. Sort of the way PHS member Jean Bodine first called our attention to Matthew Drozd's roof garden about four years ago. We printed a short piece about Matthew's garden at that time.

This summer we got another phone call from Jean Bodine saying we had to see Matthew's garden. It warranted another story. "Matthew's garden redux? Well, I don't know." Jean Bodine was persistent. "It's completely *changed* and he has some *marvelous* things up there." Ed Lindemann, PHS horticulturist and Flower Show designer, came with us. He was enthralled. That did it. We asked Mary Lou Wolfe to photograph and write the story. It's here on page 4. On Third Street, above Chestnut in the summer, passersby see the ivy geraniums cascading from the third floor patio. Heaven knows what will happen now that he's just returned from an orchid collecting trip in Paraguay. We hope Matthew's adventurous and energetic gardening ideas will inspire city gardeners everywhere. Thank you Jean Bodine.

Lots of us have heard stories about the **Rare Yellow Clivia**. Helen Brunet's story



about dividing the orange clivia just begged for some information about the rare yellow clivia. So we picked up the phone and called Kathy Mills at the Wilmington Garden Center and got a hot tip on how to get one of the rare yellow clivias at the Wilmington Garden Center's Rare Plant Auction in April. See page 11 for date and time. *Come and bring your checkbook along.*


You might be lucky and see a yellow clivia or two at the Flower Show this month. (See dates on opposite page.) It's fun scouting the Show for ideas for stories, and we were lucky last year. Towney Cunningham and Jane Pepper both called our attention to Josephine Henry's unusual *Amaryllis* which won "Best of Day" in the Horticultural judging. We're pleased that Ms. Henry wrote a short piece on *Amaryllis*; we hope she'll join us again. And speaking of first-time writers for *Green Scene*, we welcome Jeanette DeVries who wrote about a flower-covered tree stump designed by retired research chemist Bill McClellan and his wife, Mary McClellan; and Donna Bickley who writes about a Christmas rose in the spring garden. Donna's magazine debut is a double whammy this month, because the first of three articles also appears in *Flower & Garden*.

We'd love to hear from more of you. Why don't you call me (625-8254) and let me know about your interesting gardening ideas. Better yet, submit an article in 1990.

*Jean Byrne*

# TROPICA ON THIRD STREET

By Mary Lou Wolfe

A photograph of a man, Matthew Drozd, wearing a blue t-shirt, holding a green parrot (Pepe) in his hands. He is standing in a dense rooftop garden filled with various tropical plants, including large green leaves and yellow flowers. In the background, a building and a street are visible. The scene is set on a rooftop garden.

*It's a jungle up there.  
A roof garden  
accommodates plants,  
animals and people.*

Pepe (the parrot) and Matthew Drozd survey their domain. Here they check *Brugmansia versicolor*, started in 3" pots, and shown here in 12" pots.

**A** white cockatoo works out at dusk on an avian jungle gym, and humans vie with plants for space. What began in 1985 as a carefully engineered sitting roof garden and greenhouse has become a lush tropical retreat. The cockatoo Chico was too shy to flex his muscles for me, a daytime stranger. But Pepe the green parrot was happy to pose against the hot, sunny wall that is part of this garden's success strategy.

Matthew Drozd, Jr. likes gardening challenges and experiments. His hot, windy roof in old city Philadelphia has evolved into a fascinating proving ground for the plants he finds most interesting, the tropicals. His florist business, Old City Flowers, puts him in touch with a wide range of sources for plants, but it's the seeds he brings back from his tropical orchid trips,

white pine, Hinoki cypress, blue atlas cedar, honey locust and bamboo, are arranged around the roof's perimeter to give a sense of enclosure and provide some windbreak. They have survived for five years with only occasional winter watering, some carefully placed guy wires and a bit of bubble pack plastic wrap for the bamboo.

The "hot wall" closest to the Market Street end retains warmth and reflects the bright light needed to grow some of Drozd's dazzlers. A four-foot-tall Dutchman's pipe (*Aristolochia grandiflora*) came by mail in a 2" pot from Logee's Greenhouses in 1988. Its greenish-purplish flowers are shaped like an expanded bent pipe, and they swivel gracefully as the breeze hits the trellis. Also thriving on this bird workout wall is coral vine (*Antigonon leptopus*), which Drozd grew from seed collected in Venezuela.

Although it didn't bloom heavily this year Drozd likes its showy pink flowers and climbing habit and has started more seeds for 1990. What really transforms the wall though is a woody climber covered with deeply shaded pink blooms, *Mandevilla splendens* 'Alice du Pont.' This does not, luckily, reach its 30' potential on this temperate roof but still grows "too big to lug" and is replaced each spring. Some years a hummingbird visits it and in the evenings the white cockatoo nips an occasional bud.

If this garden sounds familiar you may recall that Ann Jarmusch included it in a July '86 *Green Scene* article. A yearling garden then, it had more open space, more seating and fewer exotic plants. A sitting bench built then around a skylight now holds an herb garden and a tapestry of

*continued*

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*The ginger ale spray provided the little warriors with a sugar energy boost and made their wings too sticky for flight, allowing a week's combat with aphids.*

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the cuttings he swaps and the selective eye he exercises searching out the unusual, that produce the rooftop show on Third Street.

#### *engineer turned florist*

Drozd was trained in electrical and mechanical engineering but switched to the florist business 20 years ago. He combines his home, work, and hobbies in two adjacent buildings that look out toward Franklin's Court and the Bourse. There, between Market and Chestnut is a rooftop conspicuous six months of the year for its abundant fringe of pink, lavender and red ivy geraniums cascading towards Third Street. These are not just any ivy geranium, they are *Pelargonium peltatum* 'Balcon,' chosen each year by Drozd because though sparse in spring and single flowered, they stand up to heat, cold and pests. This geranium show, which turns tourists' heads and gains the respect of local gardeners, is only a hint of the wild blaze of color above. On a carefully engineered area designed in 1985 by architect Russel De Lombard, a 500-sq. ft. space houses an 8' x 18' greenhouse and a 32'-long deck. Steel beams and wood decking laid in four removable sections handle this load and allow access to the roof should it need repair. The soil in containers, a commercial potting soil, is renewed each year with last year's lowered over the edge of the building and trucked to Drozd's father's sandy south Jersey garden. The only permanent plantings, weeping



Large pink woody climber, *Mandevilla splendens* hybrid 'Alice du Pont.'

photos by Mary Lou Wolfe







The opulent roof garden flouts geraniums (left), honey locust (tall) and *Acalypha* (right).

*continued*

photo by Mary Lou Wolfe



Duchman's pipe *Aristolochia grandiflora* went from a 3" pot to a 20"x10" terra-cotta planter.

blue-greens and orange-pinks achieved with blue green *Sempervivum*, orangey *Acalypha* with ruby *Ixora* for accent. A banyan tree that had reached 8' in 1986 and almost the point of no return (through interior stairs), now graces an artist's high-ceilinged gallery on Second Street. Drozd still saves space for tomatoes and claims that his taste better than any from the Reading Terminal Market. An expensive electric barbecue has come and gone; it took up too much plant space. The nightly watering process, an hour's effort, requires a skilled hand and a slim shape to weave through the jungle.

#### **ladybug, ladybug stay**

Plants grown this intensively can develop disease and pest problems. Drozd is vigilant, methodical and ruthless with problem plants. Since this rooftop space is shared with humans and birds, Drozd avoids chemical pest controls. Bothered this spring with aphids on tomatoes and hibiscus, Drozd opted for biological pest control in the form of ladybugs ordered from an Oregon supplier. UPS delivered 2,000 ladybugs with these instructions: "Remove from excelsior; refrigerate for one hour; spray wings with ginger ale and soda water; release!" The ginger ale spray provided the little warriors with a suger energy boost and made their wings too sticky for flight, allowing a week's combat with aphids. Drozd considers the experiment successful and used some of the ladybugs in the orchid greenhouse. Using the eggs of a parasitic wasp (*Encarsia formosa*), that devours white fly, has also proved effective. The only other alternative to banishment or biological control is occasional use of Safer Insecticidal Soap Spray. Not really pests but urban neighbors, a gang of house finches, sparrows and starlings zooms in

each spring for a tonic, decimating Drozd's herb collection. Parsley, tarragon, sage, oregano and thyme seem to be just what's needed at nesting time. The herbs recover.

Touring the roof garden with Matt is like touring the equator with a sharp-eyed, savvy guide. Orchids are what send him tripping and pique his interest all winter, but on his travels he also always watches for other unusual plants to audition on the roof top. As a licensed plant importer he has successfully grown from seed coral vine (*Antigonon leptopus*) from Venezuela; lady of the night (*Brunfelsia americana*) gathered in Merida, MX; royal poinciana (*Delonix regia*) from Hawaii; and pride of Barbados (*Caesalpinia pulcherrima*) from Belize. The visitor needs a sharp eye too. I found myself doing a double take at the blue-green tillandsia seemingly emerging so naturally from the branch of the blue-green atlas cedar. They not only seemed made for each other but even looked like one plant.

#### **end-of-the-season decisions**

For most of us who garden, the approach of fall, with reduced light and falling temperatures, signals drastic decisions about what to do with tropical plants. At Old City Flowers, unusual foliage starts appearing in customers' fall arrangements. Peachy-orange croton leaves are used with lilies. Banana leaves, chenille plant (*Acalypha*) and *Stephanotis* enhance fall bouquets. One day in late October I noticed that everything except the ivy geraniums and permanent tree plantings had vanished. Drozd explained that, as luck would have it, a Delaware landscaper who does both exterior and interior plantings learned about the Third Street collection. "Saving the jungle" involved the landscaper's crew unpotting all manner of exotics, encasing

them in plastic trash sacks and lowering them 2½ stories in heavy trash cans to a waiting truck below. On the roof, cuttings have been taken, seeds have germinated, the greenhouse bulges with favorite hold-overs and a trip to Paraguay beckons. Pepe, Chico, and Drozd's privileged guests can hardly wait for next year's jungle.

#### Sources that Drozd recommends:

Logee's Greenhouses  
55 North Street  
Danielson, CT 06239  
Catalog \$3.00, refundable with order.

#### For organic pest control:

Nature's Control  
P.O. Box 35  
Medford, OR 97501

#### Ivy geraniums:

Drozd can supply from March orders or Waterloo Gardens  
200 N. Whitford Road  
Exton, PA  
363-0800

136 Lancaster Ave.  
Devon, PA  
293-0800

#### The 1989 Jungle

*Acalypha wilkesiana* 'Macafeeana'  
*Allamanda cathartica*  
*Antigonon leptopus*  
*Aristolochia grandiflora*  
*Brugmansia* 'Charles Grimaldi'  
*Brunfelsia americana*  
*Caesalpinia pulcherrima*  
*Callistemon citrinus*  
*Clerodendrum* x *speciosum*  
*Clerodendrum ugandense*  
*Codiaeum variegatum*  
'Norma' & 'Bravo'  
*Delonix regia* 'Flamboyant'  
*Galphimia glauca*  
*Ixora coccinea* 'Morsei'  
*Mandevilla splendens*  
'Alice du Pont'  
*Musa* 'Rojo'  
*Nerium oleander*  
*Pachystachys lutea*  
*Passiflora violacea*  
*Scutellaria* 'Costaricana'  
*Stephanotis floribunda*  
*Strobilanthes dyeranus*

Photographer/writer Mary Lou Wolfe is a frequent contributor to *Green Scene*.

# CLIVIA

## Taking Clivia Down to Size

 By Helen Tower Brunet

I'm not usually timid about indoor gardening. I willingly prune the too-long branch and on occasion I've taken a carving knife to roots. But where my clivias are concerned, up until recently I've been a coward.

The more or less matched pair of *Clivia miniata* came to me 10 years ago from one of the last Edwardian greenhouses in our area, just before it was torn down.

There, in summer, the orange clivias added discreet color to the shady terrace of the majestic brick home, and in winter were housed in an anteroom of the greenhouse, where they were kept cool and dry until the stern but kindly English gardener deemed the time right to move them into the warm part of the greenhouse.

It was this measured cycle of care that I found so inhibiting. But I put the plants in our cool south-facing plant room and was greatly relieved when they bloomed in March. And, they were good sports about being hauled into the warmth of the living room to show off their flowers for several weeks.

In summer they guarded our front door, as stately as the lions at the New York Public Library. By mid-summer they bloomed again, lighting up the shady entrance like Fourth of July rockets.

The only problem came every few years when they burst their clay pots, exposing the roots. I was daunted by the sight of that tangled mass, with roots as thick as clothesline. I wouldn't have known where to begin to cut them apart to divide the plants, even if I wanted to, which I didn't. I didn't want to interrupt their twice-a-year cycle of bloom. Every authority I consulted said they might not bloom for several years after division. I took the cowardly way out and repotted them into larger pots.

Finally, they needed 14-inch clay pots. By this time their wingspan of huge shiny leaves growing in all directions took up about as much space as two open beach umbrellas. We had to either move the furniture out of the plant room, or move the clivia.

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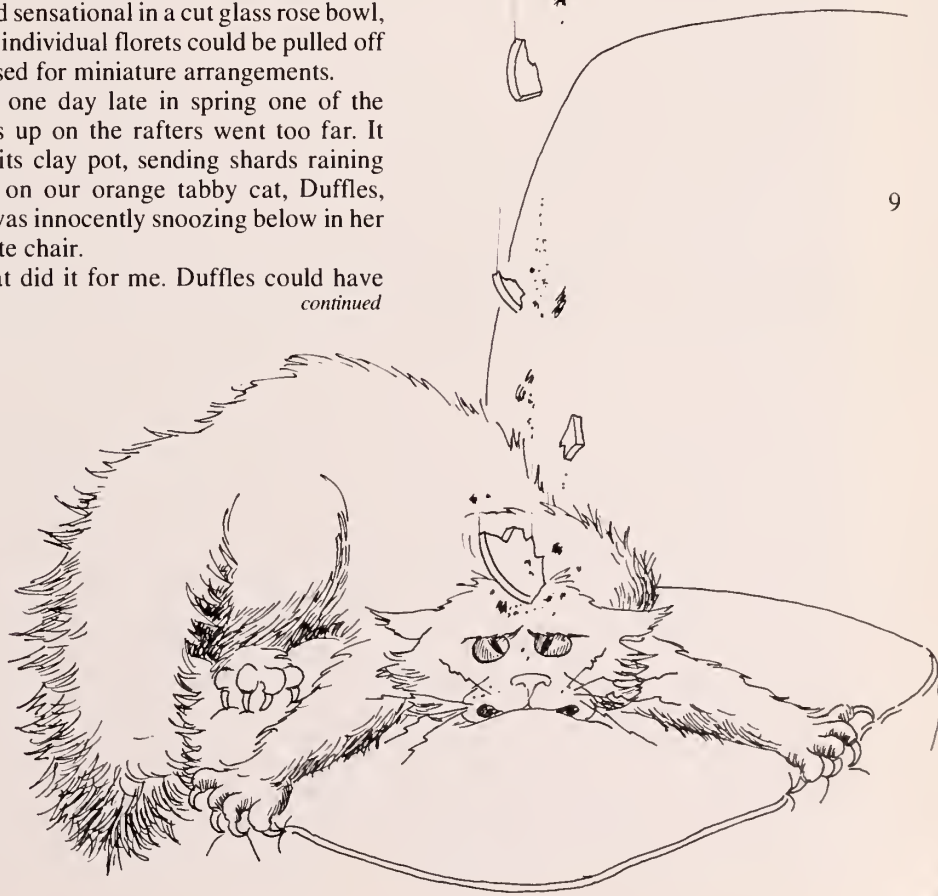
*But one day late in spring one of the clivias up on the rafters went too far. It burst its clay pot, sending shards raining down on our orange tabby cat, Duffles, who was innocently snoozing below in her favorite chair.*

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Instead, we hefted them up on a shelf between two beams in the cathedral ceiling of the plant room. This move took three adults and a stepladder. The clivias reigned supreme on their high perch and bloomed in spring as usual, and although I could no longer take them into the living room, I could lean perilously out of the window of my study above the rafters to water them and snip the flowers. The big orange umbels looked sensational in a cut glass rose bowl, or the individual florets could be pulled off and used for miniature arrangements.

But one day late in spring one of the clivias up on the rafters went too far. It burst its clay pot, sending shards raining down on our orange tabby cat, Duffles, who was innocently snoozing below in her favorite chair.

That did it for me. Duffles could have  
*continued*





The author's clivia are brought into the living room during the spring bloom period.

10

been killed. I would divide the clivias just as soon as I could find the ladder and two strong friends to help me get them down. I would be ruthless. I'd gladly sacrifice flowers, but not my cat.

Strengthened with new resolve, I set the garage floor up as an operating table, a large carving knife close at hand. But dividing proved much easier than I expected, and I never touched the roots with the knife.

What works much better than cutting, I found, is to lay the plant on its side, and insert two full-size garden forks, placed back to back, into the center of the exposed root mass, then gently push the handles apart, just the way many perennial plants are divided.

Dividing the plants really means separating the big fans from each other and from their smaller offsets. Although some of the thick, cork-like roots break off, most come apart like hair released from braids, and it becomes clear which roots belong to which crown.

I first used well-rotted compost for potting soil and divided the two big plants into

seven 8-inch clay pots. Each pot had one big fan of upwards of 20 leaves, plus a few small offsets. I saw no point in potting up these juveniles separately; I had enough of a space problem already. I placed some of the "replants" on the shady front steps that face west and others under our east-facing deck. This was the last week in May.

I soon realized that the compost was too spongy to provide support for the big fans. They wouldn't stand up straight in the pots; as long as I had disturbed them this much already, I reasoned, I might as well do a proper job. I took them all back to the garage, turned them out of their pots and changed the potting soil to a mix of sharp sand, compost and soil from the garden. Back into their pots they went. Now they stood up without sagging to the side, even after a heavy watering. I fed them with fish emulsion fertilizer and vowed to be patient for at least a year before they would flower again.

One month later, exactly on schedule, buds began to squeeze up just off center in the fans, which had at least 20 leaves. Only one of the large fans failed to bloom that

summer. Division, evidently, is not as traumatic to clivias as I had once thought.

Given the choice, I would divide just after the summer bloom, or just after the spring bloom. But never again will I be afraid to divide a clivia. No longer can they exert that gentle tyranny that once convinced me that a larger pot was the only answer. I have since given away most of the divisions, but two of the clivias are back in the plant room, on the floor, on either side of Duffles' favorite chair.

**Sources:**

Logee's Greenhouses  
55 North Street  
Danielson, CT 06239  
and some local nurseries

Helen Tower Brunet writes the weekly column "The Weekend Gardener" for *The Star-Leader* (Newark, NJ) and free-lance articles on gardening for other publications including *Green Scene* and *Fine Gardening*.

# CLIVIA

## The Wilmington Garden Center's Rare Plant Auction

Available: *Clivia miniata*, yellow-flowering form

 By Kathleen A. Mills

The horticultural enthusiasm that surrounds the Kafir lily (*Clivia miniata*) is well deserved by this king of houseplants. While most of us would be happy to add the orange-flowering clivia to our plant collection, many plant lovers lust after the rarer, clear-yellow-flowering variety (*C. miniata* yellow-flowering form).

Yellow-flowering clivia is not likely to be listed in mail order catalogs and cannot be bought at your local greenhouse. Delaware Valley gardeners, however, are plant

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*In 1983 an extraordinary specimen sold for a record \$1,200.*

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enthusiasts with a long tradition of sharing plants with fellow gardeners. Ten years ago one such enthusiast donated a yellow-flowering clivia to the Wilmington Garden Center, which sparked the idea of auctioning off rare and unique plants to raise funds for this non-profit horticultural organization.

Over the past nine years yellow-flowering clivias have created great excitement at the annual Rare Plant Auction and garnered an impressive bounty for the Center. The 10th Anniversary of the Auction will be no exception. In the past, the yellow clivia has sold for between \$400 and \$600; in 1983 an extraordinary specimen sold for a record \$1,200.

Nurseries and horticultural institutions from across the nation, as well as local garden centers, horticulturists and members donate a variety of plants which include rare and unique forms of trees, shrubs, perennials, and houseplants. Sizes range from small collections in troughs to large trees.

This year to mark its 10th Anniversary, the most prized plant from each of the past nine auctions, plus a feature plant for this year, will be offered during a live auction. These plants include, *Acer palmatum dissectum* 'Viridis,' *Tsuga canadensis* 'Bennett,'



photo by Sam Trasatti

Genny Esayian, who chaired the Wilmington Garden Center's 1989 auction, shows off a yellow clivia.

and *Parrotia persica*, and of course two yellow-flowering forms of *Clivia miniata* (a large one at the public bidding auction and a small one at the silent auction). The silent auction will include such treasures as: Hosta collections, a variety of unusual rhododendrons, a *Tricyrtis* collection, *Cydonia sinensis*, *Coreopsis rosea*, *Stewartia monadelphica* and *Cercidiphyllum magnificum* 'Pendulum.' Rare and antique garden ornaments and furniture can also be bid on during the silent auction.

The Rare Plant Auction is a gala event, which has become a tradition for serious plant lovers in the Delaware Valley and beyond. Everyone is invited to attend the 1990 Auction to benefit the Wilmington

Garden Center's Greening of Wilmington program.

### To Come to the Auction

The Dinner and Auction will be held at Longwood Gardens in Kennett Square, PA, on April 27, 1990 at 6:00 PM. To receive an invitation, contact the Wilmington Garden Center, 503 Market Street Mall, Wilmington, DE 19801, or call 302-658-1913. We hope to see you there!

•  
Kathleen Mills is horticulturist for the Wilmington Garden Center.

# STUMPED? *The Great*

photo by William McClellan



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1. *Salvia x superba* — Purple sage
2. *Tagetes tenuifolia* 'Pumila' — Dwarf marigold
3. *Torenia fournieri* — Blue torenia
4. *Sedum spectabile* — Showy sedum
5. *Begonia semperflorens* — Wax begonia
6. *Cosmos bipinnatus* — Cosmos, c.v. 'Bright Lights'

# Flower Cover Up

By Jeanette DeVries



7. *Pelargonium peltatum* — Ivy geranium
8. *Aster alpinus* — Alpine aster
9. *Anthemis tinctoria* — Golden marguerite
10. *Echinacea purpurea* — Purple coneflower

photo by Ralph De Vries

When Mary and Bill McClellan moved from their picturesque 90-acre Kennett Square farm, they were apprehensive. The ranch house they had bought in 1985, situated on a well-established half-acre lot within walking distance of the town of Kennett Square, was clearly more manageable for their retirement years than the farm. Still, there were 40 years of experiences and memories invested in "Buttonwood Farm," and the change was unsettling.

Shade for the garden area behind the fieldstone ranch house was provided by a majestic copper beech tree, almost 100 years old. All the necessary conditions for the tree to thrive were available to this *Fagus sylvatica*, 'Purpurea': acid soil, full sun, and good drainage. Despite these conditions for good cultivation, the McClellans realized that the tree was dying. The probable cause for its demise was new construction close to their property, which had damaged its far-reaching shallow root system.

In January 1989, the McClellans reluctantly decided that the copper beech had to be removed. They instructed the arborist to retain part of the trunk to a 12-foot height, so they could still hang planters and a bird feeder from the dead branches. When they looked at the skeletal remains on a stark winter day, however, Mary and Bill realized that their idea had little merit. What finally remained was a large four-foot stump; five foot in diameter. The cost of removing this stump with its many gnarled roots above the ground was prohibitive, so they decided that their winter project would be to create a landscape plan to enhance the arboreal remains. The suggestion for this alternative

care from their friend, Everitt Miller, former director of Longwood Gardens.

In the early spring, the McClellans spread half a yard of topsoil between the surface roots. Closest to the stump, they planted brilliant orange cosmos, asters in shades of deep lavender, red and pink. Height was provided by purple sage, and several groupings of *Sedum spectabile* were added for late summer color (dusty rose). Pink begonias were used to fill in a few bare spots. The bushy *Torenia* supplied dense green foliage and deep purple flowers. Two white forms of Madagascar periwinkle, some prostrate and others upright, created an outer edge for the plantings. The "icing" on the stump was provided by a combination of pink and red ivy geraniums, which trail along the indentations of the topless trunk.

The planting was a resounding success. Many of their friends, neighbors and family members stopped by to admire the colorful "stump garden." Ben, one of their grandchildren, discovered a splendid new beech seat, perfect for sipping lemonade on a hot summer afternoon visit.

Although the McClellans still miss the dense shade of their felled tree, they have transformed an undesirable remnant into a colorful focal point on their property. It is every bit as appealing as a fountain or gazebo, and certainly more imaginative.



Jeanette DeVries is a graduate of the Arboretum of Barnes Foundation, and has been a garden guide at Winterthur Museum and Gardens since 1984. Before that, she was a garden guide at Longwood Gardens, where she received her certificate in Ornamental Horticulture.



# ORCHIDS: *Myth, Lore and Lure*

 By L. Wilbur Zimmerman

*At one time, the author's four greenhouses held a collection of 6,000 orchids (100 genera and 1,100 species), some collected on trips to Guatemala, Jamaica, Puerto Rico and Mexico. Today, he contents himself with photographing orchids, lecturing, writing about them and checking on his small collection now housed in a friend's greenhouse.*

The myth that orchids are flesh-eating parasites arose in New Guinea many years ago when natives came upon an old graveyard where the shallow burials had been uncovered by heavy rains over time, so that the skeletal remains were exposed. The twining roots of dendrobium orchids had fallen from overhanging trees, and were attached to the human bones. Knowledgeable plant hunters examining the site established that it was just the characteristic of epiphytic orchids to attach themselves to whatever supporting substance was available. Being plants that did not wish their roots to be in soil, they adapted to the environment. Also

photos by L. Wilbur Zimmerman



Hybrid *Phalenopsis* 'Grace Palm' suitable for windowsill culture. Flowers last six to eight weeks.



*Vanda coeurulea* can attain a height of 4 ft. with an inflorescence 1½ ft. long. Habitat high altitude, Burma and Thailand.



as saprophytic\* plants they only used their host for support not for nourishment, as a parasite would.

There are no known black orchids, although *Epidendrum cochleatum*, which is endemic to Mexico and Central America, does have a black lip with some vertical striations. Nor do orchids have aphrodisiac or other medicinal qualities, but vanilla is an orchid, and a favorite flavor worldwide.

Linnaeus, whose terminology became botanic law, designated the family name as *Orchidaceae*, derived from the terrestrial type form growing in Mediterranean Europe known as orchis. Later a huge number of epiphytes were determined to be in the same family. *Cattleya*, *Epidendrum*, *Paphiopedilum*, *Dendrobium*, *Vanda*, etc. are all part of the family of more than 20,000 species. It is arguable whether the *Compositae* or the orchids are the largest group of flowering plants.

The tremendous variety of form, size and color, along with wide distribution in nature, has given orchids a special place in the plantgrowers world. Some orchids such as *Pleurothallis* require a magnifying glass to see the individual flower shape, while *Grammatophyllum scriptum* will climb a

100-ft. tree and another will have flowers larger than a *Magnolia grandiflora*.

We are accustomed to think of our earlier horticultural heritage as having its origins in Europe. In the case of orchids, however, we find references by Confucius (551-479 B.C.), who said that the acquaintance of good men was like entering a room filled with 'lan,' the Chinese name for fragrant orchids. There were some other indications that the Chinese were describing orchids as far back as 2200 B.C.

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***One of the striking things about orchids is the immense number of minute seeds in some orchid capsules, over 3 million in one seed pod.***

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An Aztec herbal, the Badianus manuscript of 1552, is the earliest recorded notice of orchids in the western hemisphere.

The name orchid, however, was first known to be used by Theophrastus (370-285 B.C.), a pupil of Plato and Aristotle. He, often called the Father of Botany, derived the name from orchis, the Greek word for testis. Then Dioscorides of the first century in the Christian era described orchids, as did Gerard in his herbal of 1633, and later Parkman in 1640.

An interesting Philadelphia connection is Dr. John Fothergill and Peter Collinson, both of London and both patrons of our own famous American botanist John Bartram. Fothergill had brought a plant of an orchid *Phaius grandifolius* in 1778 from China, while still earlier in 1731 Collinson had imported a *Bletia verecunda* from an unknown shipper in the Bahamas.

The popularity of orchid growing as a hobby, starting with the fashionable naturalist gentry of pre-Victorian times, grew rapidly and later spread to America, to become an important part of our horticultural scene. It has developed to such an extent that the American Orchid Society's membership now exceeds 25,000.

For a very large part of that 150-year, or longer, period, orchid plants were mainly imported from the tropical areas of the world, where there is the greatest concentration of plants and, until recently, much more undeveloped land. Since the 1930s, however, successful methods of seed germination have been developed, and more recently tissue culture has become a big factor in propagation.

In the earlier years of the orchid 'craze' in England, huge numbers of plants were killed by trying to grow them in temperatures that were too high and in a too humid atmosphere. The misconception that orchids came largely from steaming jungles was responsible for this cultivation theory. More observant and more honest plant collectors

\*Saprophytic: obtaining food by absorbing dissolved organic material.

# ORCHIDS



photo by L. Wilbur Zimmerman

*Encyclia cordigera*, collected by author in Mexican mountains at 7,000-8,000 feet elevation; six to 10 flowers on an inflorescence, good substance.

later described more accurately the tremendous variety of habitats in which orchids grow. As this information became more widely known, success in cultivation grew to present-day standards. Indeed there are orchid plants more than 100 years old that are prospering and flowering at Kew. No one really knows the potential life span of an orchid plant.

In 1856 the first artificially produced hybrid, a *Calanthe*, was made by John Dominy of Veitch and Sons at Chelsea, London. Soon to come was a plethora of hybrids in different genera, and even some intergeneric ones.

One of the striking things about orchids is the immense number of minute seeds in some orchid capsules, over 3 million in one seed pod, for example; a good reason why orchids are placed in the order micro-spermae. Only two other minor plant families are in this order.

So, why isn't the world overwhelmed by orchids. This prodigal seed production is offset by the very special needs for the seed to be able to germinate. Since the seeds are so minute and they are so easily spread, only a minimal number land where the essential fungi grow, necessary for the seed's nourishment. The seeds are so small

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***Yet these plants are widespread. They are found from the tropics to Greenland and from sea level to 14,000 feet.***

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that they are little more than a nucleus without any nutrient capsule to sustain themselves. Yet these plants are widespread. They are found from the tropics to Greenland and from sea level to 14,000 feet. Another requirement that is so specialized is the need to have specific insects to pollinate specific species. Ants, bees, flies, moths and even hummingbirds act in this capacity. While the male and female elements are in the same flower, the structure is such that it requires the third party to carry the pollen from one flower to the stigmatic surface of another. The column is designed to prevent self-fertilization, except in a few rare cases. This so intrigued Charles Darwin that he wrote a book devoted to the many special ways in which orchids are fertilized.\* He noted a certain

\**On the Various Contrivances by which British and Foreign Orchids Are Fertilized by Insects, and on the Good Effects of Intercrossing*, Charles Darwin, John Murray, London, 1862.

*Angraecum sesquipedale* in Madagascar, that had a nectary a foot-and-a-half long, requiring an insect with a proboscis that long to be attracted to the flower. No such insect was known until 50 years later when the moth fitting that description was identified.

A number of orchids imitate the appearance of a female bee so exactly, that the male bee is seduced into trying to copulate, and although disappointed transfers the pollen mass from one flower to another. In another unusual case some of the genus *Catasetum* has a number of antenna, one or two of which on slight contact will trigger the forceful ejection of the sticky pollen on the hapless invading insect, who again will carry it to the stigma of another flower.

While some orchid flowers are quite bizarre in color and form according to some aesthetic standards, a much greater number are attractive, making them desirable plants to cultivate.

By careful selection, it is possible to have some orchids in bloom year-round. In our climate, of course, this requires an artificial light setup, a sunny window, sun room or best of all a greenhouse. Some temperature control is needed and a modicum of light to induce blooming.

The range in size of both plants and flowers and the other great variants is so vast that the problem is to deal with an overabundance of choices.

As to culture, most orchids are no more difficult than african violets. The flowers in some genera will last in perfection for six weeks or longer.

Find a group of orchid enthusiasts, of which there are a number in this area, and you will find a group of dedicated plant lovers, who will quickly infect you with the desire to grow orchids. (See Plant Society Meetings on page 26.)

L. Wilbur Zimmerman is emeritus judge for the American Orchid Society, and for five years was chair of the Northeast Region of the American Orchid Society Judging Section. Zimmerman was chair of the Pennsylvania Horticultural Society Council 1976-80, and Flower Show chair 1974 and '75.

# THE AMARYLLIS PREVAILS...

*They need not be huge and garish*



By Josephine Henry

photo by William Herbert



BEST OF DAY AT  
PHILADELPHIA  
FLOWER SHOW

At the 1989 Philadelphia Flower Show, the *Amaryllis* entered by Josephine Henry won "Best of Day" in the horticultural class bulb section (other than narcissus). Henry identifies the plants as *Amaryllis belladonna haywardii* x *A. belladonna haywardii* x *henryae*, a hybrid bred by her mother, Mary G. Henry.

**A**mong my earliest gardening recollections is my mother potting bulbs (which in those days were packed in dry buckwheat hulls). She then set them into an extraordinary cold frame attached to her lean-to greenhouse at the rear of our house on Spruce Street above 19th. It was a dangerous affair consisting of a sunken pit the width of two standard cold frames, but instead of sashes each was covered with two plate glass lights\* mounted in steel, hinged across the center and also hinged across the top. They were raised by lifting the handle at the bottom of the upper light. The real killer was that the lower section of glass was never at the same position and was moveable, so the knocks and bumps upon the head were nasty ones. The terra cotta pots were filled with soil and occupied by a single wooden label reminiscent of a grave headstone. In early winter, therefore, bulbs in general could not generate a spark of enthusiasm in my young being. Nevertheless, by spring color erupted from the dreary pots, yielding species of crocus, wee narcissus, fritillaria, hyacinths, etc. Not one was of a usual sort, and all had been imported.

The cold frame delayed my enthusiasm for bulbs. It was not only inconvenient and had often caused too much pain for the brief splash of color offered in early spring. Within a few years, however, we moved to a lovely hilly property in Gladwyne and here most of the bulbs were set in the ground. It was possible to truly enjoy the unrestrained crocus, chionodoxa, leucojum, fritillaria, galanthus, muscari, narcissus and lilies. Almost all the foregoing were species, and many were truly rare. At this point my enthusiasm for bulbs began to rise.

Gardening during the spring and summer kept my mother very busy; however, as winter approached there was less work for the gardener so she retreated to her greenhouse to grow South African bulbs of various genera such as *Gladiolus*, *Lapeirousia*, *Cyrtanthus*, etc. Then bit by bit members of the South American *Amaryllidaceae* were added to the array of bulbs upon the benches until there was almost nothing but amaryllids, *Cyrtanthus* from South Africa, and *Amaryllis*, *Eucharis*, *Stenomesson*, *Hymenocallis*, etc. from South America. These bulbs, and in a few instances corms, kept us busy and just before Christmas we started to look for buds, enjoying the promise each one offered.

\*Any glass covering, cloches, panes of glass, etc.



Anticipation was not greater than reality!

Later, on a journey to Peru, Bolivia and Chile I was thrilled to come across species of amaryllis and some of their relatives, all so much more lovely than the giants featured in catalogs and shops. These wildings are so much more graceful and of such lovely gentler hues. I brought a number of these bulbs home, some of which were not then in flower. These whetted my mother's appetite, so it was not hard to persuade her to join me the next season to visit some of these and other sites. Of course, we found some beauties, which were not in flower, and we had to wait a considerable time. In fact one, *Amaryllis macbridei*, did not flower until after her death; it is one of my favorites, greenish white with a hint of pink. It is one of the newer species to be described. During this trip we observed the soil and exposures the bulbs required. Most, of course, were situated in full sun, but most had close companions to shield the bulbs and all flourished with acute drainage. Some received rather heavy rainfalls and other required a drier period. Of course, all were apparently evergreen.

In growing these at home the soil mixture was of a rather coarse nature with almost no soil: leaf mold, real peat, coarse builders' sand, a sprinkling of sharp road gravel and a dash of granular charcoal. I preserved some of this mix and have shown it to persons who exclaimed, "Oh . . . Lord!" No matter, the bulbs thrived. Recently, we have changed and are potting the bulbs in very coarse sand and drenching them with feed or water as they require. This method reduces the problem of insect infestation and any fungus threat. The potted bulbs have bottom heat coming from the cast iron pipes immediately beneath the bench. They have plenty of sunlight.

Some of us think of amaryllis as being vulgar giants, which have evolved through careful breeding and selection over the years. But to me size does not constitute beauty, nor do primary colors, which is

alas, so typical of the plant "supermarkets." These smaller species possess great dignity and refinement with such delightful colors and hues, which make them so desirable. Unfortunately, a number of them do not respond with enthusiasm to our efforts to make them happy. Many are evergreen and must not be allowed to completely dry out; all, however, require a rest be it merely reducing the watering or a drying out for a short spell.

Taking into consideration what I've just said, it's obvious that trial and error and patience are required for these special plants.

#### Amaryllis Sources:

George W. Park Seed Co., Inc.  
Cokesbury Road  
Greenwood, SC 29647  
(803) 223-7333  
Catalog: Free

John Scheepers, Inc.  
Phillipsburg Rd.  
RD 6  
Middletown, NY 10940  
(914) 342-1135  
Catalog: \$3.00

Amaryllis Inc.  
P.O. Box 318  
Baton Rouge, LA 70821  
(504) 924-5560  
Catalog: \$1.00

American Plant Life Society  
P.O. Box 985  
National City, CA 92050  
(619) 477-0295  
\$20.00 Membership  
HERBERTIA: Emphasis on  
*Amaryllis*  
R.M. Beauchamp, Newsletter  
Editor

When Josephine Henry was 18 years old, she accompanied her father on a trip to Mexico, and began exploring and collecting plants. Since then, she has accompanied her mother and gone solo on collecting trips — one to Canada to an area that was not then on the map. She has collected from India, China, Ethiopia, Iran and Turkey. A year ago in January, Henry collected *Amaryllidaceae* in the Andes in Chile at elevations up to 10,600 ft. Since her mother's death in 1967, Josephine Henry has been caring for the Henry Foundation for Botanical Research in Gladwyne, Pa.

# For Fragrance and Vigor, Try the Lavandins

 By Arthur O. Tucker

photo by Arthur O. Tucker



**L**avandin? Many people don't know this name even though they may cultivate lavandin under the name of lavender. True lavender is *Lavandula angustifolia*; lavandin (*L. x intermedia*), is the sterile, interspecific hybrid of lavender x spike (*L. latifolia*). Lavandin was first described as a naturally occurring hybrid in France in 1828. Lavandin was later promoted as an essential oil crop in France in the early 1930s. Today lavandin has proven itself as a major essential oil crop in France and Italy and enters into many perfume compositions, sometimes substituting for true lavender.

Lavandin possesses true hybrid vigor. In North America, especially in the Delaware

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*Lavender usually succumbs to a variety of fungus infections . . . In contrast to lavender, lavandin is only infrequently attacked by fungus infections and suffers little die-back.*

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Valley, lavender usually succumbs to a variety of fungus infections, especially *Phytophthora*, in the high temperatures and high humidity of late summer. Often the fungus infection is not noticed until the effects are seen the following spring: the plant is so weakened by the fungus that it is unable to survive the winter and dies back. In contrast to lavender, lavandin is only infrequently attacked by fungus infections and suffers little die-back.

Lavandins are also taller. Lavandins average 36-40 inches in flower two years after growing from three-inch cuttings, while lavenders only average 9-32 inches.

Lavandins also bloom later than lavenders. While lavandins bloom early to mid-July, lavenders bloom mid- to late June. Spike (hardy to only U.S.D.A. Zone 7) blooms latest of all, in late July to mid-August.

The fat, full spikes of 'Grosso' lavandin grown in Camden, Delaware, combined with its vigorous growth and excellent fragrance, make it a natural choice for commercial plantings in France and Italy.

*continued*

# Try the Lavandins

photos by Arthur O. Tucker



The differences between lavender, lavandin, and spike are readily apparent by observing the flowers. Lavender (left) has a broad bract accompanying the flower and no bracteoles (small bracts). Spike (right) has very narrow bracts and many narrow bracteoles. Lavandin (middle), the hybrid of lavender x spike, is intermediate: the bracts are of medium size and accompanied by a few bracteoles.

## *lavandin cultivars*

Lavandin cultivars, being sterile, must be propagated by cuttings. You cannot buy seeds of lavandin. Should you be fortunate enough, however, to locate plants of lavandin, you will be rewarded with superior vigor and the same clean fragrance of lavender.

The most common cultivar of lavandin is 'Dutch,' which grows to around three feet in the garden. Long masquerading in England under the name *L. vera*, 'Dutch' was introduced to the horticultural trade before 1923. 'Dutch' is relatively easy to find in the mail-order herb nurseries. 'Seal' and 'Provence' are similar to 'Dutch' and frequently available through catalog listings.

The largest lavandin is 'Grappenhall,' reaching to about 40 inches. 'Grappenhall,' introduced about 1902 in England, makes an excellent hedge that may last about five years or more with proper maintenance. Should the stems become too woody and begin to die-back, cut back the side branches to within a few inches of the main trunk in spring.

'Hidcote Giant' has recently been introduced to America from England, where it appeared before 1958. 'Hidcote Giant' is unique among the commercially available lavandins because its oil matches closely that of the commercial cultivars raised in France and Italy.

## Sources

'Dutch,' 'Seal,' and 'Provence' are available by mail order or pick-up at:

Well-Sweep Herb Farm  
317 Mt. Bethel Road  
Port Murray, NJ 07865  
Catalog: \$1.00

'Seal,' 'Provence,' and 'Grosso' are available by mail order or pick up at:

DeBaggio Herbs  
923 N. Ivy St.  
Arlington, VA 22201  
Catalog: free to addresses in MD, VA, and DC; \$1.00 otherwise.

'Grosso,' a very recent introduction, is commercially cultivated in Europe for its essential oil. The flower spikes are fat and fragrant. This clone was originally discovered in the Vaucluse District of France around 1972.

While all of the lavandins listed above have lavender-blue flowers, 'Alba' is a white lavandin that is sporadically cultivated in England and America.

## *cultivating lavandin*

Lavandin, like lavender, requires full,

strong light, good drainage, and a neutral to slightly basic loam. These conditions also produce a tough plant, resistant to the often lethal fungus infections that plague lavender and sometimes lavandin in late summer.

Good drainage can be provided by a number of methods. In my flat garden, which is frequently subject to poor drainage, I must grow the plants on mounds (from three inches to one foot) to insure adequate drainage, especially in late winter and early spring. Often, at this critical time, the basal bark may be stripped with constant freezing and thawing if any water accumulates at the base of the plant; this is usually lethal also.

Lavandin must be grown in *full* sun. In experimental plots we have found, much to our surprise, that flowering is greater if a one-inch topdressing of white sand is applied over our loam. The sand reflects light while lowering soil temperature and provides extra drainage at the base of the plant. The mulch of sterile sand also lowers the weed populations and makes the weeds easier to remove.

## *propagate with cuttings*

Since lavandins must be propagated by cuttings, it is essential to know of a good source of rooted cuttings. Several precautions are necessary to root lavandin cuttings.



'Dutch' lavandin makes an ideal hedge.

Lavandin foliage is adapted to relatively dry areas of the Mediterranean and, thus, will rot if rooted in any mist or covered rooting bench. A shade cloth providing at least 50% shade and open flats of perlite and peat moss (a 50-50 mix is good) are the barest essentials for rooting lavandin. Cuttings should be taken from half-hardened wood from June to November. Three-inch cuttings, with the basal foliage removed, are best. Dip the base in rooting hormone, insert in the rooting medium, leave uncovered in a shaded area, water to maintain constant moisture, and the cuttings should root within two to four weeks.

Pot up the cuttings and leave in the shade about one week longer to harden. Gradually move the rooted cuttings to the sun and plant in the ground for the winter. The cuttings will not bloom unless they are vernalized, that is, subjected to a winter dormancy.

#### *layering*

Probably the easiest method to propagate lavandins is by layering. Bend a side branch down, anchor with a "V" bent from a wire coat hanger, and cover with soil. A slight scraping of the bark and application of rooting hormone sometimes help. The

layerings should be rooted within about a month. I prefer to transplant my rooted layerings in spring after full root development and severing from the parent plant.

So, if you have difficulty growing lavender, plant lavandin and follow these instructions. The hybrid vigor of lavandin allows those who fail with lavender to still grow this clean scent.

Arthur O. Tucker is research professor and curator of the Claude E. Phillips Herbarium in the Department of Agriculture and Natural Resources at Delaware State College in Dover, where he grows and researches herbs.

# *Helleborus niger*: A CHRISTMAS - ROSE

 By Donna Bickley

I know spring is here because my Christmas-rose is blooming. I have come to accept that the Christmas-rose (*Helleborus niger*) has no relationship at all to Christmas — in Maryland. In fact, I have yet to hear of it blooming at Christmas elsewhere than in England, where it decorates creches and Yuletide tables.

Although December bloom isn't meant to be for many, those of us who live in areas to Zone 3 can use *H. niger* to brighten Easter feasts, as well as other celebrations of the Vernal Equinox. The waxy, stark-white blossoms, centered with golden stamens — reminiscent of Mayapple blooms or single miniature waterlilies — are certain to begin emerging with the advent of March — precisely March 3 here in North Central Maryland. And what a glorious spring herald they are. Standouts among the early bloomers, they put even daffodils to shame with their refined eye-catching ability.

They are the first flowers of the season to fully open in my garden — before the daffodils, before the crocuses, even before the snowdrops — giving the bees their primal picnic of luscious nectar; it is difficult to take a photograph of a *Helleborus* blossom without an accompanying bee.

After a week or two, the blooms begin to change color — first, to old rose — then, to apple green. In mid-April, they are predominantly apple-green with dusky-rose accents. Some waxy-white flowers still mingle with the pastels, often until June. Later, the blossoms turn straw-gold with green stippling. They encircle attractive golden-brown seed pods, which spill out viable black seeds, which will yield many tiny *H. niger* next spring. After they gain their true leaves, these seedlings can easily be transplanted to other locations.

The seven-fingered leaves on *H. niger* are dark and evergreen. They rise directly from the earth on short succulent (6"-8") stems. The blossoms emerge between them. This "bouquet" will last for several weeks, and doesn't seem to be affected by rain or wind, but blooms steadfastly. I've never had the nerve to cut a hellebore flower, they are just too breathtaking left in their natural setting. I understand, however, that they will last up to two weeks in an arrangement, if the stem is slit about 1/3 of

the way up before placing them in water.

*H. niger* is considered by some experts to be the best of the hellebores for gardens, and the most difficult to establish. It prefers rich, woody soil and takes a couple of years before it decides if it likes its location and will stay. Usually I do not grow



*Helleborus niger*, seed pod stage.

difficult, finicky flowers. But I was willing to heed the experts and spend a bit more time and energy on my two *Helleborus niger* plants than I normally do on other perennials. Mine are now well established.

## how to establish the Christmas-rose

Here's what I did:

- Selected their site carefully, in semi-shade, in an area where the drainage was

good, but the water would not run off before being absorbed.

- Prepared their holes with peat, compost and dried manure.

- Mulched well with leaf mold and compost, topped with shredded bark mulch.

- Made sure they got a thorough watering each week the first year — biweekly the second year — in times of drought the third year. (Some books say the hellebores require moist soil, but others aver that they are drought tolerant. Mine are now four years old, and I have been reducing their watering each year. They are thriving.)

- Fed them a top-dressing of compost, dried manure and woodashes each spring after blooming (the books disagree about whether *Helleborus* will thrive in acidity since they are native to limestone areas, so I have applied the woodashes — 30% lime — as a compromise to pure lime).

Now for my secret indulgence. Somewhere I read that *H. niger* will have spectacular blooms if you cheat and apply biweekly doses of high-nitrogen fertilizer — the Miracle Gro liquid type — throughout the growing season. This unnatural practice is strictly against my principles, but I did it, anyway, last year. And it works; I had the most prolific bloom of Christmas-rose yet — 24 blossoms from a plant with only five mature leaves! I may cheat again this year.

Spring is the time to plant your hellebores, before hot, dry weather hits.

## warning

Caution: all parts of all *Helleborus* plants are poisonous if ingested. If you have small children, take proper precautions. *Wyman's Gardening Encyclopedia* also warns that crushed *Helleborus* parts may cause dermatitis (an acute skin eruption), but I've never seen that admonishment anywhere else and don't know if it is true. I've certainly never had a problem, but then, I don't make a habit of crushing my hellebores.

## a white spring garden

I hope you will try at least one of the hellebores. While everyone else is exhibiting multi-color spring extravaganzas, produce an early spring white garden in a quiet corner of your yard — featuring *Helleborus niger* — and, in subsidiary parts: snowdrops

## Sources for *Helleborus*

White Flower Farm  
Litchfield, CT 06759  
(203) 496-1661  
Catalog: \$5.00  
(In plant form)

Andre Viette Farm and Nursery  
Rt. 1, Box 16  
Fisherville, VA 22939  
Catalog: \$2.00

Park Seed Co.  
Cokesbury Rd.  
P.O. Box 46  
Greenwood, SC 29648-0046  
(803) 233-7333  
Catalog: no charge  
Seeds: recommended for the advanced gardener.



# FOR YOUR SPRING GARDEN

(*Galanthus nivalis*), white crocuses, candy-tuft (*Iberis sempervirens* 'Purity'), white windflowers (*Anemone blanda*), and some of the luscious new *Pulmonaria saccharata* 'Sissinghurst White,' or *Bergenia cordifolia* 'Bressingham White.'

Whatever the supporting roles, *Helleborus niger* will steal the scene and bring down the house in any spring garden show.



Donna Bickley is a psychotherapist and mental health educator who gardens for her own mental health. She is a freelance garden writer and has written for *Flower & Garden Magazine*. She and her husband, John, have transformed their suburban hillside into English cottage-style gardens and vegetable terraces.



photos by Donna Bickley

*Helleborus niger*, pink and green stage.



*Helleborus niger*, pure white.

# SECRETS OF VIOLAS



By Betty Barr Mackey

photo by Ed Mackey



Violas in June.

I used to buy violas and pansies each spring while they were cute, then discard their straggly remains a few months later, after they succumbed to bugs and weather. I still buy them, and I no longer discard the violas. They are marginally perennial in our climate, which they find too hot in summer and too cold in winter.

Using a bit of hard-won knowledge, I have been able to keep them blooming all summer, long after biennial pansies fail. With care, violas live through the winter and provide their best show the following spring. Violas surviving a winter are larger,

fuller and more floriferous than first-year plants. Some that I started in spring, over a year ago, are now lively, bushy clumps — a mass of flowers even in hot June weather. The plants should last for years.

Though I had read that violas were perennial, mine never seemed to last through the summer (let alone the winter) until I got to know them better by growing them from seed. Last year, I had so many violas from successive sowings that I planted them all over the property, at several different times of the year. Many, but not all, made it through the year — only the ones planted at the right times in the

right exposures. Though frustrating, this experience was a practical lesson for me that might help other Delaware Valley gardeners.

The best sites proved to be in bright partial shade, part-way down on slopes (north, east, and west-facing) with well-drained, loamy clay soil. Being near rocks helped, too. Plants in flatter, exposed sunny areas or facing south failed to make it through the winter, though they lived all summer. The surviving plants were more hidden and sheltered.

Successful planting time varied, too. For purchased plants, late March was the best.

*With care violas will bloom through the summer, survive the winter and bloom again next spring.*

The blooming plants survived light frost with flowers undamaged and seemed to develop toughness that helped them last into the hot months very well. Small seedlings, however, died when set out too soon. Mid-April seemed to be better for them. (Some of these went on to outperform the others, with a peak of bloom in June.) In fall, both seed-grown and purchased plants did well.

Care was not demanding, but it was needed. It was important to prevent plants from setting seed and becoming too leggy. My habit of picking leafy stem tips 6 to 8 inches long and with two or three flowers on each (for bouquets) seemed to keep the plants from becoming too leggy or stringy. I removed the spent blossoms except a few for a seed crop. Also, I showered the plants with a dash of cool water on days when the heat went into the nineties. Soil of average fertility, not too rich in nitrogen, but high in potassium and phosphorous, kept plants healthy but not too soft and leafy. The most important thing was mulching around the crowns of plants, from the onset of hot weather through the winter. Mulch was less needed in spring. Along with mulching came slugs, which tend to hide under it, climbing out at night to chew up the flowers. I used traps of pans of beer (set into the soil so the top is level with the soil surface), diatomaceous earth (a powder of sharp, glasslike shells of microscopic sea creatures), and Corry's slug bait, which is toxic but I used it anyway, and I confess it worked best.

#### *growing from seed*

You may be interested in growing violas from seed like I did. The main problem I used to have was in getting the seeds to germinate. I solved it by pre-germinating the seeds, wrapping about 20 in a quarter of a wet paper towel so they were completely covered. Do not put too many on the paper or they will get tangled up with each other. Put the towel-wrapped seeds into a clear polyethylene bag and tag it with the date and seed name. Hold it at room temperature in ordinary room lighting for about a week (mine sat on a kitchen counter), and when you open it you should find that the seeds have swelled up considerably, but

have sprouted very little. At this point, plant them in small containers of potting soil (clean, recycled bedding plant six-packs are perfect), one per pocket or widely spaced, 1/8 inch deep. Use tweezers (gently) to handle the tiny seeds. Plants will grow right away. Keep them at temperatures between 50° and 70°F in bright fluorescent light a few inches from the bulb or a sunny window or cold frame. This may be done at any time of year, but if the plants are to go outdoors as soon as they are large

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*Some that I started in spring, over a year ago, are now lively, bushy clumps — a mass of flowers even in hot June weather. The plants should last for years.*

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enough, February through April are the best months. September and October are also good if you use a cold frame in winter.

It surprised me to learn that some of the violas and all of the pansies are fairly recent hybrids. The different strains and cultivars vary in their heat tolerance and hardiness. Any pansy or viola labeled "winter blooming" is very hardy. The larger violas (*Viola cornuta*) are harder than most of the pansies because their progenitors were from the harsh climate of the Pyrenees Mountains in Spain.

The smallest type of viola is *V. tricolor*, or johnny-jump-up, with myriads of violet-like 1-inch flowers of white, yellow, purple, blue or true black. 'Helen Mount' is the most popular type, a perky combination of purple and gold. Though they occasionally live through winter, more often they die but self-sow without any help from us and flower in May, June, and into July.

*V. cornuta*, the large-flowered viola, is more varied in size and hardiness. My best results have been with the cornutas, especially 'Bambini,' an old-fashioned strain (from Thompson & Morgan, P.O. Box 1308, Jackson, NJ 08527, Phone 201-263-2225) in mixed colors. Flowers from one to two inches wide with whiskered faces grow in a mixture of colors, predominantly pale to deep blues, whites, creams, and violets. Also, I purchased blooming plants of

'Princess Blue,' 'Yellow Charm,' and an unnamed white. Chance seeds saved from the plants grew well from an October planting in an unheated greenhouse, blooming by the end of March. (I grew mine with the school Greenhouse Club, in the facility at Radnor High — teachers bought and liked them at our spring plant sale.) Some were typical large-flowered *V. cornuta* types, but other reverted to johnny-jump-up size, in whites, yellows, and pale blues.

Another means of propagation is simply taking tip cuttings about 6 inches long, dipping the cut ends in a rooting hormone (I usually use Rootone), burying them 4 inches deep in sandy, peaty soil in shade, and keeping them moist and sheltered for 6 to 8 weeks. This works very well in April and May, and occasionally cuttings strike roots in summer. It works fairly well again in early autumn. After roots form, the plants may be transferred to sunnier spots.

To ensure that the marginally hardy viola plants will be perennial, I advise limiting the top growth of the plants. Towards the end of August, snip off all but the bottom two inches of stems and foliage, flowers and all. (You may be able to use the parts cut off as tip cuttings.) This will stimulate the plants to grow a multi-stemmed, flowerless basal rosette that will winter over successfully. Mulch around but not over the rosettes. Keep them from getting too wet or too dry, and they will grow stronger through the fall and winter. If it gets very cold (below about 15°F), cover them lightly with some small evergreen branches until the middle of February, but be sure to remove the evergreens before the crocuses bloom. Alternatively, you can dig the trimmed plants and overwinter them in a cold frame. Either way, your violas will be making new growth through the winter, getting ready for a tremendous floral display at the first sign of spring late in March. They will be bushier and more vigorous than the newly grown seedlings so widely available, and so irresistible, at this time of year.

Free-lance writer Betty Barr Mackey is working on a gardening book. She also works with Radnor High School students as a volunteer in the greenhouse.

# PLANT SOCIETIES MEETINGS IN 1990



photo by Darrel Apps

The daylily, 'Ida Magic.' The Delaware Valley Daylily Society will host the 1990 National Convention at the Sheraton Valley Forge Hotel on July 12-15. More than 700 members are expected to attend the convention commemorating 100 years of daylily hybridizing.

## AFRICAN VIOLET SOCIETY OF PHILADELPHIA

**Annual Show & Plant Sale**  
 May 5, 1-9:30 pm  
 May 6, 12-4:30 pm  
 Plymouth Meeting Mall  
 Plymouth Meeting, PA 19462

**Hometown Fair**  
 Sept. 21-22  
 10-9:30 pm  
 Plymouth Meeting Mall  
 Plymouth Meeting, PA 19462

**Contact:**  
 Margaret Cass  
 920 Andorra Road  
 Lafayette Hill, PA 19444

## AFRICAN VIOLET SOCIETY OF SPRINGFIELD

**Annual Show & Plant Sale**  
 April 28, noon-9:30 pm  
 April 29, noon-5:30 pm  
 Springfield Mall  
 Baltimore Pike & Sproul Rd.  
 Springfield, PA 19064

**Contact:**  
 Elizabeth Roth  
 105 Carleton Rd.  
 Wallingford, PA 19086

## PENNSYLVANIA BONSAI SOCIETY

**Bonsai Exhibit**  
 Philadelphia Flower Show  
 March 11-18  
 Philadelphia Civic Center  
 34th & Civic Center Blvd.  
 Phila., PA 19104  
 Show Admission \$9.50

**Auction/Picnic**  
 June TBA\*  
 Kennett Square, PA 19348

**Contact:**  
 James A. Gillespie  
 3183 Pine Rd.  
 Danielsville, PA 18038

## BRANDYWINE CONSERVANCY

**Wildflower & Native Plant Sale**  
 May 12-13, 9:30 am-4:30 pm  
 Brandywine River Museum  
 Courtyard  
 Route #1  
 Chadds Ford, PA 19317  
 Museum fee: \$4.00 Adults  
 \$2.00 Children

**Plant Sale**  
 May thru October  
 9:30 am-4:30 pm  
 Brandywine River Museum  
 Route #1  
 Chadds Ford, PA 19317  
 Wildflower cart offering  
 those plants that are in  
 bloom in the garden.

**Contact:**  
 F. M. Mooberry,  
 Kristine Faust  
 Box 141  
 Chadds Ford, PA 19317

## PHILADELPHIA CACTUS & SUCCULENT SOCIETY

Philadelphia Flower Show  
 March 11-18  
 Philadelphia Civic Center  
 34th & Civic Center Blvd.  
 Phila., PA 19104  
 Show Admission \$9.50

**Plant Sale**  
 October TBA\*,  
 9 am-5 pm  
 Peddlers Village  
 Lahaska, PA 18931

**Contact:**  
 Dr. Vincent J. Buono  
 2330 Highland Ave.  
 Drexel Hill, PA 19026-1510

## DELAWARE VALLEY CHRYSANTHEMUM SOCIETY

**Chrysanthemum Show**  
 October 6, 2-5 pm  
 October 7, 10 am-5 pm  
 Longwood Gardens  
 Kennett Square, PA 19348  
 Museum Admission Fee:  
 \$8.00

**Plant Sale**  
 May 19-20, 10 am-4 pm  
 Tyler Arboretum  
 Painter Rd.  
 Lima, PA 19037

**Contact:**  
 Robert Long  
 953 Palmers Mill Road  
 Media, PA 19063

## CHRYSANTHEMUM SOCIETY OF SOUTH JERSEY

**41st Annual Mum Show**  
 November 3 & 4, 1-5 p.m.  
 Gloucester County College  
 Tanyard Road  
 Sewell, NJ 08071

**Plant Sale:**  
 June 8, 3-8 p.m.  
 June 9, 9 am-5 p.m.  
 323 Columbia Ave.  
 Pitman, NJ 08071

**Contact:**  
 Edwin C. Erichson  
 323 Columbia Ave.  
 Pitman, NJ 08071

\*TBA — to be announced

## DELAWARE VALLEY DAFFODIL SOCIETY

**Annual Flower Show**  
 April 21, 1-5 pm  
 April 22, 10 am-5 pm  
 Longwood Gardens  
 Kennett Square, PA 19348  
 Admission fee to Longwood  
 Gardens: \$8.00

**Plant Sale**  
 September 29  
 9 am-5 pm  
 535 Woodhaven Rd.  
 West Chester, PA 19382

**Contact:**  
 Joy MacKinney  
 535 Woodhaven Road  
 West Chester, PA 19382  
 or  
 Mrs. John F. Gehret  
 3 Granite Rd.  
 Wilmington, DE 19803

## NEW JERSEY DAFFODIL SOCIETY

**15th Annual New Jersey and  
 Northeast Regional Daffodil Show**  
 presented by the New Jersey Daffodil Society  
 April 19, 1-6 pm  
 Frelinghuysen Arboretum in the  
 Joseph Haggerty Education Building  
 Morristown, NJ 07960

**Contact:**  
 Frelinghuysen Arboretum  
 P.O. Box 1295R  
 Morristown, NJ 07960

## GREATER PHILADELPHIA DAHLIA SOCIETY

**Annual Show**  
 Tentative Dates & Location  
 September 15, 3-6 pm  
 September 16, noon-4 pm  
 Fair Acres Geriatric Center  
 Route 352  
 Lima, PA 19037

**Contact:**  
 James W. Thomas  
 8 Woodmont Lane  
 Malvern, PA 19355

## DELAWARE VALLEY DAYLILY SOCIETY

**American Hemerocallis  
 Society National  
 Convention**  
 July 12, 13 & 14  
 Sheraton Valley Forge  
 King of Prussia, PA 19406  
 Details call:  
 Carol McConomy, (215)  
 642-7620  
 Joan Clark, (215) 644-1659

**Plant Sale**  
 September 8  
 9 am-12 pm  
 Tyler Arboretum  
 Lima, PA 19037

**Contact:**  
 Beth Creveling  
 234 Bypass Rd.  
 Perkasi, PA 18944

## DELAWARE VALLEY FERN & WILDFLOWER SOCIETY

**Bowman's Hill Wildflower Preserve**  
 May 19, 10 am  
 Washington Crossing Historic Park  
 (Parking lot near Preserve)  
 Washington Crossing, PA 18977

**Contact:**  
 Henrietta F. Adkins  
 419 Lodges Lane  
 Elkins Park, PA 19117  
 (215) 635-0932  
 Margie Chalfant, Chair of  
 event, (215) 887-1549

## AMERICAN GOURD SOCIETY INC.

**Annual Gourd Show**  
 October 6, 12-6 pm  
 October 7, 9 am-5 pm  
 Fairgrounds  
 Mt. Gilead, Ohio 43338  
 Admission: \$1.00

**Contact:**  
 John Stevens  
 P.O. Box 274  
 Mt. Gilead, OH  
 43338-0274

**DELAWARE VALLEY UNIT, HERB SOCIETY OF AMERICA**  
**Lecture and Demonstration**  
 by Madeline Hill & Gwen Barclay in conjunction with Northern Jersey Unit of Herb Society of America  
 April 25, 1 pm  
 Frelinghuysen Arboretum  
 Morristown, NJ 07960

**PHILADELPHIA UNIT, HERB SOCIETY OF AMERICA**  
**Herb Sale**  
 May 10, 10 am  
 Home of Dr. & Mrs. Bryce Douglas  
 Kimberton, PA 19442  
**Contact:**  
 Caroline W. Amidon  
 201 Nantmeal Rd.  
 R.D. 1  
 Glenmoore, PA 19343

**SUSQUEHANNA UNIT, HERB SOCIETY OF AMERICA**  
**10th Annual Herb & Geranium Sale**  
 May 5, 10 am-1:30 pm  
 The Barn at Rockford Plantation  
 Lancaster County Park  
 Lancaster, PA 17602  
**Contact:**  
 Michele Miller  
 3092 Lyndana Drive  
 Lancaster, PA 17601

**DELAWARE VALLEY HOSTA SOCIETY**  
**Garden Tours and Plant Auction**  
 TBA\*  
**Plant Sale**  
 TBA\*  
**Contact:**  
 Warren I. Pollack  
 202 Hackney Circle  
 Wilmington, DE 19803

**PHILADELPHIA CHAPTER OF IKEBANA INTERNATIONAL**  
**Chiko Demonstration**  
 by Louise McKenzie, Grand Master in Washington, D.C.  
 April 26, 10 am  
 Radnor Memorial Library  
 114 W. Wayne  
 Radnor, PA 19087  
 Guest fee: \$2.00  
**Contact:**  
 Ronell Douglas  
 57 Allendale Road  
 Phila., PA 19151

**DELAWARE VALLEY IRIS SOCIETY**  
**Iris Show**  
 TBA\*  
**Plant Sale**  
 TBA\*  
**Contact:**  
 Joy Westfall  
 673 W. Boot Road  
 Downingtown, PA 19335

**MID-ATLANTIC REGIONAL LILY GROUP**  
**Annual Lily Show**  
 June 23, 1-5 pm  
 June 24, 10 am-5 pm  
 Longwood Gardens  
 Kennett Square, PA 19348  
 Longwood Admission fee: \$8.00  
**Plant Sale**  
 October 27, 1 pm  
 Jenkins Arboretum  
 631 Berwyn-Baptist Rd.  
 Devon, PA 19333  
**Contact:**  
 Bud Slemmer  
 Box 36  
 Lederach, PA 19450

**ABRAHAM LINCOLN HIGH SCHOOL**  
**Horticulture Fair**  
 June 2, 8 am-2 pm  
 Rowland and Ryan Aves.  
 Phila., PA 19136  
**Contact:**  
 David Kipphut  
 Rowland and Ryan Aves.  
 Phila., PA 19136

**MARIGOLD SOCIETY OF AMERICA**  
**Annual Meeting**  
 TBA\*  
**Contact:**  
 Jeannette Lowe  
 394 West Court St.  
 Doylestown, PA 18901

**THE NATIVE PLANT SOCIETY OF NEW JERSEY**  
**Plant Sale**  
 April 28, 8 am-4 pm  
 Cook College Campus  
 New Brunswick, NJ 08901  
**Contact:**  
 Robert L. Swain  
 c/o The Frelinghuysen Arboretum  
 P.O. Box 1295R  
 Morristown, NJ 07960

**CENTER CITY ORCHID SOCIETY**  
**Field Trip**  
 TBA\*  
**Monthly Meeting**  
 3rd Monday  
 6:30 pm for questions & answers  
 7 pm, Official Meeting  
 Pennsylvania Horticultural Society  
 325 Walnut St.  
 Phila., PA 19106  
**Contact:**  
 Mildred Lizenbaum  
 310 S. 4th St.  
 Phila., PA 19106  
 (215) 627-1981  
 or  
 Matthew Drozd  
 31 S. 3rd St.  
 Phila., PA 19106  
 (215) 925-2882

**DELAWARE VALLEY ORCHID SOCIETY**  
 1990 DVC Speakers Forum  
 — 'Phalaenopsis'  
 April 1, 9 am-4 pm  
 Travelodge Hotel  
 Mt. Laurel, NJ 08054  
 Route #73  
 Exit 36 off 295  
 Exit 4 off NJ Turnpike  
 Fee: \$25.00 includes buffet lunch  
**Contact:**  
 Betty Schmidt  
 (609) 767-4991

**SOUTH JERSEY ORCHID SOCIETY**  
**Orchid Show**  
 November 9 - 11 (tentative)  
 Time and Location TBA\*  
**Plant Sale**  
 November 18  
 1 pm  
 Wenonah Methodist Church  
 Wenonah, NJ  
**Contact:**  
 Carla Vandergrift  
 325 S. Cummings Ave.  
 Glassboro, NJ 08028

**SOUTHEASTERN PENNSYLVANIA ORCHID SOCIETY**  
**Orchid Sale**  
 October 10, 7 pm  
 All Saints Episcopal Church  
 Gypsy Lane at Montgomery  
 Narberth, PA 19072  
**Contact:**  
 Mrs. George S. Robinson, Jr.  
 Well's Acres  
 RD 2, Box 129  
 Chester Springs, PA 19425  
 or  
 Deborah Robinson  
 (215) 827-7445

**AMERICAN PRIMROSE SOCIETY — DORETTA KLABER CHAPTER**  
**Plant Sale & Garden Tours**  
 May TBA  
**Contact:**  
 Anita Kistler  
 1421 Ship Rd.  
 West Chester, PA 19380

**AMERICAN RHODODENDRON SOCIETY**  
**Flower Show**  
 Cooperatively produced by Greater Phila. & Valley Forge Chapters  
 May 12, 11:30 am-3 pm  
 Tyler Arboretum  
 Painter Rd.  
 Lima, PA 19037  
 Show open to public  
 Exhibitors: ARS members only  
**GREATER PHILADELPHIA CHAPTER**  
**Plant Sale**  
 May 12, 10 am-4:30 pm  
 John Wister Ed. Center  
 Tyler Arboretum  
 Painter Rd.  
 Lima, PA 19037  
**Contact:**  
 (Greater Phila. Chapter)  
 Mrs. Daniel Layman  
 212 Almur Lane  
 Wynnewood, PA 19096

**VALLEY FORGE CHAPTER**  
**Flower Show**  
 See above  
**Plant Sale**  
 May 5, noon-3 pm  
 Jenkins Arboretum  
 631 Berwyn-Baptist Rd.  
 Devon, PA 19333  
**Contact:**  
 (Valley Forge Chapter)  
 Francis Raughley  
 2112 Foulk Rd.  
 Wilmington, DE 19810

**AMERICAN ROCK GARDEN SOCIETY — DELAWARE VALLEY CHAPTER**  
**Exhibit**  
 Philadelphia Flower Show  
 March 11-18  
 Philadelphia Civic Center  
 34th & Civic Center Blvd.  
 Phila., PA 19104  
 Show Admission: \$9.50  
**Monthly Meeting**  
 2nd Saturday of every month  
 9:30 am  
 Location: TBA\* in newsletter  
 Annual fee: \$5.00  
**Contact:**  
 Joyce Fingerut  
 2106 Pennsylvania Ave.  
 Fort Washington, PA 19034

**PHILADELPHIA ROSE SOCIETY**  
**Rose Show**  
 June 2, 2-8:30 pm  
 Plymouth Meeting Mall  
 Plymouth Meeting, PA 19462  
**Pruning Demonstration**  
 March 31, 1 pm  
 Rain date — April 1  
 Morris Arboretum  
 Chestnut Hill, PA 19118  
**Contact:**  
 Mrs. Donald H. Pitkin  
 923 Springwood Dr.  
 West Chester, PA 19382  
 (215) 692-4076

**BOWMAN'S HILL WILDFLOWER PRESERVE ASSOCIATION**  
**Plant Sale**  
 May 12 & 13,  
 10 am-4 pm  
 Bowman's Hill  
 Wildflower Preserve  
 Route 32 (River Road)  
 2 miles south of New Hope, PA  
**Contact:**  
 Janet L. Urban  
 Washington Crossing  
 Historic Park  
 P. O. Box 103  
 Washington Crossing, PA 18940

#### For Future Listings

*Green Scene* publishes a list of area plant society meetings and plant sales annually in the March issue of *Green Scene*. DEADLINE: November 15. Please follow format used here. Write to: Editor, *Green Scene*, PHS, 325 Walnut Street, Philadelphia, PA 19106.

# MAKE YOUR OWN FLAGSTONES FOR A WOODLAND RETREAT

 By Tim Morehouse

photo by Tim Morehouse



*Hosta 'Montana,' sweet woodruff and volcanic stones.*

28

***A bare, stubborn woodland spot comes alive when the author adds homemade flagstones and selects special plants that flourish in the crevices.***

**O**n a flat, bare spot in my woods grass refused to grow. Perennial ground covers (ivy, pachysandra, vinca, etc.) required some weeding, and tree roots robbed the surface of moisture in early summer. I decided to construct a "flagstone" area, a "terrace" in the woods. The "flagstones," however, are homemade. The result: a paved woodland retreat for special plants that require perfect drainage and thrive in open shade.

The area is small (about 12' x 10'). Before digging holes for the stones, I made certain the surface was relatively smooth. Then I planted a clump of *Hosta 'Montana'* in the center of the chosen site, a few clumps of sweet woodruff (*Galium odoratum*) for scrambling about, and placed a few volcanic stones near the hosta to add height.

The illustrations demonstrate, step by step, my process, including materials used for making (and shaping) the stones and necessary finishing touches.

With the homemade "flagstones" in place and dry, the time arrived to plant between them. I selected special areas for viewing, and others for walking. Because my soil is a heavy clay, I mixed pea-gravel, sand, compost, and peat for special "planting pockets" before inserting my choices between the stones. I chose areas where foot traffic is light; no plant, regardless of what gardening books may claim, enjoys being stepped on. The eminent English gardener, V. Sackville-West once observed: "I have discovered . . . a simple thing one

never sees mentioned in gardening books . . . many plants do better if they can get their roots under stones . . . the reason, obviously, is that they never suffer from excessive moisture or excessive drought,

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*The eminent English gardener, V. Sackville-West once observed: "I have discovered . . . a simple thing one never sees mentioned in gardening books . . . many plants do better if they can get their roots under stones."*

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the stones preserve such moisture as is in the soil . . ." (V. Sackville-West's *Garden Book*, ed. Philippa Nicolson, Atheneum, New York, 1983.)

Because this woodland "terrace" is on a raised flat area surrounded by oak trees, I planted along its borders acid-loving white azaleas ('Delaware Valley White') and box (*Buxus 'Sheridan'*) and a clump of *Hosta fortunei 'Albomarginata'*. Included are tiny

*continued*  
the green scene / march 1990

## To Create Flagstones In Place



### STEP #1:

For the center of the area, the author chose a hosta (for height), and planted sweet woodruff around it. Next he placed a few volcanic stones in the setting *before* digging holes for his stones.



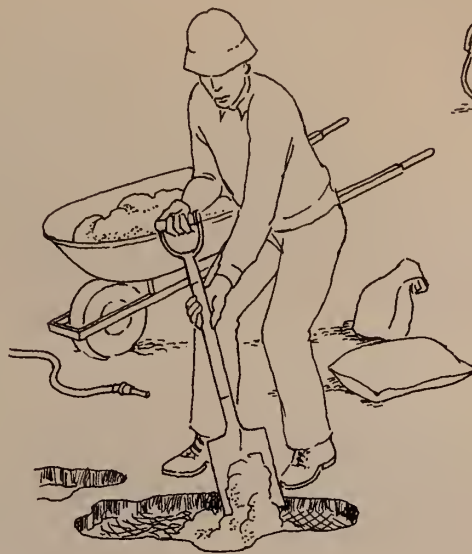
### STEP #2:

With a spade scoop out holes (any shape desired) about 4-5 inches deep.



### STEP #3:

Line each hole with crushed chicken wire (for added support as the concrete hardens) making certain the wire is well below the surface.



### STEP #4:

Follow directions on the bags of mortar. Stir the mortar in a wheelbarrow and fill each hole, covering the chicken wire. The author added a brown concrete dye while preparing the mixture so the stones would dry a natural, sandstone color.



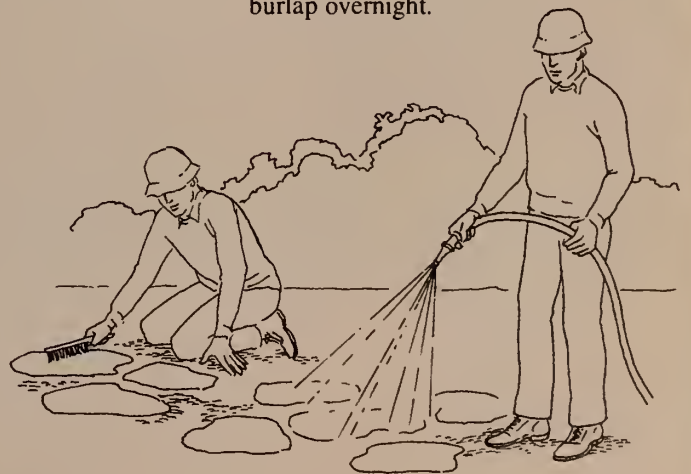
### STEP #5:

After filling each hole, use a trowel to smooth each "flagstone" into a natural shape.



### STEP #6:

When finished, cover the area with damp burlap overnight.



### STEP #7:

The next day, rub a wire brush over the surface of each stone to achieve a more natural texture and spray the area lightly with water (using a fine-mist setting) three or four times for a few days so the concrete does not harden too quickly. Slow curing is best.



Azalea 'Delaware Valley' along flagstone border shaded by oak trees.



All that's left to do is sit and contemplate.

creepers, such as *Ajuga* 'Burgundy Glow,' *Sedum ternatum*, and European ginger (*Asarum europaeum*). Crocus bulbs and snow drops bloom under the *Hosta* 'Montana,' among the sweet woodruff in early spring long before the tree branches sprout their leaves. Other tiny spring bulbs, such as dwarf iris and daffodils, could be used. The bulb foliage disappears as the woodruff takes over later in the spring. Cranesbills ('Johnson's Blue,' 'Ballerina,' and 'Lancastriense') bloom in late spring and occasionally during the summer. One area (away from foot traffic) consists of a clump-forming grass, *Festuca cinerara* 'Klose' next to a row of *Dianthus* 'Princess'

(F1 Scarlet and White), which grows about 8-10" and blooms until frost.

The gardener is the artist. Once the homemade "flagstones" are in place and the canvas is clear, what is planted is up to you; here, on a flat area 12' x 10' in open-shade, the plants will increase with each passing year and seed themselves at random. But the design is not static: if a plant is not satisfying I simply replace it with one that is. Add and subtract and be ruthless about it. The picture will provide complete seasonal satisfaction for the eyes and for the spirit.

All plants mentioned will grow in USDA Zones 4-8.

**Sources:**

Spring Planting:

*Ajuga* spp.

European Ginger (*Asarum europaeum*)

Sweet Woodruff (*Galium odoratum* or *Asperula odoratum*)

Geraniums (Crane's-bill vars.)

*Hosta* spp.

Wayside Gardens

1 Garden Lane

Hodges, SC 29695-0001

White Flower Farm

Litchfield, CT 06759-0050

Carroll Gardens

444 Main St.

P.O. Box 310

Westminster, MD 21157

Andre Viette Farm & Nursery

Rt. 1, Box 16

Fishersville, VA 22939

*Dianthus* spp.

Thompson & Morgan Seeds

P.O. Box 1308

Jackson, NJ 08527-0308

*Festuca cinerara* 'Klose'

Kurt Bluemel, Inc.

2740 Baldwin

Greenlane, MD 21023

*Sedum ternatum*

Carroll Gardens

Fall Planting:

Bulbs (assorted tiny varieties)

White Flower Farm

Wayside Gardens

Azalea (Rhododendron)

'Delaware Valley White'

Carroll Gardens

Tim Morehouse specializes in shade gardening and enjoys writing about the plants he grows, particularly hostas and ferns. His articles have appeared in *Horticulture Magazine*, *Garden Design* and *Pacific Horticulture*. His article on antique roses was featured as the cover story in the Jan. 1990 issue of *Victorian Homes*.





# Garden Walls and Paths of Broken Concrete

 By Wallace Geoffrey Pill

To create walls or paths of stone in the home landscape requires not only a great deal of skill, artistry and patience, but also a good supply of stones. Acquiring the necessary quantity of suitably shaped stones or rocks can be difficult and costly.

Although no material can match fully the natural beauty of stone, broken concrete can be a satisfactory substitute for stone in the home landscape, for constructing both

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*I have used brokrete walls to retain a severe slope, to sink a lawn, and to raise a bed.*

---

walls and paths. To describe this material I have coined the term 'brokrete,' a contraction of 'broken concrete.'

I know of no commercial sources of brokrete, but it is available. I have successfully acquired brokrete from homeowners who are replacing their concrete driveways and footpaths that have cracked or crumbled apart. Also, I have been on successful 'brokrete missions,' collecting piles of this wonderful material along roadsides or on vacant lots. Normally considered a waste material, brokrete is free for the taking.

The quality of the brokrete is less important in constructing paths than it is for walls. For paths, the brokrete is used with the smooth side upward. For walls, the pieces of brokrete are used with the underside facing upward since this rougher side

*continued*

Brokrete retains a severe slope.



Brokrete used to sink a lawn.

more closely resembles the surface of natural rock. The appearance of the cross-sectional surface is important in walls since this surface is exposed. Be sure reinforcing rods or wires are not present in brokrete used for walls. Since walls are layered in tiers, brokrete pieces within a given tier should be of similar thickness. Fortunately brokrete is normally of uniform thickness — about four inches as a former path and six inches as a former driveway. The thickness of stones is much more variable.

I have used brokrete in several ways in my own landscape. Pieces of brokrete can be “jig-sawed” together to create paths. The pieces are placed directly on the soil (the smooth upper surfaces made level by adjusting the depth of soil base on which the pieces are set); soil is packed between them, then gravel is swept over the surface to fill in voids between the pieces.

I have used brokrete walls to retain a

severe slope, to sink a lawn, and to raise a bed. In accomplishing these functions, the brokrete wall can create line (form) in the landscape. I prefer a free-form line (curves of constantly changing radius).

**How to construct a brokrete retaining wall.**

1. Mark the location of a desired wall using a watering hose, rope, or powdered limestone.
2. With a spade, slope the soil at 5° to 10° from the horizontal (into the slope) so that the base of the wall will extend outward and the top of the wall will lean into the soil to be retained. A spirit level resting on string stretched along the bed will indicate whether the bed is horizontal.
3. Place the first row of brokrete. The smooth side of the brokrete should face downward, resting on the soil bed. The pieces should touch each other. You may

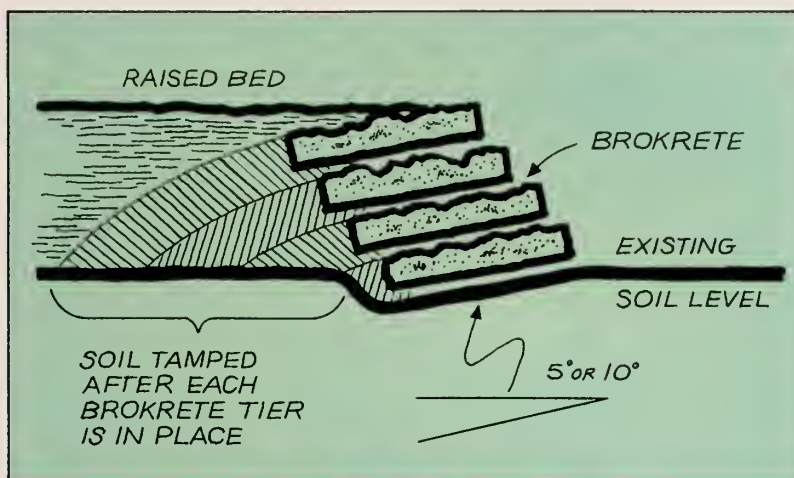
have to break large pieces of brokrete to the desired size. Breaks can be made accurately by first making repeated light taps in the line of the desired break, then a subsequent hefty tap. Since the outer vertical surface will be visible, its appearance is important. It should be free of unsightly ridges or furrows. Offending protrusions can be smoothed with numerous light blows of a mallet or sledge hammer. Frequently check this basal tier from various vantage points to ensure that both its location and construction please you.

4. Once the first tier is laid, fill behind it with soil. With a mallet, firm this soil, avoiding excessive movement of the brokrete. This tamped soil should be level with the top of the brokrete since it provides part of the bed for the next tier of brokrete.

5. A thin (1/4 to 1/2 inch) layer of moist soil is spread over the brokrete of the first



See step 4.



tier as a 'seat' for the second tier. The outer edge of the second tier should be set back about one inch from that of the first tier. Once a piece of brokrete has been correctly placed, a light tap on its top with the mallet will settle it into the soil 'seat.' Once the second tier is laid, fill behind it with soil and tamp it.

6. Continue laying tiers of brokrete until you reach the desired wall height. Each tier is stepped backwards. All the brokrete pieces in a given tier should be of similar thickness. Gaps between adjacent pieces should be minimal. The soil behind each tier is firmed by tamping. Special care must be paid to the last tier since its top surface will remain exposed. Its surface character must be pleasing and the pieces should be uniformly large so that they will resist shifting in the future.



The brokrete of the raised bed is in place.

7. Finishing touches. Fill cracks between the pieces of brokrete with soil or preferably a peat-soil combination. Plants may be "pushed" into these cracks — preferably plants tolerating dry conditions such as the sedums, perennial candytuft, thyme, rock rose, rock cress, santolina, or basket-of-gold.

8. Wood stain, splattered with a paint brush onto the brokrete, mimics the colors of the prevailing rock types in your area. I have found that cedar wood stain mimics the high iron content rocks of northern Delaware. Dark green stain mimics the algae found on rocks in wet places.



Staining the brokrete. (See step 8.)

Wallace Geoffrey Pill is an associate professor in the Plant Science Department of the University of Delaware in Newark. While his research focuses on vegetable crops, gardening is his favorite hobby.

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## LETTER TO THE EDITOR

I enjoyed reading "A Prickly Jewel" in the January/February 1990 issue of *Green Scene*. The Oregon grape has long been a favorite of mine and I am pleased that Mr. Peeples is promoting its use. He misquotes, however, *Hortus Third* regarding its current botanical name. *Hortus Third* and other current authorities continue to recognize the name *Mahonia*. Though once included in the genus *Berberis*, the current thinking is that *Mahonia* is sufficiently distinct to justify its classification as a separate genus. Therefore, the name *Berberis bealei* is archaic having been superseded by the name *Mahonia bealei*.

To paraphrase Shakespeare, that which we call *Mahonia* by any other name is still a lovely, but prickly jewel.

Paul W. Meyer  
Chair of Horticulture,  
Morris Arboretum of the  
University of Pennsylvania

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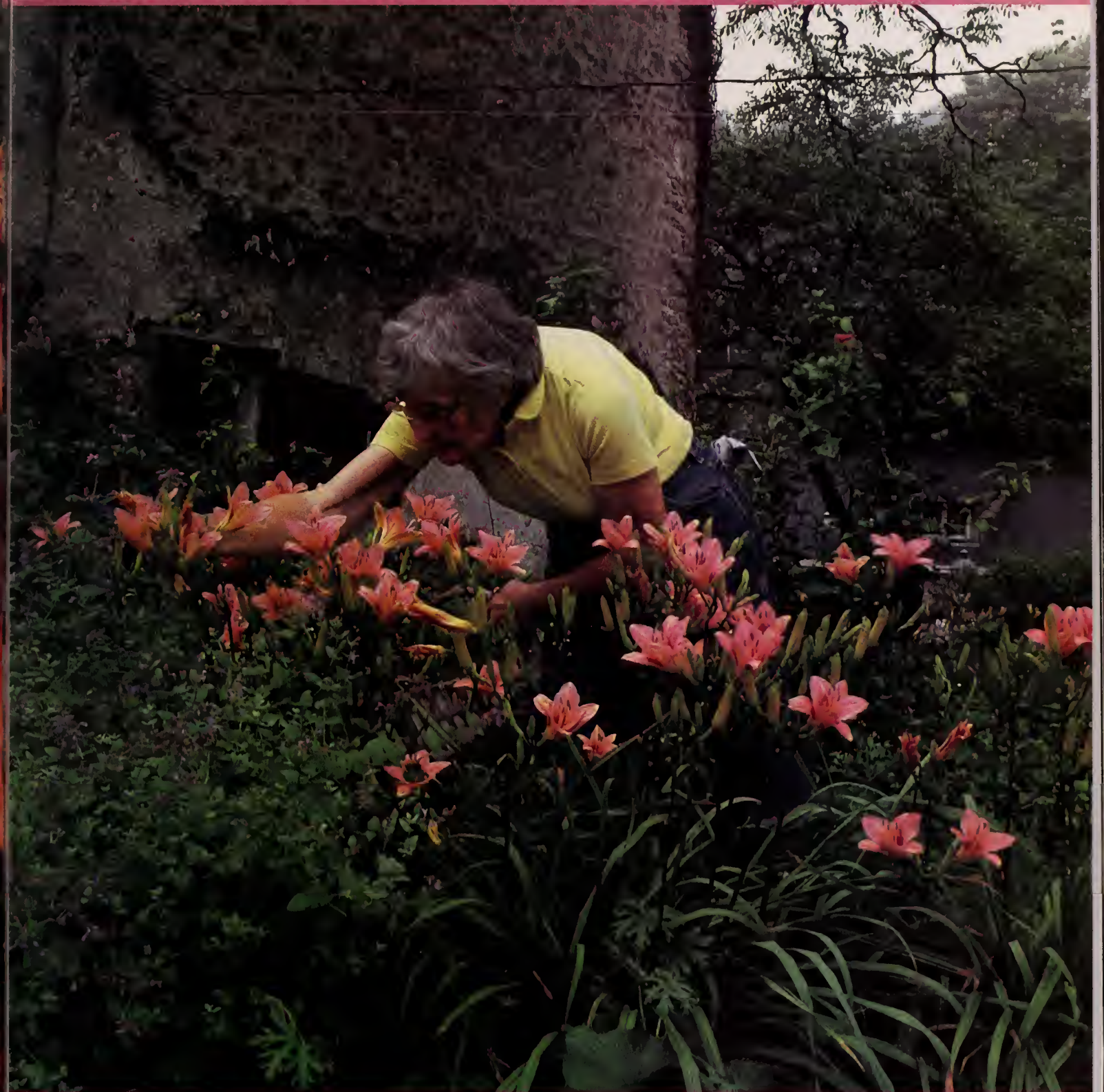
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A third floor roof garden in the city: (lower left) *Sempervivum tectorum*, (left background) *Ixora coccinea* 'Morsei,' (right bottom) *Acalypha wilkesiana* 'Macafeeana.'

# GREEN SCENE

THE MAGAZINE OF THE PENNSYLVANIA HORTICULTURAL SOCIETY • MAY/JUNE 1990 • \$2.00



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**CORRECTIONS —**

*Green Scene*, p. 26 (March 1990)  
Delaware Valley  
Chrysanthemum Society  
**Chrysanthemum Show**  
October 20, 1-5pm  
October 21, 10am-5pm  
Longwood Gardens  
Kennett Square, PA 19348

*Green Scene*, p. 27 (March 1990)  
Valley Forge Chapter  
American Rhododendron Society  
**Plant Sale**, May 5, 9am-3pm  
Tyler Arboretum  
Painter Road, Lima, PA

Volume 18, Number 5 May/June 1990

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Front Cover: Photo by Mary Lou Wolfe  
Back Cover: Photo by Madeleine Keeve





Reed



Stufano




Henley



Chletcos

## A Rich Heritage of Local Gardeners

 By Jean Byrne

The British had their Vita Sackville West; Delaware Valley has Joanna McQuail Reed. A passionate gardener, who has welcomed more than 20,000 visitors to Longview Farm over the years, Joanna has just celebrated her 50th year at the Farm. A scrapbook, at least six inches thick, lay for several weeks on a table in my office, testifying to the transformation of the bare, almost forlorn, property into a landscape that continues to draw gardeners from all over the world; how I wish we could publish all the photos from that scrapbook. And how fortunate for gardeners that a Joanna or Cuffie, her gardening mentor, materialize for so many gardeners enjoying them to be patient and keep digging and planting until they realize their gardening dreams. The short celebration here of Joanna's tenure as a gardener is merely tantalizing; we want to know more about Joanna's philosophy, about Cuffie's philosophy, more about her children's own unique gardening views — in short, nothing less than a book would seem to suffice.

Gardening visionaries and mavericks come from all kinds of backgrounds: Joanna Reed studied art and Marco Polo Stufano came to gardening from a background in art history. Perhaps that's why Marco's way of managing the beautiful Wave Hill, a public garden in the Bronx, occasionally challenges the more traditional view of the way to run a public garden.

Stufano is not averse to juxtaposing plant colors that occasionally scrape against each other to create what he calls "a Barbra Streisand effect," or pulling out a section of a garden while it's still at its height of beauty to experiment with another new and exciting idea. On the other hand, there's Gregory Piotrowski, who has relentlessly worked to reclaim the past by reconstructing a garden in tribute to the work of Arlow Stout, the great lily hybridizer. If you are planning a trip to New York, you can visit both gardens in one day.

This issue of *Green Scene* does seem to be the issue of the personality: the 101-year-old Panagiotis Chletcos who started gardening in Philadelphia at the age of 78, is doing quite well thank you, having been named the Super Senior Gardener in the City Garden Contest this past September. Two other gardeners, Harvest Show blue ribbon winners, whom we hope will inspire you to plant for the Harvest Show are Mary Sweeten of the beautiful eggplant bounty basket and Samuel Henley who weighed in with a 150-pound pumpkin. And finally, Michael Howell, whose condo garden cheerfully encroaches on his neighbor's bare ground, shows what can be done on a handkerchief-size plot. It's fitting to end with Michael, since he also does some serious gardening on a patch of land at the edge of Joanna Reed's property, and they share chores in a joint vegetable garden.



Joanna Reed begins her day in the garden at 6 a.m.

## *Gardening for 50 Years at Longview Farm*

 *By Mary Lou Wolfe*

**R**elaxing on Joanna Reed's second-story grapevine-bordered porch one hot July afternoon, I listened as two of her daughters, Franziska Huxley and Jane Lennon, reminisced about growing up at Longview Farm. Pennsylvania Turnpike traffic droned not far away and a churn thumped as the sisters took turns coaxing fresh raspberries into icy sherbet. They had realized that a momentous anniversary was approaching; that January, 1990, would mark Joanna's 50th year at Longview Farm. Joanna was scurrying between house and barn welcoming visitors who were taking advantage of her new Thursday-Friday-Saturday garden Open House invitation. When these visitors left after less than 10 minutes, Joanna shrugged and said, "They were probably expecting lots of colorful annuals and a carefully mulched garden. What they got was *country*." And what country it is! Longview

Farm on Bodine Road in Chester County is the place several generations of us think of when we imagine the perfect home and garden. At least 20,000 people have visited it on Chester County Days and a whole cadre of us has watched it develop for decades.

The gardens look gloriously complete now, though Joanna would not agree and said, "When I started to garden I would say to George 'Give me five years.' I'm finishing up the ninth of those five-year plans, and I'm still saying 'In about 10 more years it'll show!'" What shows now from the second floor rear porch is a handsome parterre redone in 1988 as a gift to Joanna from Jane Lennon and Patrick Radebaugh. Beyond, a long curve of pastel perennial beds borders 150 feet of lawn that ends in an inviting mature woodland. There are now 37 acres in all, four of which are intensively gardened: intimate "garden

rooms," vegetable gardens with an elegant well-head, a meadow garden, mature specimen trees grown from cuttings, a woodland bog garden, cistern lily pool and a walled terrace leading to the house. This is not a garden to see in 10 minutes or 10 visits. It is the result of 50 years of experimentation and evolution under Joanna and George Reed's stewardship.

### *starting with chicken manure*

When the raspberry sherbet was frozen and pronounced "ready," the Longview Farm Scrapbook was brought out and I was treated to a 50-year progress report.

In 1940 George and Joanna bought a dilapidated house and 49 acres at a sheriff's sale. This Charlestown township house, whose original structure dated to 1780, had deteriorated badly. The last owner had declared bankruptcy and had repaired inadequately, damage from a questionable

*Joanna and George Reed started their first garden more than 50 years ago. That garden grew, shepherded by nine five-year plans, surviving many challenges including the Pennsylvania Turnpike. These days Joanna, managing 37 acres on her own, is into the garden by 6 a.m.; she clocked 18 miles on foot one day, pushing the rotary mower. Now it is time to stand back, look, and celebrate an extraordinary achievement.*

however, hold the six chickens and two sheep that arrived as wedding presents.

Much more important than these earthy inducements to gardening and family was the presence of Cuffie, a very special person who had been born at the top of the hill on Bodine Road and whose ancestors had lived there since the American revolution. Cuffie farmed for the Bodines who owned a large estate near Longview. When the Reeds talk about Cuffie, I picture the benevolent spirit that materializes at essential moments in the recent movie, *The Milagro Beanfield War*. Just like the gentle old New Mexican sage, Cuffie appeared over and over to help cope with crises and challenges at Longview Farm. Cuffie quenched the mysterious "furnace" fire that would have wrecked the house at Longview a few weeks before the sheriff's sale. Later, he pondered the hole in the Reed barn and after several days' thought, coaxed Joanna in a procedure to repair it; he talked her up a tall ladder, pinch bar in

hand, to pry out loose stones and supervised the pouring of stone piers to stabilize the wall. Once, when George and Joanna were burning woody trash, the fire got away in the grass, moving straight for the woods. Joanna and George thwacked with brooms and rakes trying to control the fire. Cuffie saw the distant smoke and showed up miraculously on a tractor with a plow. The furrow he plowed that halted the fire can still be seen where the lawn meets with woodland. Cuffie taught all the Reed children how to drive but most important, he taught Joanna how to work. Cuffie believed that one should "Back into a job. Look at what you've accomplished, not at what's left to be done, and stop before you're really tired." Cuffie never seemed to be in a hurry and it was a sad day on Bodine Road when he finally passed away in 1972. He shared Joanna's vision of what Longview Farm could become and helped the Reed family in practical, neighborly ways to accomplish their dreams.

*continued*

fire. George and Joanna and friends worked on the interior before their April wedding and spent their honeymoon touring gardens on one of the early "Virginia Garden Week" open houses. Inspired by hospitable Virginia gardeners and entranced by the just-restored Williamsburg, they returned full of great plans and spent their first night in their home. Neither could sleep because a terrible stench filled the air. Fearing they had bought land bordering some sewage disposal plant, they checked around at daybreak and found a newly dumped pile of chicken manure next to the garage. Their two fathers had persuaded a neighbor cleaning his chicken house to deposit the load at Longview Farm.

Joanna claims, "That's how we got plunged into gardening." Along with the odiferous pile came lists each weekend, compiled by George's gardener father, of tasks to be accomplished.

The 49-acre purchase included a very shaky 1780 barn. Joanna, with a background of study at the Philadelphia College of Industrial Art (now University of the Arts) considered the barn an artistic dimension to the property. On the day they held the deed to the farm in their hands, a huge piece of the barn wall fell out. Exasperated, George said, "Those lines that artistic types look for mean that whatever it is, it is going to fall down." The barn did,



Tulips and phlox, sentinels with the Christopher statue in the Entrance Garden.



photos courtesy of Joanna Reed

Above: Reed House as it was when purchased in 1940.

Top right: A big piece fell from the barn on the day the Reeds made settlement (1940).

Bottom right: A special neighbor named Cuffie (Isaiah Cuff) helped the Reed family to accomplish their dreams (1947).

### ***Albert Barnes issues an invitation***

After the first year in their home, a stranger knocked at the Reeds' door and asked to use the telephone to summon help to repair a flat tire. He was Albert C. Barnes, art collector and founder of the Barnes Foundation in Merion, whose summer home, Kerfeal, was about a mile from Joanna's. He asked if she planned to have a garden, invited her to attend classes that his wife, Laura, was starting and nonchalantly suggested that the Reeds tear down the older half of the house. Joanna declined the demolition suggestion but accepted the invitation to enroll in the Barnes Foundation Arboretum classes in the fall of 1941. Dr. Edgar Wherry taught ecology with special emphasis on soils. Dr. Henry T. Skinner taught propagation and at the end of each class, students were invited to take wrapped, labelled, rooted tree and shrub cuttings for their gardens. Some of these Barnes Arboretum cuttings have become spectacular mature specimens. Joanna particularly treasures the *Idesia polycarpa* (now 30 ft.), the loblolly pine (*Pinus taeda*) and *Cercidiphyllum japonicum*. Laura Barnes and Dr. John Fogg taught plant materials and after World War II, John Kistler took over Landscape Design, a course Joanna was really ready for.

During the 1940s, Joanna and George tackled the piles of abandoned car parts and broken-down machinery left on their

---

***Cuffie taught all the Reed children how to drive but most important, he taught Joanna how to work. Cuffie believed that one should "Back into a job. Look at what you've accomplished, not at what's left to be done, and stop before you're really tired."***

---

property by earlier inhabitants, one of whom was both a bootlegger and a trapper. Fortunately, scrap iron was being collected for the war effort. What couldn't be contributed to the scrap iron drive was used as fill where the Reeds were beginning to make grade changes and build footings for walls.

With an ancient second-hand tractor and instruction from George's father, Joanna learned to mow and disk the fields for crops of corn and hay. She did not, however, master starting the tractor, which required mighty cranking. George would start it before he left for work and Joanna had to keep it going or it was all over for the day. Closer to the house, next to the garage and pile of chicken manure, a vegetable garden was started. In these war years the vegetable garden, the field crops and too many animals kept the Reeds busy. They had 300 chickens, 50 summer turkeys, the two wedding sheep, pigs, three horses and a pony.

Joanna was realizing that vegetables and

livestock were not really what she wanted to spend her energy on. George's father had given her a book, a compilation of articles from *Horticulture* magazine. She took it to the hospital in 1942 when Franziska was born and devoured it during the routine two-week maternity stay. A herb book given her by George piqued her interest. The new knowledge gained at the Barnes Arboretum classes was gestating.

Soon she tackled her first major garden beside the bootlegger's garage down the hill from the barn. Her guiding design principles learned at Barnes were "Make it sizable and tie it in with the buildings." George, dubious, said, "It will look like a dog's grave." It didn't and transformed a forlorn area into a beautiful sitting space they dubbed "the bench garden." They built a clapboard fence, planted mock orange (*Philadelphus*) and put in curving drifts of iris, peonies and daylilies.

### ***the Pennsylvania Turnpike drops in***

While Joanna was tackling landscaping where it wouldn't show much, something ominous was happening 20 feet from their front door. The Pennsylvania Turnpike was plotting an eastern extension to link Carlisle, Pa. with New Jersey. It would bisect the Reed property and would require a drastic change along the sleepy dirt road that served their property. In 1949 work began with grading, tree cutting, paving and construction of an overpass. Mature

*continued*

*the green scene / may 1990*



The second-story porch, bordered with grapevine, looks down on perennial beds along the parterre. The beds offer a profusion of color throughout the season, from early spring through frost. The border's L-shape ties together two paths that lead to the large lawn.

photo by Mary Lou Wolke



George Reed on their first tractor. Note metal wheels, no tires (1940).



Joanna Reed's "Bench Garden," her first garden, next to the garage (1947).

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hickory trees on Reed property were felled. Pear trees were smothered with fill. Joanna cried all day expecting an essential large maple in front of her house to go down next. She ended up going with little Franziska to the Turnpike Authority to plead for that one tree. Someone softened and said, "I'll leave it but if someone says it has to go, I'll take it down." The tree was spared and gave protection for many years. To provide some front yard privacy Louis DiEnna, a stonemason, built a four-foot stone wall between house and road. Joanna said it looked like a fort but later, with a terrace surfaced in stone, this front entrance has become one of the most charming parts of the property. The years before the entrance garden settled into its present serene state Franziska calls "the annual tree and shrub checkers game." One unfortunate *Franklinia* tree was moved four times before it succumbed. This area now includes a tiny pool at the base of the wall, protected sitting spaces, room for Joanna's revered houseplants to summer, and the "Christopher" statue, an Italian cut stone figure purchased with Joanna's first art commission earnings.

The lower part of the Reed property adjoining the brand new turnpike was also changed forever because the new highway, built on a very dense soil called Kaolin created a dike that flooded the Reed's lower fields. The trees so badly needed to muffle the turnpike noise died. Joanna eventually planted moisture-tolerant viburnums and deciduous hollies interspersed with perennials like *Eupatorium*, *Solidago*, *Lobelia*, *Vernonia* (iron weed), *Hemerocallis*, *Iris pseudacorus*, *Astilbe* and sweet rocket (*Hesperis matronalis*).

The most showy part of the Reed garden, which one looks down on from the high, viny porch, evolved through many stages. Pushed by the turnpike's changes and needing a place to entertain a growing circle of friends, Joanna started developing

the area adjacent to the rear of the house. George, ever the practical engineer, pointed out that there was a five-foot drop between the upper and lower areas of the proposed terrace. While George was on an extended business trip to Pittsburgh, Joanna started working on a retaining wall. She also managed to have a truckload of greasy dirt from a Paoli railroad station excavation, dumped near the proposed terrace. This soil was used to help level the site but has always been a source of problems. After overlaying with good soil, tiny boxwoods were planted and a large urn placed as a central focal point. Eventually, voles, moles and boxwood disasters required changes. In 1978 the bulk of the boxwoods were removed and replaced with fragrant and tender herbs. In 1988, when Jane Lennon and Patrick Radebaugh renovated the parterre as a gift to Joanna, they sliced the sod from the paths, dug out two inches of soil, laid a base of three inches of gravel and laid cut slate to replace the grass paths. The surviving boxwoods provide winter interest while the raised beds and paved paths provide the warmth and drainage these predominantly Mediterranean and Mexican plants require. Says Joanna, "It is a space inspired first, by John Kistler's lectures at Barnes; secondly, by many books from the PHS Library; and thirdly, by a long-awaited trip to England."

### *the Herb Society of America*

Joanna joined the Herb Society of America in 1965. For many years the Reed barn housed the Philadelphia chapter's wildly successful annual herb sale and luncheon. When plans were afoot for constructing a herb garden at the National Arboretum in Washington, DC, Joanna wanted to contribute. For years she produced luncheons and gave garden tours at Longview Farm, contributing the profits to help fund the national herb garden. In 1980 and 1982 she served as national president

of the Herb Society, travelling all over the United States meeting with and bringing together local chapters. These two years of travel added to her huge circle of gardening friends and correspondents but her absences also meant putting the gardens "on hold."

Around this time, George took early retirement and the Reeds went on extended sailing trips every second summer, which meant considerable catching up during landlocked summers. A severe three-year bout with arthritis, which took three inches off Joanna's height and weakened her right side, made the summers on shipboard a therapeutic rest. She brought her crewel work\* on board, producing museum-quality stitchings while dodging the boom. Looking back on those years Joanna says, "It's never been just a smooth, determined progress. I think it's kind of nice for people to know that."

George died in 1982 and since then, Joanna has managed Longview Farm essentially singlehandedly. With three of her five children living nearby, her family pitches in on special projects and celebrations, but it's really Joanna's garden. When she mows all the grass and meadow areas with her new rotary Gravely (with self-starter) she covers 18 miles. Anyone who wants to reach her by phone during garden season calls between nine and ten A.M. or after dark. Wanting to photograph the daylily borders in early morning light, I arrived at six one misty July morning to find Joanna already deadheading the borders. She gets in three hours of work before breakfast.

Joanna doesn't talk much about how hard she works (look at her hands and you'll know) but she does want people to know that one woman, even one in her 70s, can maintain by herself and enjoy a sizable garden. The nine five-year plans have

\* See "Joanna Reed's Crewel Seasons" by Anne S. Cunningham, *Green Scene*, Jan. 1987, p. 24.)



refined design, discarded fussy plants, made garden areas “sizable” and “tied them in with the buildings.”

Walking with Joanna one October day in the reclaimed meadow above the vegetable garden, I asked her about her next five-year plan. She pointed to a number of newly planted trees defining the meadow edges: a *Davidia involucrata* from a friend; a *Koelreuteria elegans* from the National Arboretum; an *Evodia danielii*, a *Cotinus coggynia* and a *Catalpa*. She is reclaiming

the meadow from an overgrazed, eroded pasture, rooting out volunteer hawthorn and bittersweet, encouraging viburnums and other desirables. She mows this area in July after violets, strawberries and daisies and before yarrow, penstemon and rudbeckia. In 1989 she was delighted to find two blooming clumps of daylily and five blooming Siberian iris growing from seed scattered during an earlier five-year plan. Think what this meadow will look like in 10 years!

On a fall day, looking to the woods from the house the brilliant *Spiraea japonica* ‘Gold Flame’ dazzles the eye.

We walked toward the woodland west of the meadow eyeing the mature tulip poplars and hickory trees. Winters will find Joanna cutting lower, undesirable trees, snapping and dropping twigs, and carefully constructing, according to Cuffie’s instructions, a huge brush pile to be burned on a rainy winter day. Her goal in the woodland is to create a grove of about two acres of high forest that she can maintain by mowing.

Remember, Joanna, “Back into the job. Look at what you’ve accomplished, not what’s left to be done and stop before you’re really tired.” And *THANKS* for sharing with all of us 50 years of inspired gardening.

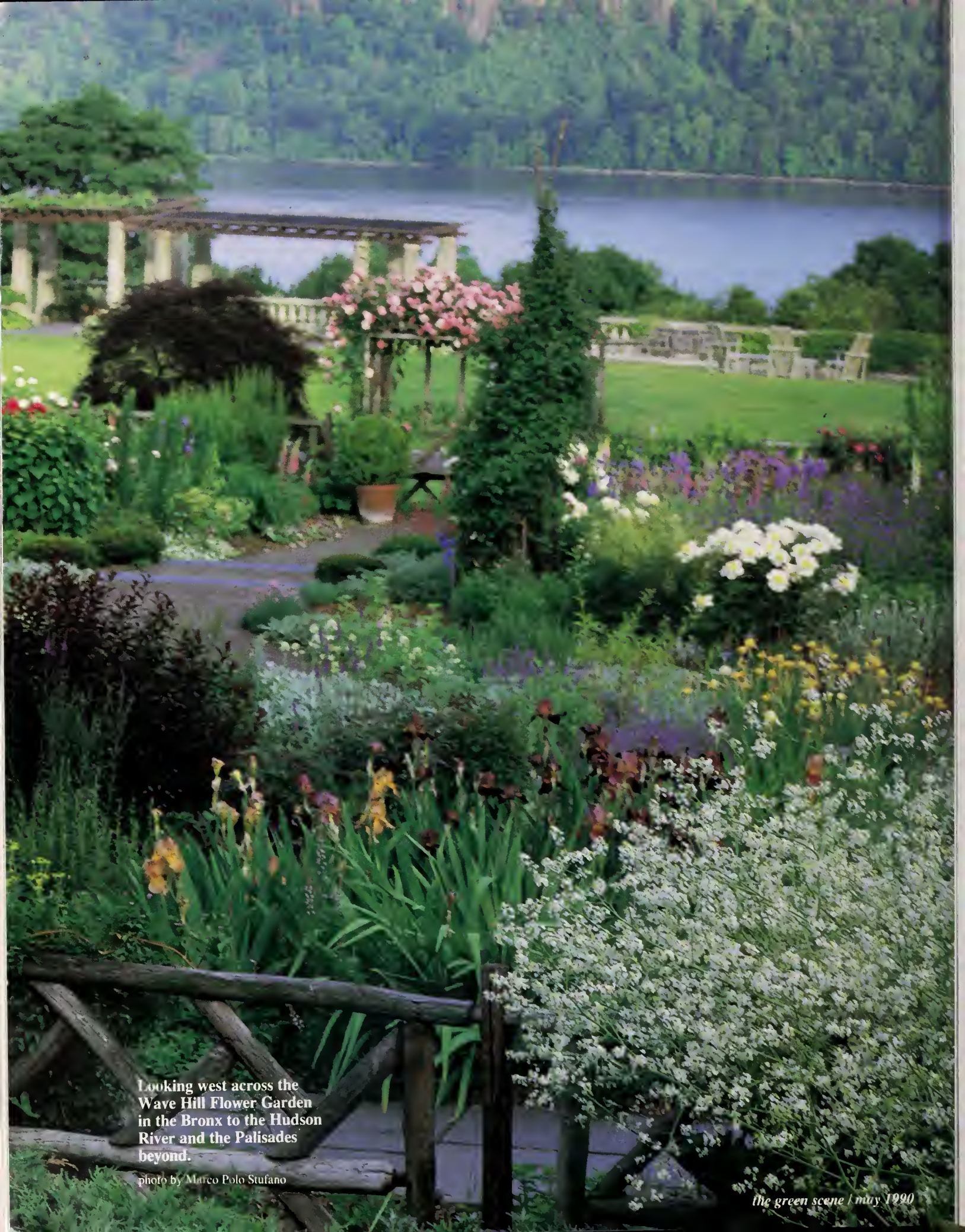
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Longview Farm will again be open to visitors from noon to dusk, April 15 through October 15. Admission \$5. Visitors are welcome to bring a picnic to eat in the barnyard. For a map, write: Joanna Reed, Longview Farm, Box 76, Malvern R.D.1, PA 19355.

Mary Lou Wolfe, a writer-photographer, who also gardens, is a frequent contributor to *Green Scene*.



The Parterre Garden after its renovation, which was completed the winter of 1989. In addition to the aesthetic improvements, removing the grassy paths saved many hours of mowing.



Looking west across the Wave Hill Flower Garden in the Bronx to the Hudson River and the Palisades beyond.

photo by Marco Polo Stufano



# An Unfailing Eye: Marco Polo Stufano at Wave Hill

 By Madeleine Keeve

For Marco Polo Stufano, the features of a good garden are like well-constructed buttonholes. “My mother, who was a seamstress, had a word for it: ‘civile,’ which means elegant — to describe a well-tailored suit. All my life I’ve heard about good seams and ‘giving the job a finish,’ and that insistence on quality and knowing your craft, has informed my approach to gardening. And I still inspect the buttonholes when I shop for clothes.”

Wave Hill’s director of Horticulture approaches his work with an eye for detail, and for order: at eight in the morning one might find him hard at work, not writing memos but sorting and stacking newly washed clay pots, a task he finds addictive, “like eating peanuts.” Such seemingly mindless work belies the talents of a gardener whose 22 years of plantsmanship inspire visitors from Seattle to Tel Aviv to come and explore one of the finest public gardens in the country.

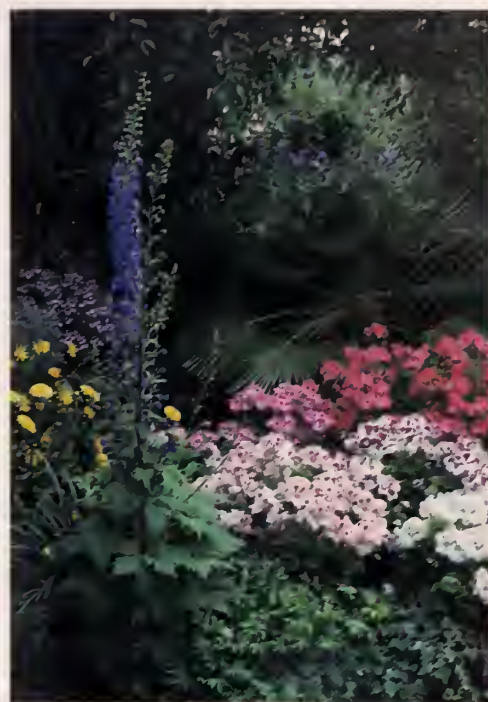
If you look hard enough, the Stufano rage for order shines through — not necessarily in the seemingly casual masses of color in the Flower Garden or in the freewheeling paths of the Wild Garden, but in the underlying structure of the gardens, from the careful placement of the pines framing the parking lot to the exact arrangement of ocotillo, *Dasyliirion*, and *Euryops pectinatus* in the Palm House seasonal display. Considering his university training in architectural history, it’s no wonder that Marco looks for good architecture in a garden, and in the plants themselves.

“I’m fickle about plants, but as a group I like half-hardy Mediterranean-type plants, and I like succulents, because they’re all structure; more than anything else they’re living sculpture. The drier the climate the more you have plants with real character. That’s why I don’t care for most rhododendrons and azaleas — they’re formless blobs that turn a bright color once a year. They’ve got no architectural interest.”

## public gardens shouldn’t be ruled by codes

Of course, it’s easier to create architectural drama in a garden when you’ve got a splendid backdrop to begin with: once a private estate, Wave Hill overlooks the Hudson River and a spectacular view of the Palisades, a row of cliffs in northeastern New Jersey. One frequent comment from visitors to Wave Hill is that it doesn’t have the “look” of a public institution. It has, in fact, been owned by the City of New York since 1960. The secret to its domestic ambience, Marco believes, is in — not surprisingly — the small details. “We’ve been very lucky in that we’ve experimented with lots of little things — like putting out collections of potted plants, or creating a garden with narrow, winding paths — that aren’t supposed to work in a public garden, and they’ve worked out just fine. Public gardens can’t be ruled by codes, by having a public garden mentality, by thinking, ‘We can’t do it, it won’t work in a public place.’ If you feel strongly about an idea for your garden, do it. Frankly, I would tell public gardeners that they can’t always plant with the public in mind. That leads to very safe,

*continued*



Delphinium, Martha Washington geraniums, calendulas and a hanging basket of *Convolvulus mauritanicus* in the Conservatory.



Marco Polo Stufano deadheads *Canarina canariensis* in the Conservatory.

*A public garden with the daring of a private garden.*

predictable gardening. But if you follow your own inclinations, you may discover that people will recognize your work, and respect and enjoy it. If you feel passionate about your work, it's always worth a try."

You have only to watch Marco's hands to discern the intensity of his passion for the work. Throughout the day, he's constantly lifting potted plants, fingering the soil to check for moisture, plucking yellowed leaves or faded flowers as he goes by. His eyes are constantly vigilant, and those restless hands also create plant pictures of repose that approach the horticultural equivalent of Renaissance architecture. His plant combinations have the pleasing proportions of a Palladian villa, with a naturalness that is anything but arbitrary. The strength of a cycad balances the delicacy of an *Acacia cultriformis*; the sloped sides of an urn complement the rounded form of a *Westringia rosmariniformis* standard. Stufano readily admits, however, to some inadvertently unsettling combinations, such as the recent combining of the rose-pink Aster 'Crimson Brocade' with a very orange dahlia. He calls it "The Barbra Streisand effect — a jarring combination of plants that initially sets your teeth on edge, but that you learn to appreciate not so much for its prettiness, but for its strength of character, its gutsiness."

His strong opinions and his dedication to teaching others about plants have won him the fond respect of a group of 20 volunteers, the Wave Hill Garden Guides. Started in the early 1970s, the volunteer program is open to anyone interested in giving guided tours of the gardens and greenhouses, and has been called by one staff member "the best PR Wave Hill has." Monthly Garden Guide meetings, led by Marco, focus mostly on greenhouse and garden plants of seasonal interest, so that guides can offer a wealth of information at any time of year to both the general public and gardening groups. A typical mid-winter meeting ranges in topics from the comparative merits of various *Viburnum* in fruit to the origin of the name of the Chilean bellflower, *Lapageria* (named for the Empress Josephine, a keen gardener and amateur botanist whose last name was La Pagerie). Guides do not memorize a docent's script ("No canned talks here," says Marco); rather, each guide relies on meeting notes and individual study to satisfy the curiosity of both casual visitor and experienced gardener. Says one veteran guide, "Marco's enthusiasm is contagious, so when you take people on a walk, you want them to get as excited as you are when Marco talks to you. You want to pass along his love of the place. It's a public institution, but Marco's made it a network of plants and people.

You never know who you'll meet, or what new plant he'll introduce."

One guide enjoys greeting garden clubs with "Welcome to the Bronx," reminding them that they are enjoying a piece of New York City property. "And I tell them that although I live in a small highrise nearby, I

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*I like succulents, because they're all structure; more than anything else they're living sculpture. The drier the climate the more you have plants with real character.*

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think of Wave Hill as my backyard. It's home."

Marco, who is a native New Yorker, points out, "We've been adamant about referring to it as Wave Hill in the Bronx, and not Riverdale (the garden is located in the Riverdale section of the borough), so it's placed squarely in New York City. Some people are hesitant to visit because we're in the Bronx, and when I give lectures around the country I have to reassure them that it's safe. You don't have to go through Manhattan to get here, it's really accessible — and then they come and see for themselves.

### **Aster 'Chicago Bus Stop'**

Chicago, November, 1987: Marco Polo Stufano looked on warily as John Nally, curator of the Gardens at Wave Hill, carefully pried a graceful specimen of *Aster ericoides* from a crack in the sidewalk of Madison and Des Plaines Avenues. It was a bus stop; Marco and John were waiting for a ride when the beauty of the aster caught John's attention. Marco recalls, "I was nervous, because two bus drivers were standing nearby, and who knows what their reaction might have been to John's digging. He saw something in that plant, and now we have it in the Wild Garden, informally known as Aster 'Chicago Bus Stop.'

Sadly, Wave Hill lost its most determined plant collector. John Nally, one of Wave Hill's first trainees who became a major influence in all its gardens, died in 1988, after a 19-year career. In honor of John's beginnings as a garden apprentice, and his years of dedication, a fund has been established in his name to train and employ new gardeners. Marco credits John for some of the most imaginative plantings at Wave Hill. "He worked very hard at growing, collecting, researching. He didn't give a damn for convenience. He had a vision of what things should be, and what we have is a result of that. Without his creative energy I'm not sure what direction I'd have taken

in the development of our garden philosophy and style."

One major influence on the Stufano/Nally garden aesthetic has been their collecting decorative art objects, especially Victoriana. John became a respected authority on 19th century American porcelain; Marco's home is crammed with molded 19th century pottery and Eastlavian furniture. He is as comfortable discussing William Morris as Gertrude Jekyll, and is quick to point out connections between the Aesthetic Movement and the best in contemporary garden design. "If you look at a chair designed by the Herter Brothers (a 19th century design firm), you can see the underlying structure, and the craftsmanship is superb, but on top of that are overlays of detail: exquisite carving, painted panels, fabric panels, gesso, elephants' heads, flowers, birds, and yet it's all held together by the bones. It's no different from looking at the gardens at Great Dixter (the home of English garden writer Christopher Lloyd) and seeing, under the strong structure, layer after layer of plant interest. And all the pieces fit together."

### **no hobnobbing**

As an administrator with little patience for the social hobnobbing usually expected of garden heads, Marco instead devotes time, as does his staff of seven gardeners, to the horticultural rituals of a more genteel age, before the days of automatic greenhouse vents and ready-made soilless mixes. Clay pots, not plastic, dominate the greenhouses (for better drainage and pleasing aesthetics); the leaves of potted bulbs are "brushed up" with meticulously woven stems of *Euonymus alata*; the best stonemason, not the cheapest, is hired to restore the herb garden paths. From April through October, gardener Jim Blase will, as the final step in his ritual tending of the seasonal bedding schemes, carefully tamp down the sloped sides of the beds with the back of an iron rake — one sign of a crackerjack technique. Jose' Concepcion will, every summer, painstakingly sculpt the Wild Garden yews into clouds with his shears, a process he has been taught to master not for speed, but for the finish.

Not surprisingly, Marco's desk suffers as a consequence. It is not one of a paper-pusher; it's covered with film canisters filled with seeds, pipe fittings, handthrown clay pots, tiny paintbrushes, a rubber cockroach, and dozens of plant notes, usually illegible scrawls on the backs of memos or envelopes: "Ask P. about *Cyissus battandieri*," "Get *Sophora viciifolia* — where?" "Peony 'Break of Day' — NO!"

"What I can't emphasize enough is how completely unfancy Marco is," comments

Maggy Geiger, the owner of a Manhattan landscaping business who began her horticultural training at Wave Hill. "He's got the gardening knowledge of a master, but the high spirits of a novice, and that made him the best teacher I ever had." The unfancy approach extends to the Wave Hill plant collection policy: if it looks wonderful or shows potential for interest, grow it, no matter how rare or how common. The eyes that discover, amid the vast array of plants now available, the ones worth growing, may find them on a trip to the Canary Islands or, as in the case of a striking black-purple *Coleus*, in a tire planter on a street in Yonkers. He advises gardeners to check out smaller, lesser-known nursery sources for interesting plants, and not to be afraid to experiment. What plants would he like more people to try? "Certainly more half-hardy plants, no more difficult to winter over than geraniums, like *Salvia leucantha*, which flowers so well for us at the very end of the season . . . and other labiates, such as *Agastache*, *Lepechinia*, *Phlomis*. The perennials boom shouldn't keep people from growing more interesting annuals, like single zinnias, and *Dyssodia tenuiloba*, which self-sows and blooms all summer, and *Emilia javanica* — all wonderful additions to a garden."

#### rattling the garden's bones

With his love for preserving fine antiques, both in furniture and flower form (Wave Hill has an expanding collection of vintage iris and dianthus cultivars), it may seem strange that Marco has his demolitionist's eye set on some of the mature plantings he and his staff established some 20 years ago: a few old junipers, false cypresses, and a *Betula nigra* 'Heritage' are to be removed from the Wild Garden, as all have overgrown the scale of the setting. Such change will rattle the bones of the garden, but Marco refuses, above all, to fix the plantings in time for sentimental reasons. "The art of a garden is in doing it. It should never be 'done.' There's a great tendency in the U.S., fostered by the media, to raise everything to a level of great art, and that doesn't make sense for a garden, because it then becomes precious and static. It won't happen here."

As John Trexler, director of the Worcester County Horticultural Society and a frequent Wave Hill visitor, sees it: "Marco's work is unique in the rather safe world of public gardens. He zeroes in on plants with a greater sense of daring than any gardener I know."

The late Miss Elizabeth Hall and the late Mr. T.H. Everett would probably have told you that he was always that way. Marco began his formal horticultural training not



*Crocosmia* (center), *Hemerocallis* (bottom right) and *Gleditsia* 'Ruby Lace' (background).

far from Wave Hill, at the New York Botanical Garden. It was there that Miss Hall, head librarian, and Mr. Everett, esteemed British horticulturist and author of a well-known encyclopedia of gardening, began a gardening program in the mid-1960s.

One day in 1965, Marco, 27 years old and newly sprung from two years in the Army, wandered into Miss Hall's office. For an hour Miss Hall listened patiently to

Marco's innocent questions and comments about horticulture. Then she walked into Mr. Everett's adjoining office and said quietly, "I think we've got a live one out there."

Madeleine Keeve, a graduate of the New York Botanical Garden School of Horticulture, is one of the seven gardeners at Wave Hill.

#### when to see Wave Hill

You won't find poinsettias on display at Wave Hill in December, or forced tulips and daffodils at Easter. You will find continuous changes, though, both in the conservatory and in the gardens scattered throughout the 28 acres of this Hudson River estate, given to New York City in 1960 by the Perkins-Freeman family. Besides an old-fashioned flower garden filled with clematis, iris, peonies and other mixed plantings, you'll find the Wild Garden, a hillside of mostly species perennials and shrubs in a naturalistic setting; a formal water garden; an herb garden with about 100 varieties; the T.H. Everett Alpine House; a conifer collection; and most recently, a Monocot Garden.

There is much to see in any season — visitors come to admire the *Veltheimia* and other South African bulbs in January as they come to see the vintage roses in June and the grasses and unusual *Dahlia* cultivars in October. The two mansions on the property are used for a wide

range of art, dance, environmental and educational programs. In the summer, you can stroll through the gardens and grounds at sunset and then attend an outdoor dance performance. In the winter, the Friends of Horticulture sponsor a series of three presentations by distinguished horticultural professionals; the lectures have ranged in topics from the art of pruning to antique plants to botanical illustration.

**Hours and Tours:** Wave Hill is open seven days a week, every day of the year except Thanksgiving Day and Christmas. Regular hours are 10:00 AM to 4:30 PM, with extended hours between Memorial Day and Labor Day. Guided tours of the gardens and greenhouses are offered every Sunday at 2:15. For more information, call (212) 549-3200.

**PHS members can visit Wave Hill** as part of a PHS New York trip planned on Tuesday, June 19. Check your May PHS *News* for registration, times and cost.

# THE GREAT DAYLILY HUNT

 By Gregory Piotrowski

*Persistently and meticulously, the author launched an extensive search to collect daylilies bred by the pioneer daylily hybridizer Arlow B. Stout, to recreate a daylily garden that once featured many of Stout's hybrids. This collection of daylilies recognizes Dr. Stout's work at the New York Botanical Garden and is in appreciation of the innovative advancements that he made with these popular perennial plants.*

photo by Gregory Piotrowski



'Taruga' one of the author's favorites. This spider-like bloom has segments that twist and curl at the tips. Abundant flower production; blooms often marked with pink halo; fragrant.

Every year members of the American Hemerocallis Society anticipate the selection of a new Stout Medal winner, the highest honor given by the Society to a daylily. This award honors Dr. Arlow B. Stout, one of America's pioneer daylily hybridizers.

Dr. Stout worked at the New York Botanical Garden from 1911 to 1948 as director of Laboratories. During his tenure, he published many scientific papers pertaining to his research, which involved plants other than daylilies. Stout was interested throughout his career in the sexual sterility of plants. His interest in *Hemerocallis* developed through his studies of the sterility habits of the roadside daylily, *H. fulva*; his first hybrid daylilies resulted from experiments with *H. fulva*. In time, Stout became interested in broadening the color range and seasonality of garden daylilies.

## *the search begins*

While Stout's many entries in issues of the *Journal of The New York Botanical Garden* indicate that several large flower beds had once displayed daylilies in areas where the public and garden employees could enjoy the flowers, Stout's parent and seedling plants were located in secluded nursery beds, and included a large collection of species daylilies. Stout received samples of daylilies from many countries and his species daylily collection contained many plants collected from their native habitats. By 1935, his most intense period of collecting and breeding, Stout accumulated what was probably the largest daylily collection of the time.

When I began working at the NYBG in 1986, a few scattered, unlabeled, and unmapped daylily beds still existed from Dr. Stout's vast collections. Over the years, the Garden's priorities had shifted, buildings and roads were constructed throughout, and many of the daylily beds were removed. The only labeled Stout daylilies remaining were growing in nursery beds at the propagation area, with a handful also growing in the Irwin Perennial garden. These plants were to be the foundation for the reconstruction of a daylily garden that was removed during the '70s.

## *rebuilding the garden*

The garden to be rebuilt was originally planted during the '50s and included Stout's daylilies as well as those by other popular hybridizers of the time. Many, if not all of the plants were donated by members of the



The late Dr. Arlow Burdette Stout (circa 1950).

Long Island Daylily Society and by commercial daylily nurseries. The garden, half-circular in shape, is backed by a 10-foot-tall European hornbeam hedge (*Carpinus betulus*), which remained after the daylilies were removed. The formal beds conform to the shape of the allotted space. Two large curving beds in the rear of the garden follow the curve of the half circle and are adjacent to the hornbeam hedge. Four other beds are rectangular in shape and parallel the road.

Once replanted, I envisioned the garden containing as many of Stout's daylilies as we could acquire, all of the Stout Medal winners, species daylilies used in Stout's breeding programs and a few of the original plants by other hybridizers. The majority of Stout's daylilies were introduced 40 or 50 years ago, and I was concerned that I would have difficulty finding any others besides those that we already had. The search was where the real work lay. Growing the plants, propagating them, and preparing the soil for planting would be easy compared to finding all of the plants necessary to fill the garden. Fortunately, my vision was not out of reach; I was able to fill the garden.

We began by scouring first recent, then old, catalogs of the many mail-order nurseries that specialize in daylilies. We worked from a tentative master list of introduced Stout daylilies. The more research I did on Dr. Stout, however, the longer the list became; we are still adding new names to it.

I was surprised at how hard it was to find all of the Stout Medal winners, which date back to the early '40s. I thought these daylilies would still be popular and still available through most nurseries. Only one nursery, Oakes Daylilies (see source list for address), carried all of the Stout Medal winners.

#### **gardeners support the project**

Many of the other plants were sent to the garden in response to several advertisements that I placed in *The Daylily Journal* during the years 1987, '88 and '89. I received several Stout cultivars that many people, including myself, thought were lost to the gardening world. At first, I was disheartened because there were so few responses to my ad; remarkably however, four years later, letters still arrive from enthusiasts promising to send a division or two of one of the daylilies on my "want list." From these generous gardeners I have received 'Mignon' (Stout 1941), a small-flowered yellow that blooms in early-midseason (approximately the last week of June in the New York area). The trumpet-

#### **The Stout Daylily Garden, 1990**

The Stout Daylily Garden at the New York Botanical Garden encompasses 3/4 of an acre and is set in the most eastern part of the Garden, across from the Children's Garden and 1/8 mile from the Peggy Rockefeller Rose Garden. It is one of the most historically important daylily gardens in the United States. Original daylily beds, planted throughout the Garden by the great researcher and hybridizer Arlow B. Stout, reached their zenith around 1935, but began to vanish 35 years later. Rebuilt over the last four years, the Stout Daylily Garden is in bloom from May through October, with more than 120 varieties, some once thought to be irretrievably lost.

The New York Botanical Garden is located in the Bronx at 200th Street and Southern Boulevard, next to the Bronx Zoo and across from Fordham University.

Hours: April 1-Oct. 31 8am-7pm  
Nov. 1-March 31 8am-6pm  
Closed Mondays, except on holidays.

Phone: (212) 220-8700  
Voluntary admission

shaped flowers are held on tall, slender flower scapes. The foliage is narrow and grassy. Another donated daylily is 'Zelda Stout' (Stout 1960), a large-flowered, pale yellow double named for Stout's wife after Dr. Stout's death. 'Zelda Stout' is a companion to the double orange daylily 'Arlow Stout' (Stout 1960), which was also named posthumously. A plentiful supply of 'Arlow Stout' already existed in the NYBG collection and is now joined by its mate. Both of these daylilies were among some of the first doubles to be introduced, arising from mutations of single-flowered hybrids.

#### **the search continues**

I have written letters to individuals, public and private gardens pursuing daylilies mentioned in articles and round-robin comments appearing in past issues of *The Daylily Journal* and other periodicals. These efforts have provided sources for some of the desired daylilies. Several senior members of the American Hemerocallis Society generously pointed the way to

*continued*



Midseason bloomers in the Stout Garden (July 15). Many yellows derived from *H. fulva rosea*. The garden now contains even more Stout daylilies than it did when first constructed in the early '50s.

possible sources. Occasionally, I am rewarded with a much sought after daylily, making the effort of searching worthwhile. And the gardeners involved have always been eager to share.

### verifying newly acquired plants

As the daylilies bloom, I compare flower and growth characteristics of each against various sources to validate their authenticity. The sources that I use are the American Hemerocallis Society checklists, old Farr nursery catalogs, which have black and white photographs with written descriptions, and Stout's own meticulous descriptions written in the *Journal of The New York Botanical Garden*. Sometimes I observe them for several years before I am convinced that we have the correct plant. Yet most plants are what the sender has claimed them to be.

### some praiseworthy daylily species

Among the species daylilies in our collection, several stand out as excellent garden plants. *Hemerocallis middendorffii*, and *H. dumortieri* are valued for their extra early flowering. Often, the orange *H. middendorffii* and yellow-orange *H. dumortieri* will rebloom on taller flower scapes in the fall. These daylilies are small-flowered plants, having low-growing foliage. Although both have low flower bud count on unbranched flower scapes, many scapes are produced, however, providing a rewarding display early in the season when the Garden's tall bearded irises, early peonies and rugosa roses also begin to flower.

*Hemerocallis thunbergii* is apparently variable in the wild, our specimen exhibits excellent plant habits. Its yellow flowers resemble *H. citrina* but remain open during the day, while *H. citrina* opens only at night. The smallish, fragrant flowers are held above the stiff, bluish-green foliage on branched flower scapes. *Hemerocallis thunbergii* has a long bloom season in this area beginning mid-late season (approximately the third week of July). In spite of its many excellent qualities, the flower tends to wilt on hot days when planted in full sun.

A combination of daylilies that I regard greatly is *H. fulva* and *H. fulva* 'Cypriana.' These two daylilies are similar in appearance but 'Cypriana' has a larger yellow throat and lacks the reddish eyezone of *H. fulva*. Both are self-sterile triploids resulting in flower scapes that are self-cleaning; because they set no seed, the spent flowers fall to the ground. *Hemerocallis fulva*

photos by Gregory Piotrowski



Stout medal winners growing together: 'Satin Glass' (1968) and 'May Hall,' pink (1969). These both flower during midseason.

'Cypriana' begins to flower two to three weeks after *H. fulva*. Combined, these two daylilies provide a burst of orange for over eight weeks. Although individual plants are growing in the Stout garden, a mixed grouping of these daylilies grows in the Rodney White Country garden, which is one of the demonstration gardens adjacent the Enid A. Haupt Conservatory.

### the Stout Medal winners

Among the Stout Medal winners, the following older champions have performed admirably in our area during the past several years. The first Stout Medal was awarded to 'Hesperus' in 1950. The large, star-shaped blossoms are produced on rather sturdy, tall scapes. The flower color is yellow and intensifies to deep yellow in the throat. 'Hesperus' has proven to be a vigorous grower, establishing itself quickly and providing several weeks of bloom beginning in mid-season.

'Painted Lady' is another tall-growing daylily and was awarded the Stout Medal in 1951. This large, rusty orange daylily has a deeper eye zone, large yellow throat, and a strong fragrance. It is a vigorous grower and the blue-green foliage remains clean and pleasant throughout the season.

Daylilies that always put on a worthy display are 'Frances Fay' and 'Satin Glass.' These daylilies received the Stout Medal in 1964 and 1968 respectively. They are both similar in color, being a blend of yellow, melon and lavender-pink. Compared with 'Frances Fay,' 'Satin Glass' is a paler blend of these colors, has a wider yellow throat, and grows taller. Over the years, these two daylilies have stood out as fine examples in the pastel color group. High flower bud production on both assures a long period of bloom.

One of my favorite Stout Medal winners is 1967 'Full Reward.' A wonderful deep

lemon-yellow daylily with an intense green throat, it is exceptionally vigorous with sturdy, upright foliage growing to 3 feet. The flower form is round and recurved, blooming just above the foliage.

### outstanding Stout daylilies for the home garden

Many Stout daylilies make excellent garden plants, rated on foliage and growth habits as well as flower quality and distinction. I will mention only a few of the stellar performers, although many more are worth viewing. Most of Dr. Stout's daylilies are nocturnal in flowering habit, meaning they are fully open in early morning. The Stout Daylily garden has a long season of bloom beginning in late May with the flowers of 'Elfin' (1949), and continuing through the first frosts of fall with 'Autumn Minaret' (1951) and 'Autumn King' (1950).

'Poinsettia' (1953), a floriferous bright orange-red daylily, begins flowering during the second week of July and continues for many weeks, always displaying bouquets of blooms. Because of very high bud count, 'Poinsettia' provides dependable bloom filling the gap between mid-season and late daylilies. The orange-red color is closer to the poinsettias available during the '40s and '50s than to the true red hybrid poinsettias now available and is unlike any I've seen in other daylilies.

Among the many bicolor daylilies to surface during the '40s and '50s, 'Caballero' (1941) is one of the finest. The vigorous



Another of the author's favorites is 'Poinsettia.' Unique orange-red color with abundant blooms. Always a big show, good for the hot border.

growth habit rapidly creates an established clump, which seems to get better year after year without dividing. The excellent foliage, flower scapes and flower size are well proportioned, generating a plant pleasing to the eye. The inner flower segments are deep rose or reddish-brown; the outer segments are bright yellow, often dusted with the same reddish-brown color.

Of the smaller flowers, 'Liebchen' (1956)

is always outstanding. Beginning to flower in late May or early June, 'Liebchen' continues for five weeks, often reblooming sparsely in fall. The grassy foliage forms a neat, compact mound. The tall, but sturdy flower scapes are well branched. The flowers are deep salmon or a pale reddish-brown in color with darker markings above the yellow throat. Literally dozens of blossoms open each day exhibiting a welcome splash of color early in the season. 'Liebchen' demonstrates an extended flowering habit, with flowers remaining open into the second day.

One of my all-time-favorite daylilies is 'Taruga' (1933). This fragrant, star-shaped yellow daylily has pinched or twisted floral segments that are often brushed with pink. 'Taruga' begins flowering early in the season, continuing for four to five weeks, peaking during the early part of mid-season. Showing superb plant habits, this well-proportioned plant has remained unparalleled in distinction for over 50 years. I have never seen anything like it elsewhere.

One of the last daylilies flowering in the Garden is 'Chancellor' (1956). This daylily begins to flower in late July or early August and continues almost until frost. The large, light mahogany-red flowers have a wide yellow throat and midribs. Branching and bud count are good on very tall flower scapes. 'Chancellor' reaches six feet producing the flowers high above the foliage. Surprisingly, the scapes are sturdy enough and support themselves adequately. The flowers produce no seed, which is beneficial for a tall-growing daylily because the flower scapes would undoubtedly bend under the weight of seed capsules. Although Stout has introduced several late-flowering daylilies, 'Chancellor' seems to be little known to most daylily growers.

By today's standards, many if not all, of these older daylilies would be considered spider-like or spider variants by many daylily enthusiasts. Actually, the sometimes unusual flower forms and narrow floral segments are typical characteristics of daylilies introduced during the '30s and '40s. For those interested, the A.H.S. has created a nostalgia round-robin and a species round-robin for members wishing to become more involved with these types of daylilies. (See source list for information.)

#### expanding the historical daylily collection at NYBG

Plans for the Stout Daylily garden include expanding the species daylily collection and adding several more Stout

cultivars currently being propagated in our nursery. Although the garden now contains more Stout daylilies than it ever has, we look forward to "discovering" and planting more of them.

Several named, introduced Stout daylilies have never been registered with the American Hemerocallis Society. One task will be to register these so they will be recognized by the Society as legitimate cultivars.

The Stout Daylily garden is a continuing project aimed at obtaining, identifying and preserving, in addition to Dr. Stout's daylilies, the species daylilies. Preserving these plants also preserves history. Not only the history of the modern hybrid daylily but also a large portion of the histories of both the American Hemerocallis Society and the New York Botanical Garden.

Aside from the Stout Daylily garden, the NYBG has hundreds of labeled daylilies on view to the public. Thanks to the efforts of the Long Island Daylily Society and several commercial nurseries who have donated plants, our collection of the more recent daylilies has enlarged greatly over the past several years. Peak flowering is generally during the first three weeks of July. Anyone wishing to visit the New York Botanical Garden during this or any time is most welcome. Daylily enthusiasts can become reacquainted with old favorites, and I hope, find some new favorites as well.

#### Sources:

American Daylily and Perennial  
P.O. Box 210  
Grain Valley, MO 64029

Oakes Daylilies  
8204 Monday Road  
Corryton, TN 37721

Saxton Gardens  
1 First Street  
Saratoga Springs, NY 12866

Sunnyridge Gardens  
1724 Drinnen Rd.  
Knoxville, TN 37914

Gilbert H. Wild & Son  
P.O. Box 338  
Sarcoxie, MO 64862

For information about the  
American Hemerocallis Society  
contact:

Elly Launius  
1454 Rebel Drive  
Jackson, MS 39211  
(membership \$18.00 per year)

Gregory Piotrowski moved from Michigan to New York to attend NYBG's School of Horticulture program. After graduating, he began full-time work at NYBG as gardener.

#### Hemerocallis species and named Dr. Stout cultivars the New York Botanical Garden wishes to obtain:

##### SPECIES

*H. aurantiaca*  
var. *major*  
*H. coreana*  
*H. exaltata*

*H. forrestii*  
*H. littorea*  
*H. x luteola*

*H. micrantha*  
*H. nana*  
*H. x ochroleuca*

*H. pedicellata*  
*H. plicata*  
*H. sempervirens*  
*H. yezoensis*

##### STOUT HYBRIDS

'Aladdin'  
'August Glow'  
'Blanche Hooker'  
'Brownie'  
'Candelabrum'  
'Caprice'  
'Cathay'  
'Copperpiece'

'Dusty Miller'  
'Firebrand'  
'Gold Bouquet'  
'Jubilee'  
'Majestic'  
'Manchu'  
'Martha Strong'  
'Martha Turner'

'Ming'  
'Monarch'  
'Nada'  
'New Yorker'  
'Penelope Stout'  
'Red Bird'  
'Rose Gem'  
'Royal Ensign'

'Sachem'  
'Saturn'  
'September Rose'  
'Triumph'  
'Vesta'  
'Viking'  
'Wolof'  
'Zouave'

If you have any of the above cultivars or species and would like them to be in The New York Botanical Garden's living collection please contact:

Gregory Piotrowski  
Horticulture Department  
The New York Botanical Garden  
Bronx, NY 10458-5126  
(212) 220-8764



The blue-pink garden rambles over the area to the left of the walk.

# A CONDO GARDEN *Making the Most of*

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*When you garden intensively in small spaces, consider all of the elements: your favorite plants, their horticultural well-being, and a design that displays them to their fullest potential.*

Condo gardening offers the gardener an opportunity to keep the garden in top shape, since he's working within a small area. He has to make the most of every space during each season and has little space to hide the less-than-inspiring moments through which all dynamic gardens must pass. He holds the garden together with a strong basic design.

The purpose of a garden design is to create a general scheme that will include places for favorite garden treasures, that will support their horticultural requirements and show these treasures off to their best advantage. Many of these treasures

have been selected not for how they will fit into a specific design, but rather for other qualities: rarity, fragrance, interesting form, exciting color, good for cutting, or houseplants needing a summer home.

### *the garden as a stage*

I'd like to discuss here some basic design concepts using the plants in my garden as the cast of characters. Most of these characters were chosen for their individual qualities and not for how they look sitting next to their neighbors. The basic goal is to arrange the "stars of the show" (larger distinct forms) to feature them. Then give the stars a supporting cast (groupings of subordinate forms, colors, sizes, etc.), that will complement the stars in each area of the garden with their harmonious or contrasting qualities. Finally, tie each area together with a chorus line that will function to pull the whole garden together visually.

**The stars** in this garden include trumpet lilies, delphiniums, oriental lilies, large-flowered clematis, agapanthus, scotch thistle, giant alliums, japanese anemones, containerized exotic houseplants and other distinctly showy annuals and perennials. **The supporting cast** includes groupings of

tulips, narcissus, cleome, annual poppies, zinnias, salvias, cosmos, lisianthus, purple basil, and curly parsley. The plants in the **chorus line** are used singularly and in combination with each other. They include sweet alyssum, lobelia, pansies, verbenas, impatiens, neirembergia, and other plants that have great quantities of smaller-sized flowers. The "line" sweeps in, through and around more distinct areas of plants, pulling the garden together and providing a rhythmic flow. The garden is developed as a series of 'line-mass' arrangements united as one. The stage is that available garden space.

Another way to conceptualize this stage is as a canvas on which you are painting. You, the gardener and garden artist, use the design elements (the basic physical qualities of line, color, shape, size, form, texture, and pattern) and organize them according to the design principles of rhythm, proportion, scale, dominance, contrast and balance. You must always keep in mind the horticultural requirements of the 'characters' or 'elements' such as light and moisture. For example, using your artistic sense, you may be planning a particular area of pinks, blues, and mauves and consider using lythrum at the top of a mound to





The silvers, grays and whites give way to the yellows, golds and oranges of the garden to the right.

## Gardening in Small Spaces

 By Michael Bowell

accentuate height. But, in horticultural reality, it would tend to get too dry there for lythrum to look its best. Therefore, you move this excitingly new cultivar of lythrum (that you just had to have) to a lower spot in the garden where it will dry less quickly. You then substitute another tall, spikey form such as *Salvia* x 'Indigo Spires,' and if the salvia is too deep a blue to pull that area together, maybe add pink or white cleome to lighten the area and make the deeper blue salvia more visible.

Color in a garden affects each one of us differently and certainly its use is one of personal taste. The basic rule is do whatever works for you. If you find that it doesn't work, then you must analyze your color scheme and make changes. In my meadow garden at another site, I like to use lots of different colors. The plants tend to be light and airy and most are viewed from a distance. In the condo garden, the colors are concentrated and viewed up close. The same color combinations that blend harmoniously in the meadow may become visual cacophony at close hand.

In my condo garden, I want the color impact to be harmonious: usually pleasant; in many spots, exciting; and in some spots, provocative. Since I garden with plants

expressing hues from around the color wheel, I must organize them into groups to achieve the desired impact. These groups are divided by walls of color neutral or complementary to the colors of the adjacent groups. The green of the rhododendrons works all seasons, clear yellow tulips do the job in the spring, and white cleome (sometimes mixed with tall blue salvia) works from midsummer onward. The walls of color become the backbone of the garden. Repeated plantings of white and silver in a line-mass arrangement takes the viewer from the front path to my door, and the color works both day and night. The several niches created within the garden makes the garden as a whole seem larger than it is.

This condo garden requires maintenance an average of three to four hours per week from early April through late July, and less from August into autumn. This includes planting, watering, staking, deadheading and weeding. Let's examine the garden as the season progresses.

### March

In early March, *Helleborus orientalis* sends its rose-colored flowers up on 12-inch scapes. By the end of the month, tufts

of yellow crocus, snowdrops and other early bulbs are in flower. Buds of the larger-flowered crocus and *Anemone blanda* 'White Splendour' are evident. The locations of the spring-flowering bulbs and most of the herbaceous perennials are evident at this time. Pansies are planted now, among the emerging bulbs to give the taller flowers some transition of color from the ground up when they are in bloom and to camouflage their withering foliage later. The pansies are actually solid, clear yellow violas that harmonize with most other colors and run from their masses into curved lines to hold the early garden together. Clear blue violas are massed with the emerging dwarf blue forget-me-nots (*Myosotis* 'Victoria Blue') and cool pink tulips in another area of the garden. Ranunculus plants are added now; they will flower through spring and usually return the following year. Spaces are cultivated now and seeds of annual poppies are sprinkled over them. The same procedure is used for red-leaf lettuces. The different varieties of annual poppies will flower from late April through July, providing color between spring bulbs and later summer annuals. Many will reseed on their own, providing a 'cottage garden' feeling.

*continued*

As the early bulbs finish flowering, small plants of blue lobelia and white alyssum are added to the garden foreground. They are grouped in areas where space permits and run in loose lines (sometimes interplanted with the pansies), again to help hold the garden together. Parsley plants are planted now as are dwarf stocks. The stocks are deliciously fragrant and do well when established early. All of these early flowering annuals will last into midsummer. If they are still going strong at that time, I will pull some of the imposing plant away from them. If they are looking tired, I will cut them back or remove them and allow later annuals to take their places.

photo by John C. Gouker

### April and May

During late April and early May, I start annuals in seed trays. They will go in the garden as space and weather permits. Dahlia tubers are planted directly into the ground now. Poppy seedlings are carefully thinned (in a random fashion) to stand four to twelve inches apart. Pots of fuchsias that have started growing indoors should now be set out and hardened off. The coral, upright honeysuckle fuchsia (*F. x 'Gartenmeister Bohnstedt'*) will be planted in a bed of yellow-green variegated english ivy. Other fuchsia cultivars will be combined into containers of mixed flowers. Pots of peruvian daffodils (*Hymenocallis narcissiflora*, *Ismene sp.*) and assorted cannas, which have sat dormant in a cool, dry spot all winter, are now soaked and placed in full sun. The *Ismene* will send up stems of exotic white fragrant flowers to be enjoyed sporadically from June through August; the cannas will flower from midsummer until frost. Pots of agapanthus are also set out to flower in early summer.

As the spring warm-up continues, I bring other houseplants outside where they can be dealt with more easily for the summer months. The yellow variegated ginger is a good foil for the orange impatiens and yellow pansies. Flowering orchids are hung in strategic spots and are also arranged with containerized bromeliads, ivies, ferns, and annuals. Blue *Plumbago auriculata*, pink *Hibiscus Rosa-sinensis* cultivars, and various angelwing begonias are pruned and fed with osmocote (14-14-14, three- to four-month formula), as are most of the containerized 'houseplants,' annuals and perennials. The osmocote will be repeated again sometime in July depending on the



*Lilium x 'Casa Blanca'* lights up the garden in midsummer.

weather conditions. In unusually wet summers, the fertilizer is leached more rapidly than normally. In hot, dry summers, the combined very warm soil temperatures and continuous watering also deplete the fertilizer rapidly.

### from May through mid-July

The garden changes from week to week as the different 'stars of the show' take center stage. The clematis, delphiniums with tall trumpet lilies, giant alliums, thalictrums, baptisia, foxgloves, campanu-

las, and various annual and perennial poppies all have their time in the limelight. The pansies, lobelia, alyssum, parsley, larkspur and forget-me-nots are colorful throughout the period. By mid-July, the garden has just a few perennials and some early-planted, warm-weather annuals such as zinnias and salvias in flower. The bulb foliage has been removed and the rest of the early flowering perennials, which had been cut back, are greening up again. The tired cool-season annuals are either removed or pruned and fed. Some of the



Tall growing *Cleome* 'Helen Campbell' planted at the highest point accentuates garden height and provides a backdrop for combinations on each side.



*Zinnia* 'Fantastic Pink' is highlighted by deep rose *Cosmos bipinnatus*, silver *Salvia farinacea* and white *Nicotiana glauca*.

nicotianas, cleomes and cosmos that reseeded from previous years have commenced flowering. The garden is now filled in with assorted salvias, zinnias, cleomes, impatiens and verbenas, as well as some annuals that are new for this year. Extra pots are planted with the same varieties that are being used in the garden. These will be used later to fill in spaces vacated by mid-season plants.

Some of the larger potted plants now take their spots in the garden. Mandevillas and hyacinth bean vines are set in at the

bases of tall, staked trumpet lilies. They will climb up and over the lilies and even reach into the trees (on the wires extending from the trees that had supported the large heads of lily flowers). The cannas are also set in the garden now, their broad foliage contrasting beautifully with all of the fine foliage and masses of smaller flowers. The tropical plants (mandevillas, hibiscus, cannas, etc.) are set up on the ground in shallow saucers. The extra height afforded by the pots is a bonus. This also means less root disturbance to the surrounding plants

and underlying bulbs. The garden is full enough that the pots are mostly hidden.

The perennial asters that had already been pruned back a few times are now looped around spent lily stems, baptisia, and rhododendron branches. From now into early autumn, many of the taller annuals will need to be staked. To create some transition, I stake the tallest, strongest plants upright and the adjacent plants out on angles. I will pull some of them down to ground level, mixing them with the lower-growing plants where their branches will grow upward again.

### *late July to mid-August*

Vacation time. Before I leave, I make sure that most of the annuals are pinched or cut back. That gives them a chance to recover and to look good when I return. That also means that I return to less garden maintenance, and a garden that looks fresh and ready to bloom.

### *September*

The garden peaks again in early September. The zinnias that were planted in July are flowering heavily now. They are free of the mildew that plagues the earlier planted ones. Not only do all of the annuals look great, but the perennial autumn anemones have started their season. Many of these anemones and several types of salvia will persist through the first frosts, lasting well into November. They are joined by the survivors of the spring-planted pansies, alyssum, and verbenas as well as clumps of perennial toad lilies, autumn crocus, and more recently planted ornamental kale.

### *November*

November is bulb planting time for my condo garden; there's no space to do it any sooner. Early flowering biennials are set into their positions at this time. They will need to be checked for heaving during the winter months. It is now time to evaluate the plan for next year; the first garden catalogs are just a few short weeks away.

Michael Powell is a horticulturist by vocation and avocation, and is best known for his love of orchids. His business, Flora Design Associates of West Chester, PA, specializes in flower garden design, consultation and installation, as well as interior gardening with exotic plants.

# BLUE RIBBON EGGPLANTS

 By Mary Sweeten

**D**eciding on a bounty basket of eggplants was pretty much a process of elimination.

The dog days eliminated most of the peppers in my unirrigated organic garden. (Insects made holes in the rest.) The tomatoes that weren't done in by the heat developed gross-looking anthracnose spots. (I ate them anyway.)

Two summers ago the heat-loving *Solanum melongena* sailed through August, and their thick, glossy skins seemed impervious to insects and disease. In other words, they were a lot prettier than their gaudy relatives — and just in time for the '88 Harvest Show.

I had only planted a few varieties — a couple of oriental types, a white 'Easter Egg' and a variety called 'Violette di Firenze' that produced three gorgeous striped fruits — so that my first attempt at an all-eggplant bounty basket looked a little sparse.

I decided to spend the winter looking for oddball eggplants.

I ended up at Harvest Show '89 with 14 varieties and a reputation among my co-workers (who ate the surplus) as an eggplant oddball.

Lest *Green Scene* readers think I planned my '89 garden merely to win ribbons, here's what I learned:

- Though the fruits are tough, the plants are feeble.

Eggplants do love heat — and they did hate the cool, wet summer of '89. I worried for a while that they would never set blossoms at all.

They are the favorite food of the dreaded Colorado potato beetle. In previous years, this caused me to bring out the most awesome weapon in my arsenal: 5% rotenone. Last season, one application of M-One, a variety of *Bacillus thuringensis* developed for Colorado potato beetles, and regular picking and squishing seemed to keep them under control. But maybe the beetles don't like cool summers either.



photo by John C. Gouker

- This year, I'm setting the plants three feet apart, not 18 inches.

I realized I had done my eggplants wrong when I saw the four-foot bushes in a friend's garden. Digging sheep manure and side-dressing with Erth-Rite helped — a little. The puniest plants were at the end of the row, where the nutrients ran out.

I also planted basil in the same beds, in the faint hope that the herbs would discourage flea beetles. They didn't, and the eggplants eventually shaded out most of the basil.

- Even under these trying conditions, a few varieties were noticeably more prolific than others. 'Pink Bride' (the variety PHS distributed for one of the '89 Harvest Show challenge classes), 'Prelane' and 'Little Fingers' would not quit.

White eggplants ('Easter Egg,' 'Ghostbuster'), while prolific, were prone to a brown rot that also afflicted the pink ('Pink Bride,' 'Italian Pink Bicolor') and green ('Thai Green,' 'Louisiana Long Green') varieties. The purple eggplants were largely unaffected, so I suspect sunburn contributed to the problem.

The standard shapes mostly sulked on their lean diet. 'Black Beauty' was so-so. 'Violette di Firenze' and 'Italian Pink Bicolor' grew a few fruits on peaked-looking plants. But my biggest disappointment was 'Ichiban,' an oriental type that, with its purple-black calyx, is my favorite eggplant.

'Orient Express,' as advertised, was the earliest (one catalog says 58 days), and also fairly prolific.

The prettiest eggplant was one I couldn't grow. It's a standard shape with stunning dark purple and white stripes, and good eggplant flavor to boot. It grew for a friend from unlikely looking dark brown seeds packaged in a Spanish-language packet. The seeds he gave me didn't germinate, but I'll be trying the Spanish eggplant, from seeds he grew, again this year.

*continued*

### Sources:

Gleckler's Seedmen  
Unusual Seed Specialties  
Metamore, OH 43540

Harris Seeds  
961 Lyell Avenue  
Rochester, NY 14606

Johnny's Selected Seeds  
Foss Hill Road  
Albion, ME 04910

Le Jardin du Gourmet  
West Danville, VT 05873

Seeds Blum  
Idaho City Stage  
Boise, ID 83706  
Catalog \$3.00

Shepherd's Garden Seeds  
30 Irene Street  
Torrington, CT 06790-6657

Stokes Seed, Inc.  
Box 548  
Buffalo, NY 14240

Vermont Bean Seed Co.  
Garden Lane  
Fair Haven, VT 05743-0250

**Fourteen varieties of eggplants net a Blue Ribbon for a Harvest Show bounty basket.**

Speaking of flavor: my favorite way to eat eggplant is to slice them lengthwise, soak in olive oil and sprinkle with salt and grill over charcoal. What you can't eat right away can be mashed into baba ghanouj (a Middle Eastern dip including eggplant, garlic and olive oil).

- About those red-and-orange eggplants that looked like cheese peppers, the ones called 'Small Ruffled Red' that no one believed were eggplants: I confess, I never ate even one. I never tried cooking them. I did cut one open — it looked seedy — but mostly I kept them in a bowl on my kitchen table.

- Mary Sweeten lives in Manayunk and grows vegetables on five plots at the Schuylkill Center for Environmental Education in upper Roxborough.

## AUTHOR'S PICK

### NOVELTY

'Small Ruffled Red' (Seeds Blum): green, yellow and orange, shaped like squat cheese peppers or gourds. They grow off the stems of plants with meaner-than-usual thorns.  
'Easter Egg' (Vermont Bean Seed): white, spherical or oval. They turn yellow as they age.  
'Ghostbuster' (Harris): white, oblong.

### ORIENTAL

'Orient Express' (Johnny's): purple, long and slender.  
'Ichiban' (Vermont): purple, more oval than Orient Express.  
'Little Fingers' (Harris): purple miniatures, with 3- to 6-inch fruits in clusters.  
'Pink Bride' (Gleckler's Seedmen): lavender-pink and faintly striped oriental. Constantly mistaken for zucchini!  
'Thai Green' (Seeds Blum): pale green.

### EUROPEAN

'De Barbentane' (Jardin du Gourmet): purple.  
'Prelane' (Shepherd's): purple, described as an improved de Barbentane.  
'Louisiana Long Green' (Paul Tsakos, a friend): green with darker stripes.

### STANDARD

'Black Beauty' (Jardin du Gourmet): purple, garden center regular.  
'Violette di Firenze' (Shepherd's): purple with darker purple streaks and occasional white stripes. Plus, the skin under the calyx is white.  
'Italian Pink Bicolor' (Stokes): a muddy lavender version of 'Violette di Firenze,' without much contrast.

# RUTHLESS DECISIONS YIELD A PRIZE PUMPKIN

23

 By Samuel H. Henley

When I entered a large gourd in the 1988 Harvest Show, I won second prize. When it was time for the 1989 Harvest Show, I wondered what I could plant to have a better chance at first prize? Looking through my seed collection, I found three Big Mac pumpkin seeds that I had purchased in 1988. Even though they were a year old, I decided to try them anyway. It was May, and I knew I should have planted the seeds around the first of April. Nevertheless, I set out to grow a prize-winning pumpkin. I planted each seed in a four-inch peat pot filled with finely milled sphagnum moss. I could have used other varieties than Big Mac: Burgess Giant; Atlantic Giant, considered to be the biggest variety; or Big Moon.

I never let the temperature of my peat pots fall below 60°F. I maintained a temperature of 85°F, which is best, guarding against it going any higher. Small plants

photo by John C. Gouker



150-pound pumpkin: the author's prize-winning Harvest Show exhibit.

appeared in about a week. When the seedlings were three weeks old, I planted them outside. I planted the peat pots directly in the mound I had prepared earlier. By planting the pot, I did not have to disturb the root system. This was important, because, a disturbed root system could have set the seedlings back a week or more. It was June 1, and I was a month behind so I didn't have to worry about late season frost. Had I started my seeds the first of April and transplanted them outside the first of May, I would have provided protection against spring cold snaps. I would have covered the mound with black plastic to warm the soil and milk cartons to cover the seedlings. I had previously prepared a mound in the center of a 20 ft. x 20 ft. clear soil area. A 10 ft. x 10 ft. would have sufficed (a single vine will grow 15 ft. long, but it can be trained around the plant).

To prepare the mound I dug a four-foot *continued*

photo supplied by Samuel Henley



Samuel Henley's second place gourds in the 1988 Harvest Show inspired him to go for it with a super pumpkin in 1989.

square hole 18 inches deep. I filled the hole 12 inches with wood chips for drainage. I filled the last six inches with well-rotted horse manure (any manure would have been okay). Then I made the mound two feet above the ground level with loose garden loam, rich in organic material or compost. Proper drainage was important, even though adequate moisture was a must. So I made the mound high. I could always provide water, but if the plant was in a low area heavy rains could turn it into a swamp and my planting would be ruined.

The area I selected for my prize pumpkin, had full sun all day long. This was important. I provided burlap wind protection around the perimeter. Needless to say I guarded against weeds of any kind competing with my plant, especially during the middle of the growing season. As far as nutrients or fertilizer was concerned, I avoided high nitrogen levels. I used some phosphorus to aid the plant in developing a strong root system. A high nitrogen level would produce foliage at the expense of developing the all-important early root system.

It was three or four weeks after I transplanted my seedlings outside that I faced a most difficult choice. I had to select the most vigorous-looking plant and pull up the others. I wanted to put off the decision, but I knew the root systems would compete. I wanted to concentrate all nutrients into one plant. After pulling up the weaker two, one vigorous plant stood alone.

During the growing season I gave my plant as much water as I could, since I had planted it on a mound with good drainage. I always tried to water in the morning. Occasionally I would have to water during the day, but never in the evening or at night. Whenever I would have to water during the day I would water on ground level to prevent leaf burn. While watering, I would spray the leaves weekly with liquid seaweed until flowers appeared. Since I started with good rich organic soil, I only used a 5-10-5 fertilizer formulation four times during the entire season.

I considered mulching to prevent the top layers of soil from drying out, but I knew I'd risk hiding watering and insect problems so I abandoned the idea. I was fortunate not to

have too much of an insect problem. As a precaution, I did dust the leaves with rotenone early in the season. I knew there was the possibility of fungus growth, since we had many hot, wet days. I watched for deterioration in the foliage and since a fungus disease can happen fast, I was ready with a fungicide called Karathane (dinocap). But as I've said I was fortunate and did not have the problem. Finally, when I noticed yellow blossoms or flowers I knew my plant was ready to start producing a giant pumpkin. A pumpkin plant produces both male and female blossoms on the same plant. Insects, invariably bees, must carry pollen from the male blossom to the female blossom so the female flower will turn into a small fruit. I could have rushed setting the fruit, by hand pollination, i.e. by swabbing pollen from the male flower to the female flower. This must be done in the morning when the blossoms are open. It's easy to distinguish the male from the female if you remember your basic biology. If hand pollinated, the fruit would have set a week earlier. But, I went along with nature. One day when I was inspecting my plant, there it was. Several female blossoms had fallen off leaving a tiny green pumpkin behind. Shortly afterward there were others. When they were about two inches in diameter I had to make another all-important decision. I knew I had to concentrate all of the plant's growing power into one pumpkin. The tiny fruits looked the same, but I studied them closely. And then I saw it. It was a little different and kind of special. I would keep that one. And as much as it hurt I snapped the others off along with all the blossoms. My plant continued to blossom but rather than wait until a fruit would set I picked off all the flower buds as soon as they appeared. I spent the rest of the summer watching it grow. Although it didn't reach my expectations, it did weigh in at 150 pounds. Enough to win first prize.



Samuel Henley has been a community gardener in Philadelphia since 1976; he won first prize in the City Garden Contest in 1977, and second prize several years since. Henley was awarded the 1983 Garden Achievement award by the *Gardens For All* magazine. He is on the boards of several city gardening organizations, including the Philadelphia Green Advisory Board.

# GETTING A LATE START IN GARDENING

 By Natalie Kempner

*Panagiotis Chletcos was 78 when his doctor said "keep working." "I took up gardening," says Chletcos. He planted his first seed when he was 79. Twenty-two years later, at 101 years of age, he still has a full-time job looking after the basil and begonias.*

photo by Harvey Finkle



In winter, Panagiotis Chletcos works with his begonias on the sunny back porch.

In a galaxy of shining stars, Super Senior Gardener, Panagiotis Chletcos, 101 years old, shone brightest at the Pennsylvania Horticultural Society's City Gardens Contest 15th Awards Night in 1989.

As Diane Allen, honorary chair, announced the award, a color slide of Chletcos in his garden filled the giant screen. An astonished Panagiotis rose with great dignity and moved forward, propelled by the cheers of a crowd gone wild with the contagion of shared joy.

Actually, gardening in Philadelphia knows no age limits — old or young. If "senior" means over 65, many of the award winners in every category of the contest qualify. Yet the Super Senior is always a special hero. A senior myself, just the remote possibility of being out there cultivating a garden (never mind an award-winning one) when I am a century old is rejuvenating. And I was certainly not the only person with chills running up my arms and tears rolling down my cheeks as I leapt to my feet to applaud. I knew that I must meet Panagiotis Chletcos.

A few days later, I am welcomed into the handsome 10th and Pine Street house, which has been home to the Chletcos family for 71 years. Theresa Anastasia Chletcos, retired school principal and first-born of six Chletcos offspring, leads the way through spacious rooms to the cheerful, light-filled kitchen. Here, the genial celebrity with his shock of thick white hair ("Too much hair," he later tells me. "I need a haircut every month."), sits, alert and

*continued*



Chletcos and his daughter Theresa Anastasia waiting at the City Gardens Contest Awards night.

attentive, at an oval table.

"Daddy, we have someone who wants to hear about your garden."

The tanned and sturdy Chletcos rises from his chair. His warm handshake bids welcome and, because rain seems imminent, he guides me immediately through the back porch, down steep steps to his garden.

Every millimeter of space from the house back to the garage on the next street is garden. Clematis and roses climb sheltering walls and a grape arbor flourishes in the far right corner. Narrow walkways pass between cement blocks fashioned into beds for portulaca and petunias, dahlias, coleus, and verbena. Potted plants hang from coat racks and ivy twines up trellises. Begonias bloom everywhere and the air is heavy with the scent of basil.

"Begonias and sweet basil, they are my favorites."

All the begonias — "about 300 plants a year" — started with a single plant 25 years ago. Chletcos donates dozens at a time to the nearby Pennsylvania Hospital Thrift Shop and to the St. George Retirement Home at 8th and Spruce.

### **basil, a sacred plant**

Basil, however, is the Chletcos specialty, and he loves it more than all the rest. He plucks a leaf and savors its fragrance. "This one," he asserts with pride, "is from seeds we brought from the Holy Land in 1963."

When I suggest the endless possibilities for basil-based dishes, I learn that Panagiotis Chletcos's predilection for basil is not culinary.

"We don't eat the basil. It's a sacred plant."

Theresa Chletcos then explains the reverence for basil with the story of Empress Helen, mother of Constantine the Great. The Empress and her son, in Jerusalem on a quest for the sepulchre of Jesus, dug beneath a green and fragrant basil plant in Golgotha and there came upon wood from the cross.

Each year, on September 14th, the Day

of the Holy Cross, Chletcos takes bunches of sweet basil to St. George's Greek Orthodox Church on 8th Street and to Annunciation Church in Elkins Park where they are blessed, then shared with the congregations.

As we move slowly through the garden, Chletcos touches his plants fondly, as one touches favored household pets, and I become aware that he is feeling his way.

"He can see some," says his daughter, "but mostly he feels. Take watering. He goes around touching every plant, watering individually as needed."

Chletcos leads the way to a box-like structure under his grape arbor. "Here is my fertilizer. Sometimes I add a little potting soil, peat moss, vegetable scraps. I make compost under the arbor, where the grapes fall down."

The first drops of rain are falling and Theresa urges us inside. Chletcos lifts his ruddy face to feel the rain.

"This has been a good summer for rain," he comments as he gets his bearings and touches a pepper plant. "My peppers are from Greece. I brought the seeds from the outskirts of Athens."

"It was the same 50th Wedding Anniversary trip that took him to the Holy Land," explains Theresa as we climb the steps. "A gift from the six of us to our parents. They returned to the village where

they were born and no one they had known was still there."

Back at the kitchen table, Chletcos expands on his life story, pausing often, lost in memory. Theresa contributes and contradicts with insight and humor. Their relationship is affectionate, open, enviable.

Panagiotis Chletcos was born November 21, 1888, in the village of Lihna on the Greek Island of Lemnos.

"My grandfather lived to 110. Never saw a doctor."

"And your father? How long did he live?"

"My father? He died at 40. Struck by lightning."

When Panagiotis was 15, he left Lihna with two young cousins. It was his first trip anywhere. Together they crossed Europe, mostly on foot. They sailed from Belgium and landed in New York City on the 4th of July, 1904.

In New York, Chletcos found a job rolling cigarettes for \$3 a week. Two months later, on Labor Day, he moved to Philadelphia where his job was with Notaro Brothers, a cigarette manufacturer at 11th and Chestnut. "I was small so they dressed me up as a little Turkish boy. They wrapped my head in a turban and I served Turkish coffee in the showroom."

Marianthe Karapanagiotou arrived in Philadelphia seven years later. She had



Roses climb the wall of the tiny garden in the back of the house.



been in school with Panagiotis in Lihna. They met again and were married in 1911.

"We moved to this house in 1918," recalls Theresa. "Momma insisted we live near a Greek church and the only Greek church in Philadelphia was Annunciation at 12th and Fitzwater. We went there every day after public school for Greek language and religion."

### *a new vocation begins*

As the family increased, Chletcos found his vocation as a waiter. "For 62 years I was a good waiter. First class. And, for 62 years, my name was Nelson. An easy name, Nelson. Panagiotis is hard to say and spell."

When Chletcos was 78 he went to a doctor and announced that he was going to retire.

"No good," advised the doctor.

"But I'm 78 years old."

"Keep working."

"So I took his idea along with mine. I retired from my paid job but I didn't stop working. I took up gardening."

Theresa clarifies: "Momma got him started. We'd never had a garden but Momma loved plants and flowers. She had the idea to keep him busy."

"Momma was 94 and had been married 77 years when she died the week before Awards Night. This leaves Panagiotis the patriarch of a clan that includes four

daughters, two sons, 10 grandchildren and five great-grandchildren. Of these, only one — granddaughter Bonnie — shares her grandfather's gardening enthusiasm.

Most days Chletcos spends six hours in his garden. "Every day I go in the sun. First

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***"We don't eat the basil. It's a sacred plant."***

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I drink my coffee. Then I got my job out there. That's what I got to do."

He smiles. "This year, with all the rain, I saved dollars watering from barrels instead of hose." Extra work doesn't bother Panagiotis. Spending money needlessly does.

"The only plants I like are the ones I raise myself. I like to plant seeds and see them rise up. I don't spend money on seeds. I have a Scotsman's pocket."

Chletcos collects seeds and brown-bags them around September. "I never use plastic. Makes them moldy. Anybody wants, they can have," he declares, handing me a few brown-bagged selections. He would like them to be scattered everywhere: "In Fairmount Park, on vacant lots, on all Philadelphia!"

This was Chletcos's first time in the City Gardens Contest.

"Daddy didn't even know he was in a contest," laughs Theresa. "A young lawyer from around the corner — he won an award too — entered daddy's name. When the judges came in July, I just said they came to see the garden. I didn't want him to do anything different. But when they returned in August to take photos, I had to tell him."

"Was the family excited about the award?"

"Excited!! We made copies of the certificate and mailed it with photos to all his friends and children and grandchildren!"

As Super Senior, Panagiotis won a \$50 gift certificate from W. Atlee Burpee Co. I ask him how he plans to use it.

"We have catalogs. I'm deciding. Right now I'm thinking bulbs. Bulbs are one thing I don't mind spending money on."

Theresa: "You'd better not ask what he does about his bulbs. He takes them all out every year. Then he sifts the soil."

Chletcos: "Yes. In October I did them all up. I get the ground all soft. I put on fertilizer. In November I put the bulbs back in. And I have daffodils and tulips for Easter."

Chletcos attributes his long and healthy life to a good wife, a good family, good genes. And work.

"Working keeps you going. Gardening is my work. Right now I got to get my bulbs

*continued*



'New Guinea' Impatiens, petunias, begonias in containers and pepper and basil seedlings.



Vinca 'Bright Eyes' surrounded by coleus.



Sweet autumn clematis (*C. paniculata*).

in [October]. I got to keep on living. I can't afford to die. My plants need me."

"What do you do in winter when you can't work outside?"

"I plan my summer garden."

"Are you planning something different for next year?"

"Yes. More basil and begonias."

#### winter work

Four months later, in January, still rejoicing in a man whose gardening career spans 22 years although he never planted a seed until he was 79 years old, I revisit the Pine Street house. This time, Panagiotis Chletcos, wrapped in an afghan, sits dozing in a big easy chair, rather like a comfortable hibernating bear.

Theresa Anastasia, vibrant as before, speaks softly: "He gets tired and lazy in the house all day. This winter he can't even water the plants on the back porch and upstairs because he can't see and gets water all over the place. Outside, that doesn't matter."

As Theresa serves coffee, Chletcos stirs in his chair and tells about the time in 1963 when he had coffee and sweets in Jerusalem with The Patriarch and King Hussein of Jordan.

"That was a big day for me," he recalls, kind eyes enlarged by thick lenses.

"How did you use the \$50 Burpee prize?"

He pushes the afghan aside, sits straighter and grins. "It's in the ground. Bulbs! All lilies! Now I have a lily garden right in the

middle of everything."

Theresa brings the catalog with photos of the lily choices from the Aurelian Lily Collection and reads the names aloud: "African Queen, Enchantment, Perfection, Black Dragon, Golden Slipper."

Fully revived, Chletcos escorts me to the plant-packed back porch. Its south-facing windows overlook the garden, now colorless except for the green of a lone hemlock.

Chletcos holds up a potted basil. "Last year I had five kinds of basil. Now I have six! This new one looks like a gardenia and smells beautiful!"

We return to the warmth of the living room where the imposing grand piano is a reminder that the youngest Chletcos daughter and her daughter, too, are pianists. Panagiotis Chletcos settles into his chair, surrounded by photos and mementos he can no longer see. He sits tranquilly but his strong, work-worn hands are restless, moving — fingers tapping. Snow is falling outside on Pine Street.

"Lot of work to get done. Fix the pots, sort the seeds, mix the fertilizer." The surging life force is apparent as the planting plans percolate. "They'll be coming up soon, my lilies. And then the basil. When the seeds start coming up I feel good. With my own hands I do it. Then I sit down and have a smoke and a rest. And enjoy."



Natalie Kempner is founder and retired director of the Norris Square Neighborhood Project, an environmental education center in North Philadelphia. A fervent fan of Philadelphia gardeners, she frequently writes about their victories in the battle to reclaim the city's wastelands.

# Versatile Container Gardening

By Charles Marden Fitch

Planting in containers is a versatile way to garden. You can place flowers, shrubs, and vegetables anywhere you wish, so long as the light exposure is suitable for the plantings you enjoy. There is still time to plant vegetables and annuals in containers, for summer into fall results. Started plants offered at garden centers are usually available after mid-April. You can also grow most vegetables easily from seed, at a great savings. Herbs and some smaller-growing vegetables in containers are easy to move indoors when cold weather comes.

## container choice

Plastic, wood, cement, and glazed clay containers are the most practical choices. These materials dry out more slowly than unglazed clay so there is less danger of your plants drying out completely if you miss a day of watering. Only for herbs such as thyme, and succulents like *sempervivum*, would I risk using plain clay pots outdoors in the summer.

Giant ornamental clay containers of terra cotta, although expensive and heavy, are attractive. These big pots don't dry out too fast so they are practical for many plants, especially geraniums, dwarf marigolds, and miniature roses. Put these heavy containers in place before filling them. They are difficult to move once filled with moist planting mix.

In my garden the most useful outdoor containers are oak barrels made by sawing whiskey-aging barrels in half. These sturdy half-barrels are 24 inches across by 15 inches deep, slightly wider at the top than bottom, with a wide band of metal holding the staves together on the outside. Garden centers offer these containers at prices ranging from \$10.00 to \$20.00. If drainage holes are not already drilled in the bottom of each barrel, I use a 1/2" bit on a power drill to make six or eight holes. Without drainage holes a moist planted barrel is watertight.

To discourage woodrot I paint the barrels inside and out with clear Cuprinol wood preservative. After two days drying and a quick rinse with hose water the treated barrels are ready for planting. Some wood preservatives are toxic to plants but Cuprinol is safe when used as described.

## planting soils

Commercially prepared potting mixes,

based on peat-lite formulas, are practical and inexpensive. Plastic bales of potting mix are available at garden centers. I have tried a number of national brands and find they produce similar results. Last summer the vegetables grew well in Jiffy-Mix, Pro-Mix, and Terra-Lite Vegetable Potting Soil. You can also make your own planting mix by combining equal parts of sphagnum peat moss, perlite, and vermiculite plus five tablespoons of dolomite limestone per bushel of mix.

Modern peat-lite type mixtures have very little available nutrients. Some of the commercial mixes have fertilizer that sup-



photo by Charles Marden Fitch

'Super Chili,' 1988 All America Selection. This sturdy bush was still producing fruit in March. The author brought the container-grown plant into his sun room in late September. All of the fruit set outdoors continued to ripen, and flowers kept setting new peppers. In December the author picked a big batch of fully ripe chili-peppers. A brief attack of aphids slowed the bush somewhat, but it continued to set more fruit. Use the chili-peppers roasted as a garnish, and as a spice on tofu, vegetable, and cheese dishes. 'Super Chili' fruits dry well in the sun and also keep easily when frozen.

plies adequate nutrients for a few weeks. I add a slow-release fertilizer such as Osmocote or MagAmp, according to package directions, so the container-grown plants will have a basic steady supply of fertilizer. Once the weather is consistently warm and plants are growing fast, I supplement the added fertilizer with liquid fertilizers such as Hyponex and Miracle Gro, or other chemical formulas diluted in water according to package directions. Most vegetables need much more fertilizer than flowering annuals.

## watering

Watering container-grown plants can be relaxing if you have time to study the plants

as you hold the hose, but in hot dry weather it can become a tiresome task. To reduce watering chores, add a mulch on top of the planting mix. My favorite is ground sugar cane (Staz-Dry or similar type of bagasse) but that isn't easy to find in the north so bark chips are a suitable alternative. Another way to reduce watering time is to plant in a mix designed to retain moisture without smothering roots. One such formula is sold as Hydrosol.

Having a permanent soak or drip device in each large container simplifies watering. With such an arrangement you need only attach a trickling hose to the main input and all of the containers will be slowly soaked.

## wicks

Wick watering is practical where you can provide a waterproof reservoir under or alongside each container. I use wick watering as a supplement to regular top watering, most useful for containers that need water every day. A bucket or deep tray next to each barrel sends water to a wick fashioned from absorbent cloth. This is an ideal way to recycle old towels, cotton shirts, and clean-but-worn wool socks.

One of my most successful cucumber plantings was kept happily moist through an old varella sock, the full British length being quite useful in going from bucket to barrel. After several weeks a network of roots grew into the sock fibers and eventually reached the water bucket. Fertilizing wick-watered plants is easy since one need only fill the bucket with 1/2-strength fertilizer solution every week.

## stakes

Crops such as tomatoes and cucumbers are easier to harvest and groom if they are trained up stakes or grown into a 2- to 3-foot tall wire cage pushed into the planting mix. If your growing site is windy be sure to push the stakes or cages well into the mix, and perhaps even weight the containers with a big rock or two so summer winds won't topple your towers.

Insert stakes and wire cages before or right after planting the barrels or other containers, so no roots will be damaged. Coarse twine or plastic plant ties are useful for training tall crops.

## selections

The flowering plants sold for bedding

*continued*

use are fine for even small containers. These include coleus, impatiens, petunias, portulaca, geraniums, verbena, and dwarf zinnias. I enjoy mixing vegetable plantings with flowering annuals, to get color and food in the same container. For example, last year I had bright yellow dwarf marigolds around the edge of barrels with tomatoes.

Choose vegetables that catalogs or nursery people describe as compact, dwarf, or ideal for containers. When herbs, tomatoes, and peppers are in containers I can place them where they get maximum sunlight. Once crops are almost ready for picking I can even move some of the smaller containers to a nearby terrace or close to the kitchen door.

In the 1989 season I had excellent results with a compact creeping mini-Greek basil (*Ocimum basilicum* cv.) although seed did produce a few plants much taller (to 12 inches) than the listed mini-cultivar. The true small plants did well around the edges of containers in which I had hot pepper 'Super Cayenne' and tomato 'Golden Mandarin.'

The new tomato 'Golden Mandarin' makes very smooth persimmon-shaped golden fruits; flavorful and nice to look at.

'Super Cayenne' pepper, a 1990 All-America Selection winner, makes ultra-hot thin peppers, which grow hanging down. You can pick them green but it's more fun to let them turn bright red. The hot taste seems stronger to me from the red ripe fruit. My plants grew bushy, 24-30 inches tall, but I still used a wire hoop and a few bamboo stakes to stop the wind from blowing over fruit-filled stems.

You might prefer a milder pepper such as the new cross between the standard green Bell sweet pepper and a jalapeno

photos by Charles Marden Fitch



Squash 'Smoothie' growing in a 20-gallon tub.



Tiny *Capsicum annuum* 'Bird Pepper,' very hot taste.

chili, 'Hot Shot.' I grew 'Hot Shot' in a big barrel set in full sun. When the plants made more fruits than we could eat I just put the extras in a zip-lock freezer bag and froze them. No special treatment is needed to freeze peppers if you are going to use them in cooking.

Dwarf French bean 'Dandy' produced beans all summer long in a 6-inch pot. A runnerless strawberry grown from seed (Alpine Rügen Improved from W. Atlee Burpee Co.) made an ideal edging around a barrel planting of Pepper 'Better Belle.' The strawberry plants even came through the winter in the container, with only a slight straw mulch as protection. By late

April they were already in flower.

### *late-season benefits*

Container-grown plants, especially compact sorts such as herbs and bedding annuals, can be kept producing well into the fall by moving the containers into protected locations when frost threatens. Modern wood-look plastic windowboxes make ideal outdoor containers for a summer patio or deck, then in the fall the whole container can easily be brought into the house, sunroom, or other bright location for winter enjoyment.

### Sources:

'Hot Shot' peppers

Johnny's Seeds  
Foss Hill Road  
Albion, ME 04910  
(207) 437-9294

'Super Cayenne' pepper

W. Atlee Burpee Co.  
300 Park Avenue  
Westminster, PA 18974  
(215) 674-4915

Mini Greek Basil

*Ocimum basilicum*  
'Fino Verde Compatto'

Japanese hybrid tomato  
'Golden Mandarin Cross'

Shepherd's Seeds  
30 Irene Street  
Torrington, CT 06790  
(203) 482-3638  
(catalog sales)

6116 Highway 9  
Felton, CA 95018  
(408) 335-5400  
(hort. questions)

Runnerless strawberry

'Alpine Rügen Improved'  
W. Atlee Burpee Co.  
300 Park Avenue  
Westminster, PA 18974  
(215) 674-4915

Wayside Gardens  
1 Garden Lane  
Hodges, SC 29695  
(800) 845-1124

### PROCEDURES FOR CONTAINER PLANTINGS

1. Cover drainage holes with coarse pebbles or broken clay pots. Large barrels and similar containers should have about one inch of drainage material.
2. Add several large chunks of plain hardwood charcoal.
3. Spread a layer of unmilled sphagnum moss about one inch thick over the drainage material and charcoal.
4. Add the planting mix.
5. Some gardeners may wish to fill the bottom half of each large container with homemade compost so roots can reach a nutrient-rich mix when plants become established.
6. Water the planting mix until it is fully soaked and water comes out the drainage holes.
7. Let the planter drain and settle for at least one day before setting in the plants.
8. Push in stakes or other supports.
9. Water the newly planted seedlings with a solution of 1/4-strength water-soluble fertilizer (about 1/2 teaspoon of chemical such as Hyponex per gallon of water) plus a few drops of SuperThrive or similar transplanting hormone to encourage new roots.
10. Label plantings to keep track of what you are growing. Make notes on your favorites for future reference.

Charles Marden Fitch of Mamaroneck, New York, is a well-known photographer, writer and lecturer. He travels frequently to the tropics to search for and photograph new plants. He wrote *All About Orchids* (Doubleday & Co.) and guest-edited *ORCHIDS for the Home and Greenhouse* in the Brooklyn Botanic Garden's *Plants & Gardens* series.



# TOMATO STAKING: The Method to the Madness

By Cheryl Lee Monroe  
and Thomas Monroe

While gardening as a team is a great experience because we share ideas and opinions, we have certainly fine-tuned our negotiating skills. Our vigorous debates go on from season to season. Our common goal is nevertheless the same, and our love of gardening leads to concessions, a few lessons and some successes. This is a fair description of the dynamics of our gardening team and since we first turned a shovel on our joint garden, one of the major debates has been our tomato crop.

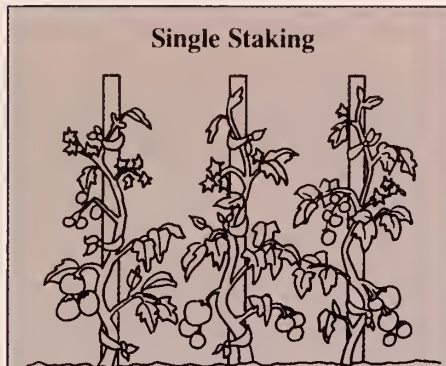
A garden staple, tomatoes require considerable attention and our joint gardening began with lots of them. Our first garden had plenty of room and 30-40 tomato plants hardly put a dent in the space. We ate, canned and shared the abundance.

One technique we borrowed from our experiences was to let our plants sprawl on the ground — a practice learned while working at the USDA Research Center in Beltsville, Maryland. Layers of grass clippings and leaves kept weeds down and protected the fruit. The losses we did have from rot, animals and sunscald were acceptable.

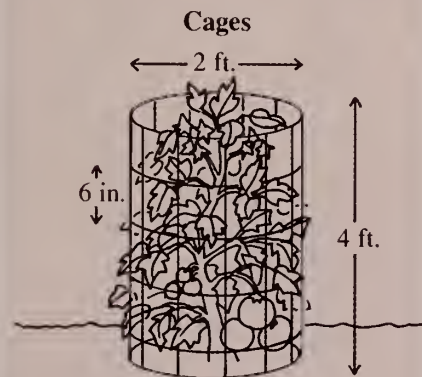
We had great tomato crops but modifications were in order when we moved to a home where space was limited. Not only was there less space, but our interests were more diversified and the competition was fierce. Our goal for the tomato crop was to have enough to eat during the season and a large enough harvest to make canning feasible. Other considerations were accessibility, minimal weeding and watering.

First we considered which varieties we would use and their growth habits. Tomatoes are either determinate, indeterminate or semi-determinate. **Determinate** varieties have short stems ending in fruit clusters and provide fruit early in the season. As fruit begins to develop, growth stops, giving these varieties bushy habits that do not require staking. These varieties don't lend themselves to pruning as it reduces the yield.

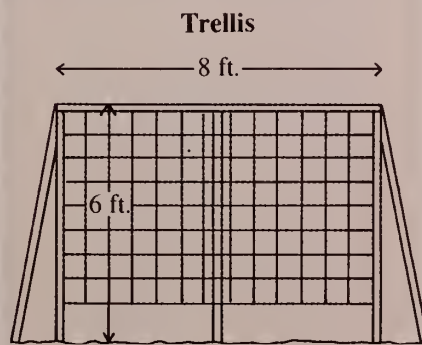
**Indeterminate** varieties bear fruit in late



Suckers are pinched to maintain one to three main stems trained on single stakes.



Heavy steel mesh with 6-inch spaces allow for easy access to fruit.



Trellis-like structures should be braced and/or tied together with top bars to keep them stable.

season and grow freely, if not rampantly, until frost. These plants continue to grow and develop fruit clusters and perform best when pruned and staked.

We now only use Better Boy, an indeterminate variety, because it is good eating, cooking, disease-resistant, and perfect for our small garden.

## staking

We considered staking mandatory for the late season varieties we chose, but debated the best method. Our first year began with single stakes for each plant, and by pinching suckers we had a limited number of main stems to tie to the stake. We found that we did not prune enough and although the yield was good, it was difficult to keep our monster plants tied up as the season wore on.

The following year we abandoned single stakes and were prepared with a supply of heavy steel mesh cages approximately 4 ft. tall and 2 ft. in circumference. The cages were sturdy and the 6-inch spaces in the wire mesh were large enough to reach through. Again we pruned, but were reluctant to remove a significant number of growing tips. The plants were soon sprawling up over the cages. Some cages would not remain upright until stakes woven through the wire and driven into the ground provided insurance against tipping.

Our next attempt was a trellis-like structure not unlike that we use for training peas. We were able to fit 12 plants into an 8 ft. x 8 ft. area with ample space to move among the plants.

The planting layout accommodated three rows of four plants in a north/south orientation that provided the best sun. Each row had three 2 in. x 2 in. stakes averaging 6 ft. above the ground. These were secured together with 1 in. x 1 in. wooden braces. Stapled to the frame was the 6-inch heavy wire mesh recycled from our cages. Finally, 2 in. x 2 in. strips of wood were used at the top to tie all the rows together and keep them rigid.

As the tomato plants grew they were

*continued*

## TOMATO STAKING

trained to the wire. We have found cloth and old shirts torn into strips provide the best soft ties; they don't damage the stems. Diligence in tying and training early in the season minimizes work when fruit production peaks. Frequent tying allows the ties to support the weight of the plant and its fruit.

This year our tomatoes flourished. We pinched all the lower suckers early and tied all the other branches. We filled the aisles with grass clippings to keep the soil moist

and cool and combat the weeds. As the plants matured we pruned the top branches to encourage more secondary branching and fruit. When the plants began to yield we found ourselves easily walking among 6-foot walls of tomato vines. The frame allowed good ventilation and provided enough shade to prevent sunscald on the fruit.

Now that we have found a mutually acceptable, successful solution for our

tomatoes maybe we can tackle some of the other great debates we are waging — over the leeks, for example.

Cheryl Lee Monroe is administrative coordinator for the Pennsylvania Horticultural Society and Thomas Monroe is sales horticulturist for the Conard-Pyle Company in West Grove, PA. They share a garden in West Chester, PA.

photo by Charles W. Rogers



Yodel Hybrid mix (*Lisianthus russellianus*) grown in the Meadowbrook Farm cutting garden. *Lisianthus* makes a marvelous cut flower, and the ones in this photo lasted almost four weeks after they were taken from the garden.

# THE PRAIRIE GENTIAN

By Charles W. Rogers

*Call it Lisianthus or Eustoma; it's an old, but new flowering plant for the garden. A plant native to large areas of the United States, and one that is considered in many places, a weed, a common pest. Now improved by selection, hybridization and breeding, it has become a welcome addition to the gardener's palette. Lovely shades of white, pink and purple-blue blossoms, in the shape of large cups, are born on striking grey-green foliage. Combined they make lisianthus a marvelous blooming plant, ideal for the flower border or as a cut flower. A sure winner for the 1990s.*

Whatever name you use, the *Lisianthus* is a great flower. With stems averaging 24 inches in height, flowers both single and double and a primary color range of white, pink and blue and now offered in a wider range of shades of these primary colors, including deep blue, mid-blue, lilac and rose. A superior plant that deserves to be used more and more in our gardens.

### propagation

*Lisianthus* is grown from seed and is not the easiest seed to germinate. The seed should be sown in the light well-drained sterile soil medium, covering the seed lightly with the same mix. Some growers suggest covering the seed pot or flat with clear plastic until germination takes place. Sterile milled sphagnum moss is one of the old standbys for germinating difficult seed and might offer the greatest chance of success; cover seed lightly with it.

*Lisianthus* is slow to germinate and slow to grow, requiring six months from seed to flower. The seeds should germinate in 10-21 days. Growers recommend sowing the seed early. Some gardeners are known to start them as early as late December but most growers suggest January to mid-February. The young seedlings from germination up to three or four weeks after transplanting are susceptible to damping off caused by too much moisture. So the advice should be, grow *Lisianthus* from seed if you are strong of character, of a persistent nature and ready for a challenge. It might be wiser to buy the plants already grown from a plant shop or garden center during May for success.

### culture

When four true leaves appear, about 8-10 weeks after germination, it is time to transplant the seedlings. Take care not to damage the root system since *Lisianthus* are not happy when their roots are dis-

turbed. Seedlings should be potted into a light, well-drained soil and grown onto a size large enough to be planted in the garden. The transplants should be shaded until well established and then grown in full sun.

While it is not necessary to pinch the plants, pinching causes the plant to branch freely, while delaying the blooming time by only several weeks. A plant that is not pinched will produce a single or center stem with blooms occurring earlier than the pinched plants.

Plants grown from seed will flourish in a garden setting if the soil is fertile and well drained. A normal fertilization program will insure healthy and vigorous plants. Flowering should occur in July and continue until frost. My experience indicates good flowering in the cooler temperature of fall.

I've had some success with wintering over well-established plants in a deep cold frame. It is possible to treat *Lisianthus* like foxglove, canterbury bells and even snapdragons, and sow the seed in July and winter the plants over for earlier bloom the following year.

*Lisianthus* makes a great contribution to any flower bed or border, as well as some promise as a pot plant and is marvelous in the cutting garden. As a cut flower, they have a great lasting quality, and it is not unreasonable to expect two to four weeks pleasure from them once cut and kept in fresh water. As a matter of fact, the photos accompanying this article were blooms that opened on stems that were cut at the end of October, with the large buds opening over the next four weeks.

Charles W. Rogers is manager of Horticulture at Meadowbrook Farm Greenhouse. Former curator of Horticulture at the Philadelphia Zoo, he founded the Association of Zoological Horticulture.



### what's in a name

"A piece of cake" was my reaction to a request to write an article about *Lisianthus*. I have grown it, used it in flower arrangements and admired it for its clear color and handsome appearance. Then came the research and what an eye opener. *Lisianthus* is not listed in many plant books, not even as a cross reference. So I looked up the other name I knew and there it was *Eustoma grandiflorum*, the prairie gentian. The prairie gentian has a range through the Great Plains and extending from South Dakota in the north to the Mexican border in the south, from Florida in the east to Texas in the west, surely a wide range. *Eustoma grandiflorum* is commonly known as Texas blue bells, as well as prairie gentian. The name *Eustoma* comes from the Greek — "Eu" — meaning good or well and "toma" a mouth — an allusion to the wide-mouth corolla of the blooms.

The plant is listed in books as *Eustoma grandiflorum* or as *Eustoma grandiflorum russellianus* or as *Eustoma russellianus*; it also appears as *Lisianthus grandiflorum* or *Lisianthus russellianus*. Whatever name we choose to call it does not detract from the generous adjectives I've heard used to describe its blossoms. A reasonable way to separate the names is to consider *Eustoma grandiflorum* as the native wild flower plant and *Lisianthus russellianus* as the cultivated variety.

As with most generalizations, however, there are some problems and these show up in seed catalogs. Thompson and Morgan, Seedsman list it as *Eustoma grandiflorum* and in parenthesis (syn. *Lisianthus russellianus*) and offer a single hybrid mix as well as a double-flowered mix. Park Seed Co. lists it as *Lisianthus* Park's Hybrids, a half-hardy perennial; W. Atlee Burpee & Co. list it as *Lisianthus*, (*Eustoma grandiflorum*, prairie gentian) and offer a Yodel Hybrid series (*Lisianthus russellianus*).

### Sources:

#### Plants

Any good plant shop or garden center.

#### Seed

Thompson and Morgan  
P.O. Box 1308  
Jackson, NJ 08527

Listed as *Eustoma Grandiflora*  
F1 Hybrid Mixed  
F1 Hybrid Prima Donna  
(Double Flower)

W. Atlee Burpee & Co.  
Warminster, PA 18974

Listed as *Lisianthus* —  
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Park Seed Co.  
Cokesbury Road  
Greenwood, SC 29647

Listed as *Lisianthus*  
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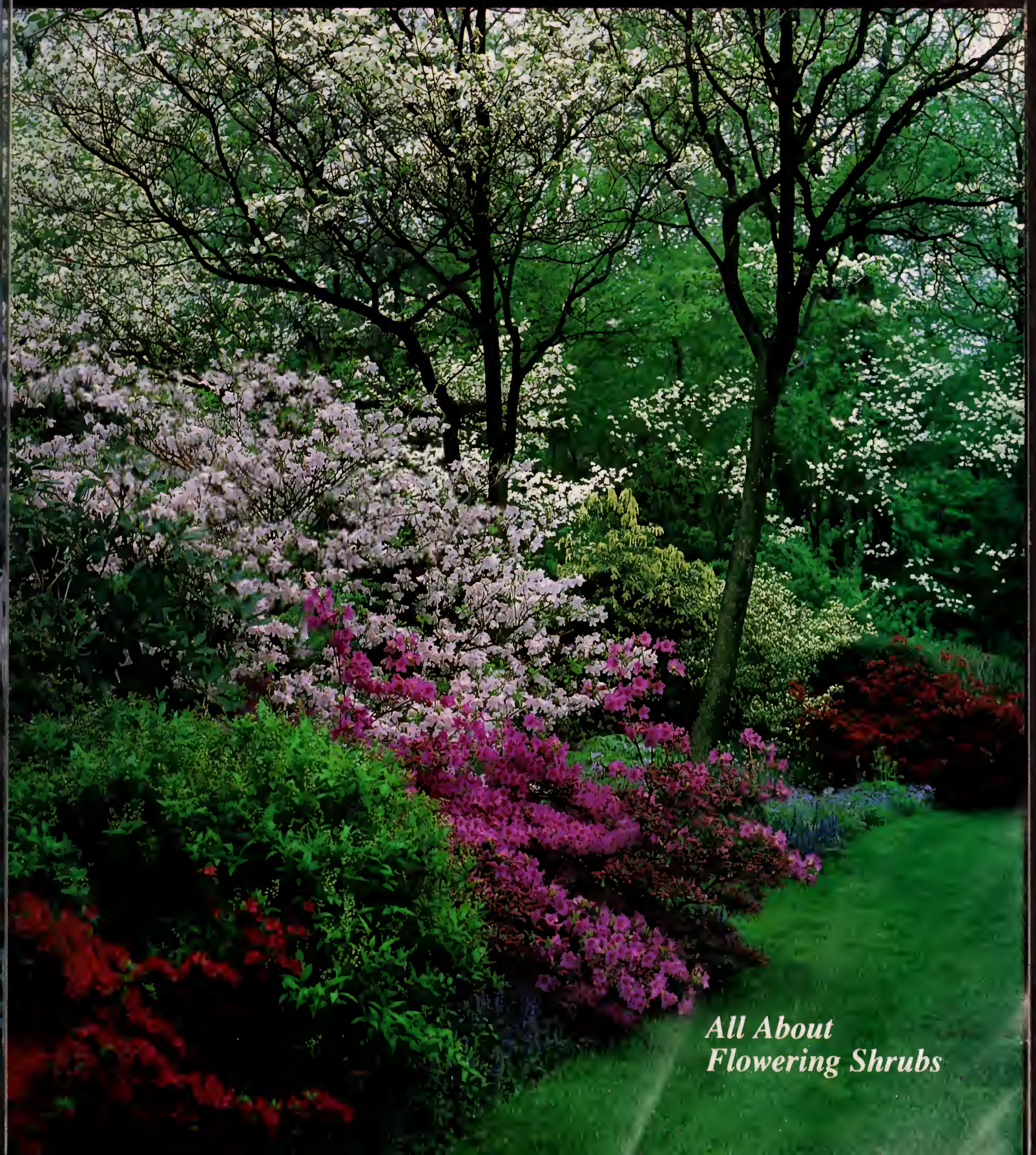
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**Marco Polo Stufano**  
in the Greenhouse  
at Wave Hill.  
See p. 10

# GREEN SCENE

THE MAGAZINE OF THE PENNSYLVANIA HORTICULTURAL SOCIETY • JULY/AUGUST 1990 • \$2.00



*All About  
Flowering Shrubs*



in this issue



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**Front Cover**

In spring, brightly colored azaleas, *Pieris* and dogwood bloom. In the foreground, to the left, a *Deutzia* will bloom presently.

**Front Cover:** Photo by Derek Fell  
**Back Cover:** Photo by Paul W. Meyer

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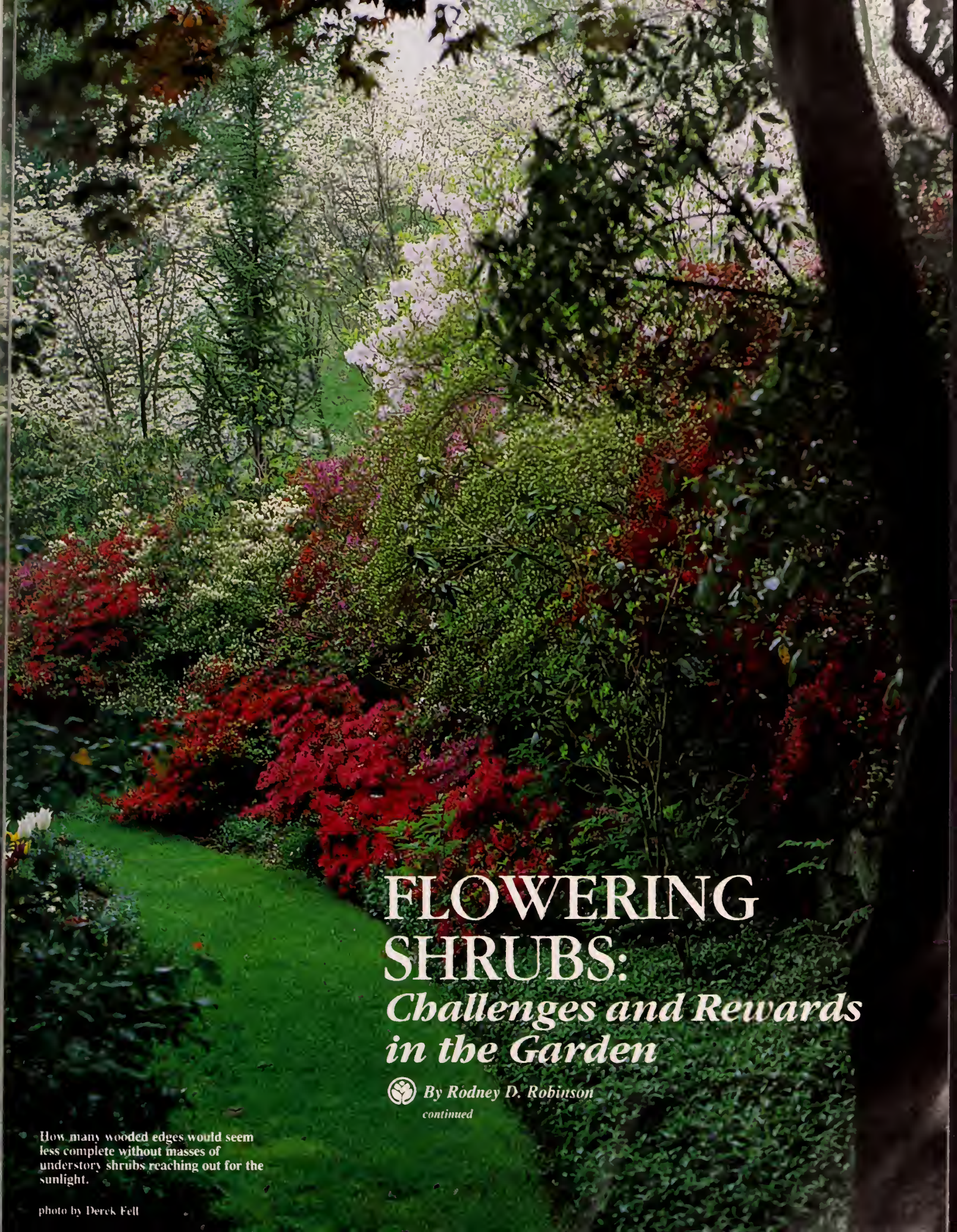
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# FLOWERING SHRUBS: *Challenges and Rewards in the Garden*



By Rodney D. Robinson

*continued*

How many wooded edges would seem less complete without masses of understory shrubs reaching out for the sunlight.

photo by Derek Fell



The *Daphne x burkwoodii* 'Carol Mackie,' combined with white birch trees and liriopse, become the most successful combination in the garden.

**A**s a garden enthusiast I find flowering shrubs offer a greater variety of seasonal effects than any other single plant group I can think of. In the spring they bring us an array of colorful flowers; in summer, choice foliage; in fall, colorful leaves and fruits; and winter offers interesting branching patterns, complex textures and sometimes evergreen foliage. And yet, as a designer, I find that flowering shrubs present the greatest challenge.

The countless possibilities of appealing flower, bloom time, fruit, texture, form, height, spread, etc., available to the designer are only matched by the variety of ways we can use flowering shrubs in our gardens. The possibilities seem endless and in my own experience it is this abundance of choice that can be hardest to manage. It's easy to lose control. The well composed garden requires a careful approach that includes knowing growth habits, understanding the role flowering shrubs play in a garden, and awareness of design techniques.

### *form is critical*

Because of their size and seasonal variety, flowering shrubs play a structural role in the garden as well as an ornamental one.

Although the description "flowering" might suggest that color is the key ingredient to the shrub's usefulness, I think overall form is more critical. A flowering shrub's form often determines where it can be used most successfully. Every garden composition requires some plants that lend

---

*Although the description "flowering" might suggest that color is the key ingredient to the shrub's usefulness, I think overall form is more critical.*

---

scale and proportion to the setting. Similarly, large plants are usually needed to give a sense of space and to anchor other elements in the garden. Flowering shrubs, being large and permanent, are often best suited for that purpose. For this reason, shrubs are the backbone of most gardens' compositions.

How many perennial borders have you seen planted without some backdrop of shrubbery? How many wooded edges would seem less complete without masses of understory shrubs reaching out for the sunlight? Shrubs are used to soften buildings, balance their design and embrace the landscape. In winter, when the foliage is gone and herbaceous plants have disappeared, the colorful twigs and bold forms of flowering shrubs are often all that remain to tie the landscape together.

Ask yourself if the shrub is best suited as a specimen to occupy a prominent location? For this purpose we select shrubs that exhibit conspicuous flowers, showy fruit or bold forms. Common specimen shrubs are butterfly bush, fragrant mock orange, and panicle hydrangea.

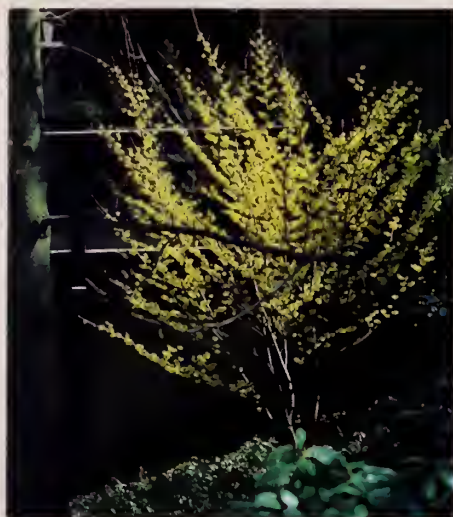
Some flowering shrubs are better suited

for massing. These shrubs usually have a less interesting form and are grown for a single-season effect like a conspicuous flower or a delightful fragrance: e.g. fragrant honeysuckle, viburnums like doublefile, and of course forsythia. Shrub masses can be composed of a single or mixed species. Remember to follow the same principle used in planning a perennial border. Plant shorter shrubs in front of the taller ones increasing height as you work your way back. Massed shrubs can be used to screen unwanted views, direct attention and delineate space. Shrubs can create a fairly solid barrier, but spread out some shrubs in front where they carefully develop and avoid an overgrown thicket appearance.

### *evaluating plant's qualities*

As with all garden designs, before selecting individual plants consider how they will look in relation to the other plants in your garden. I begin by considering the qualities a certain plant or grouping ought to have before I think about what the actual plant will be. We tend to pick our favorite plants and then find a way to fit them in. In my view, this approach will create the classic "square peg in a round hole" dilemma, which more than likely will yield a plant collection instead of a garden.

In a plant collection attention is focused on the individual. By definition the goal is to have a great variety of individuals. In the garden, however, you need first to pay attention to the whole. The key to successful



Top: The witch hazels are best known for their early bloom. Bottom: Their winter branch pattern is equally appealing.

garden compositions involves a controlled plant palette and clear performance criteria as to color, texture and form. Your garden can include your favorite plants, but each plant selected should fit your criteria to insure its successful contribution to the garden as a whole.

For example, some years ago I was designing a small urban garden for an owner who was keen to have white birch somewhere in his yard. Bordering the south side of the property was a continuous six-foot privacy fence. I had intended to break up the straight line of fence with a small bed while providing some light shade for the yard from that direction. In one portion of the garden we had planted golden variegated liriopé and decided to extend the liriopé across the yard for continuity. I chose to locate a small grouping of white birch among the liriopé, thereby using a favorite plant to meet a compositional



Oakleaf hydrangea soften a wall in a shady location.

need. At this point I felt we needed to include a flowering shrub to further soften the fence and add more plant mass to that side of the garden. The bed was lightly shaded and well protected. After visiting some nurseries to see what was available, I chose to plant five *Daphne x burkwoodii* 'Carol Mackie' among the birch trees. The daphnes were not well known to me but in trying to find a companion for the other plants they were hard to resist. For me, the yellow-edged green leaves of the daphne, combined with the buttery white bark of the birch trees and chartreuse-green of the liriopé, became the most successful combination in the garden.

### **growth habits**

Know about growth habits. Many flowering shrubs can become quite large, and for this reason some people hesitate to use them. Viburnums can easily reach heights and spreads of 10 to 12 feet, as will winterberry and witch-hazel. Many azaleas will grow to be six or eight feet wide, and mountain laurel can reach 12 feet in height if allowed to. Some flowering shrubs like redb twig dogwood, bottlebrush buckeye, and oakleaf hydrangea can spread indefinitely due to their stoloniferous habit. Be aware of plants like carolina allspice, which we like to plant near a walk or entrance. Their fragrance is spectacular, but they sucker quite readily and grow to be 10 feet wide.

Most flowering shrubs require little attention once they become established, but don't let this lead you into a false sense of security. We are quite willing to put great effort into tending lawns and perennial flowers, but because shrubs can go unnoticed we easily forget about them. No example better illustrates this than the typical residential foundation planting. They remind me of kittens. The shrubs are adorable when we first plant them, before we know it they are too big, there are too many of them, and no one wants them. Be willing to spend the time it takes to shape your shrubs through selective pruning. And know whether your shrub requires cutting back every spring, as do buddleia and vitex species.

Remember also the permanency of flowering shrubs. Perennial flowers are easily moved about and indeed, most of us expect to dig and divide them. But once a flowering shrub is planted it usually stays put. So plan ahead and be aware of the shrub's ultimate height and spread. If you want an immediate effect either plant larger shrubs or be willing to relocate some as they grow.

### **enhancing garden size**

Is your garden large or small? Because your garden has limited space doesn't mean it has to look small. The challenge is not the amount of space available, but the amount of interest provided. Even a small

*continued*



Usually crowded among other shrubs *Kolkwitzia* will demonstrate specimen qualities when allowed to stand alone.

garden can be designed so that it reveals itself in stages. Such diversity and richness within a garden increases its interest. If you can see your entire garden at a glance it will, over time, become boring.

In a small garden you may not have enough room for trees, so use flowering shrubs to define space within it. In one small city garden I designed, I divided an 18-foot by 30-foot area into two spaces by

pinching the middle with plantings of *Cercis canadensis* on one side and *Rhododendron catawbiense* with *Acer palmatum dissectum* in mass on the other. The planting established a barrier that directs your eye through an opening to the space beyond. A sculpture, which is quite large, no longer appears to be on top of you. You can see the sculpture through the opening without revealing the entire space.

Because I prefer gardens that reveal themselves slowly, I often place a small tree or flowering shrub in the foreground, enabling you to peer through or over for a glimpse before moving around it to see more. Flowering shrubs used for this purpose should have enough characteristics to interest you from a distance and at close range. The delicate white bottlebrush flowers of fothergilla become more beautiful the closer I get, as does the foliage and stem color of Virginia sweetspire in autumn.

It is easy to overlook the subtle things. Plants, like native deciduous azaleas, offer an impressive bloom that draws you toward them from some distance. As you approach you notice their fragrance. And upon closer inspection you admire their delicate flower structure. The challenge is to recognize how each of those qualities can best play a different role in the garden experience. The well composed garden is one where each plant is carefully used and the ornamental value of each plant is considered for its contribution to the whole. Try to look beyond single effects and consider all that each plant has to offer.

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## SHRUBS MENTIONED IN ARTICLE

Common Name	Botanical Name
Butterfly bush	<i>Buddleia davidii</i>
Fragrant mock orange	<i>Philadelphus coronarius</i>
Panicle hydrangea	<i>Hydrangea paniculata</i> 'Grandiflora'
Fragrant honeysuckle	<i>Lonicera fragrantissima</i>
Viburnum, doublefile	<i>Viburnum plicata tomentosum</i>
Forsythia	<i>Forsythia</i> spp.
Golden variegated liriopie	<i>Liriope muscari</i> 'Variegata'
White birch	<i>Betula pendula</i>
Daphne	<i>Daphne x burkwoodii</i> 'Carol Mackie'
Redtwig dogwood	<i>Cornus sericea</i>
Bottlebrush buckeye	<i>Aesculus parviflora</i>
Oakleaf hydrangea	<i>Hydrangea quercifolia</i>
Carolina allspice	<i>Calycanthus floridus</i>
Redbud	<i>Cercis canadensis</i>
Rhododendron	<i>Rhododendron catawbiense</i>
Japanese cutleaf maple	<i>Acer palmatum</i> 'Dissectum'
Fothergilla	<i>Fothergilla gardenii</i>
Virginia sweetspire	<i>Itea virginica</i>





Bottlebrush buckeye  
bloom (*Aesculus  
parviflora*).

*The author, an avid  
plant collector and  
fourth generation in the  
nursery business, picks  
his favorite native  
flowering shrubs.*

# Native Flowering Shrubs in the Landscape

By Richard L. Hesselein

For years, sophisticated gardeners and horticulturists have collected and grown rare and unusual plants from different parts of the world. As their experience has grown, they have tried more and more difficult plants, often with a disappointing lack of success. The native American trees and shrubs that European and Japanese gardeners would greet with delight have tended to rest in obscurity, with few nurseries growing them and few horticulturists using them.

We have now reached a point in our country where many people not only devote a good portion of their recreational time to gardening, but also to ecological concerns as well. We are now concerned about water conservation, pesticide and chemical use, energy use reduction and carbon dioxide buildup. These challenges have an impact on how intelligent gardeners regard their own spheres of activities, and native plants fit hand in glove with all these important concerns.

*continued*



Few people use the flowering horse chestnut shrub, bottlebrush buckeye. The shrub flowers in July when few other shrubs are blooming.

Native plants, those that grow naturally in a specific climate or geographical area, have evolved through natural selection to grow in a vigorous and care-free manner in their own habitat. They have adapted to the soils and temperatures of their home terrains, as well as to the diseases and insect pests, which naturally occur there. Consequently, they should be more maintenance-free than most exotic alternatives, requiring less fertilizer or pesticides. If planted in soil types similar to their natural sites, they are often considerably more drought- or stress-tolerant under typical environmental conditions. Their appearance blends well with other naturally occurring plants in a site. In addition, they require little or no maintenance if they develop naturally without constraints.

Many gardeners already know that native plants in their own environment are almost care-free. What has not been emphasized enough, however, is that we number among our North American natives some of the world's most stunning and visually rewarding plants. Just because such a plant grows near our own back yard does not mean it is common or boring. Although the list of attractive natives is extensive, I have chosen five plants to concentrate on here. Not only are they easy to grow and readily available in a number of nurseries, they are all beautiful in at least one or more of our seasons. We have grown them all for many

years at our nursery and observed them closely in different locations and conditions, and I believe they deserve a lot more recognition and use.

#### *flowering horse chestnuts*

The tree-form flowering horse chestnuts are a common sight in our northeastern landscape, but few people use or recognize the smaller, shrub-form bottlebrush buckeye (*Aesculus parviflora*). It occurs naturally from South Carolina to Florida and Alabama, and is hardy well into zone 4. Its mature height is 8 to 12 feet, with a spread of 8 to 15 feet, forming a multi-stemmed shrub with extensive suckering within the mound. The foliage is neater and more delicate than tree-form horse chestnuts, and is a medium-green in summer, changing to a yellow-green in fall. The flowers make this shrub particularly attractive, as they occur in July when few other shrubs are blooming. At that time white, upright panicles cover the plant (8 to 12 inches long, and 2 to 4 inches wide). They persist for a long time and are followed later by a small crop of glossy, squirrel-enticing chestnuts.

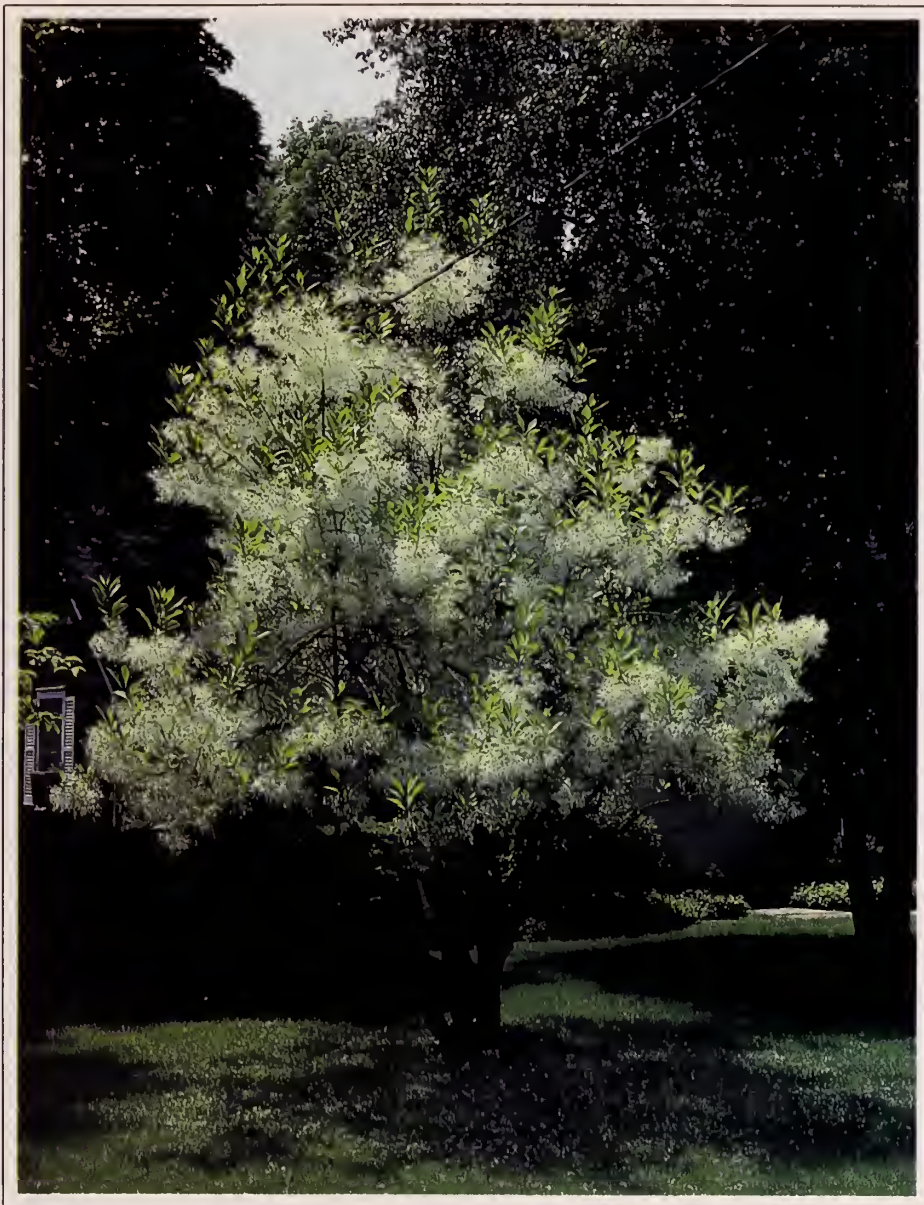
*Aesculus parviflora* can be used effectively in a number of different landscape sites, from a large mass planting, to a mixed border, or as a large single specimen plant surrounded by green expanses of lawn. It does well in a broad spectrum of soil types,

from sandy loams to heavy clays. It flourishes in full sun, but will also grow and bloom well in shade. In summer the foliage is a vigorous green, without the leaf disease that usually disfigures other horse chestnuts in our humid climate. In winter the regular mound shape of the plant's suckering habit is eye-catching.

#### *white fringe tree*

*Chionanthus virginicus* is a large shrub or small tree, commonly called the white fringe tree, because of its exceptionally beautiful 6- to 8-inch long, white fleecy panicles. Its showy, deliciously fragrant blooms in late May and early June make it a nice shrub planted close to a patio, or a window open during the early summer. *Chionanthus* grows slowly, eventually reaching a height and spread of 15 to 18 feet. Its growth habit is open and wide, with large, lustrous dark green leaves, especially on male plants. Although *Chionanthus* is dioecious, bearing male and female flowers on different plants, the flowers are almost indistinguishable. The female plants have an added interest in their frosty-blue to purple pendant fruit, which look like a lovely bunch of blue grapes. They are not easily seen, however, until the leaves drop in the fall, at which time they look like hanging bunches of raisins, on which birds feed enthusiastically.

*Chionanthus* has an extensive natural



▲ The white fringe tree's fleecy panicles are 6-8 inches long. Its deliciously fragrant blooms in May and early June make it a nice shrub to plant near the patio or windows that will be open in early summer. (*Chionanthus virginicus*.)

range, from New Jersey to Florida and west to Texas. Its hardiness is excellent, well into zone 4. It prefers moist, deep, fertile soil, but can tolerate somewhat lesser soil quality. It can be used in the landscape as a single specimen tree, or, as I have used it in my own yard, as a border or screen mass planting. Undoubtedly, this plant's most outstanding characteristic is its lovely fragrance, so it should be planted where people will pass it often. In my opinion, it surpasses any other flowering shrub.

#### witch hazel

*Hamamelis virginiana*, or the common witch hazel, is another plant high on my list of necessary shrubs. It occurs extensively in the wild from Canada to Georgia, and as far west as Nebraska and Arkansas. Its natural habitat is moist, shady forests and riverbanks, but we have grown it in a number of soil types at our nursery and it has always flourished. Its tolerance of shady conditions is excellent, but it becomes

more densely branched and flowers more lavishly in full sun. The small flowers give this witch hazel its special interest. The flowers are four narrow, straplike, clear yellow ribbons, each about 1/2-inch long. The blooming period from mid-October to early December varies from plant to plant since they are usually grown from seed, with all the inherent wild variation. The showiness of the bloom also varies, since some shrubs retain their yellow fall leaves well into the winter, and others drop them early, allowing the flowers to make a much brighter show. *Hamamelis virginiana* usually reaches a height of 12 to 15 feet, so it is excellent as a backdrop for lower, summer-flowering plants, or as a naturally informal-looking specimen. The foliage is a neat, medium green in summer, changing to a striking yellow in fall. The odd-shaped seed capsules grow directly on the branches (where the blooms were found earlier), and when they open in late summer, they shoot out two tiny, glossy black seeds with sur-

prising vigor. Another admirable characteristic of this large, multi-stem shrub is its virtual freedom from pests or diseases. Its low-maintenance qualities, when combined with its unusual blooming time and great fragrance, make it a welcome addition to any landscape.

#### winterberry

When we consider plants that will enliven a dull winter landscape, we usually think of bright berry displays. In this category no plant can surpass *Ilex verticillata*, or common winterberry. It is one of the deciduous hollies, and as soon as the leaves drop early in the fall, the berry-covered stems make a strikingly vivid statement. The shrub is an upright, oval-shaped plant growing 6 to 8 feet high, with a similar spread. Many suckers grow from the base to form a multi-stemmed clump. The summer foliage is a dark green, changing to a rather insignificant bronze in fall. The plant is dioecious (and the flowers are largely unnoticeable), and both male and female plants are necessary for pollination and berry production. The fruit is the most outstanding characteristic of this holly, offering months of spectacular show throughout the winter. The berries are a vivid, bright red and usually 1/4 of an inch across, lining the dark, leafless stems. Branches can be cut and displayed in the house as a solo display, or in combination with other winter greens for an unusual arrangement. The plants are most effective used in large mass plantings, where a male plant can be obscured by the showier females without standing out. *Ilex verticillata* tolerates a wide variety of soil types, but is happiest in moist soils with a low pH (4.5 to 5.5), a site that often stunts or kills other plants. It is a native to swamps from Nova Scotia to Western Ontario and Wisconsin, and is even found occurring naturally as far south as Florida. Its cold tolerance is excellent, its fertilizer needs are minimal, it has almost no pests, and its

*continued*



Top: The deciduous holly, winterberry, is striking in the early fall when the leaves drop and the stems are covered with berries.

Bottom: Sweetbay magnolias (*M. virginiana*) bloom well in shade but are showiest in full sun. They bloom from June to September.

10

berries are a significant late winter food source for northern birds.

Breeders and growers have paid a considerable amount of attention to selecting showier, larger berried clones of this holly. The selections produce either more fruit per branch, or larger berries than many naturally occurring plants, and since they are propagated by cuttings of genetically identical plants, they will be uniform. Several of these outstanding cultivars are readily available in the trade, and local nurseries or garden centers should be able to recommend good selections.\* I know of no other shrub with more outstanding winter interest, and I feel it has a place in any semi-natural landscape.

\**Ilex* 'Sparkleberry' (*I. serrata* x *I. verticillata*) was given the 1988 Pennsylvania Horticultural Society's Styer Award of Garden Merit.

### **magnolia**

Spring's onset seems to be most clearly announced by the blooms of the star and saucer magnolias in city and suburban yards and parks. But not enough gardeners in the Northeast are familiar with the much longer blooming and more fragrant sweetbay magnolia, one of our finest native flowering trees. This is a pity, because no magnolia has more to offer in more seasons than *Magnolia virginiana*. It occurs in woodland and swampy sites from Massachusetts to Florida and as far west as coastal Texas, and is a common sight particularly in and around New Jersey's Pine Barrens. Unlike most magnolias, it does well in wet soils, but will tolerate drier conditions if the soil is rich and loamy. It blooms and grows well in shady locations, but is showiest in full sun. With an eventual height of 15 to 20 feet, and an equal spread,

it can be used as a large multi-stem shrub or small specimen tree. Its leaves are particularly lovely, with a glossy, lustrous green surface and a distinctly glaucous underside. Most sweetbay magnolias are deciduous, but their leaves persist far into the winter; some clones are evergreen in protected locations. The growth habit is upright, open and graceful, and its bare branches with their lime green new growth are interesting and handsome in winter.

*Magnolia virginiana*'s crowning glory is its flowers and fruit. The creamy white flowers, with 9 to 12 thick petals, open to large blooms, 2 to 3 inches in diameter. It blooms from June to September, with a number of blooms open in a steady succession. Their fragrance is magnificent, a strong lemony odor, particularly delightful in the evening. The fruit, an aggregate of follicles, begins to ripen and open in late summer. The fruit becomes quite red before cracking open to display the bright orange, flesh-covered seeds, which persist for a while before dropping. They are eye-catching, especially against the shiny green leaves. Since the plant is usually still blooming when the fruit is most showy, *Magnolia virginiana* is a particularly interesting addition to any landscape.

### **economic and aesthetic value**

These five choices of outstanding native flowering shrubs for our area are only a tiny portion of what is actually a long and fascinating list of overlooked plants. Everyone is well aware of how much aesthetic and monetary value a good landscaping job can add to homes. Less aware of how much economic impact an intelligent planting can have on energy cost reductions, by cooling structures in the summer and helping them retain warmth in the winter. People are also becoming aware that the wise use of native, acclimated plants not only rewards the eye and the pocketbook, but also lessens our excessive dependence on pesticides and chemical fertilizers. If one can have all these things and still have spectacular and eye-catching plants to enjoy at the same time, it is clearly time to pay a lot more attention to our beautiful and unique native plants.

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Richard Hesselein has a B.S. degree in Botany from Humboldt State University in Northern California. He is the fourth generation in the nursery business, with three sons and a daughter whom he hopes will follow him. He is vice president of Princeton Nurseries and manages their Allentown, New Jersey, division. He is an avid plant collector with a special interest in magnolias. He is a member of the PHS Styer Award Committee.

# FLOWERING SHRUBS: *12 Great Cultivars with Roots in the Delaware Valley*

 By Claire Sawyers

photo by Rick Darke



*Caryopteris* 'Longwood Blue.'

the green scene | july 1990



In many seed companies researchers actively breed and select superior annuals and vegetables, but because most woody plants take years to reach flowering size, few nurseries select shrubs and trees. Most exceptional woody plants are developed or discovered either by passionate amateurs or by staff members of gardens and arboreta who, over the course of their careers, become intimately knowledgeable about plants and the variation that occurs within a species.

The Delaware Valley has been the source of many flowering shrub cultivars, which shouldn't be surprising considering the region's wealth of gardens and knowledgeable gardeners as well as plant professionals. Here are the stories of a dozen of the latest and choicest to be named from this area, described in order of bloom. (For sources, see page 15).

## March, April bloom

In late March or April the winterhazel *Corylopsis* 'Winterthur' is among the first shrubs to flower. For over 30 years this shrub has been growing at Winterthur Museum and Gardens in Delaware, but it wasn't until 1989 that the garden offered it for sale. The parentage of *Corylopsis* 'Winterthur' is thought to involve *C. spicata* and *C. pauciflora*, because it combines the fragrant flowers of *C. spicata* with the finer twigs and denser habit of *C. pauciflora*, but no one knows for sure.

Henry Francis du Pont, who created the Winterthur gardens, showed a stroke of gardening genius with his use of *Corylopsis*. He combined winterhazels, which have pale yellow flowers that dangle like earrings, with the Korean rhododendron (*Rhododendron mucronulatum*), whose soft lavender flowers bloom at the same time. This shrub border is pure garden magic in early spring.

You can get an eyeful of *Corylopsis*  
*continued*



*Rhododendron* 'Hal Bruce.'

'Winterthur' as soon as you enter the parking area for the museum. On a hillside facing the lot, a cluster of marvelously large shrubs have been growing for more than 25 years. The mature specimens are nearly 10 feet tall and twice as wide. They bloom heavily there in the sunny location, although this plant will also perform well in high shade.

Winterhazels flower so early in some years the flowers freeze. A sad event, but the glory of them in flower other years makes that worth enduring. In the years the flowers get nipped, the foliage provides some consolation because it is handsomer than most. Pleated leaves unfold into bright green hearts that remain attractive through the growing season.

Blooming at the same time as *Corylopsis* 'Winterthur' is *Forsythia* 'Winterthur.' But before you skip ahead thinking you don't need another forsythia brightly blasting away in your spring garden, at least hear this. *Forsythia* 'Winterthur' has flowers of a similar light yellow as *Corylopsis* 'Winterthur.' One of H.F. du Pont's favorites, the color will combine with other spring pastels without dominating the way common forsythias do. This plant is a hybrid between *Forsythia ovata* and *F. x intermedia* 'Spring Glory.' It combines the compact habit of *F. ovata* with the large flower size of *F. x intermedia* and it got a dose of pale flower color from both parents. It blooms one to two weeks later than *F. ovata*. At maturity it's about 6 feet tall.

This forsythia's origin is obscure but it has been a part of the spring display at Winterthur for years. In 1987 it was named and introduced into the trade.

#### late April, early May bloom

In late April and early May *Fothergilla gardenii* 'Blue Mist' blooms and provides

#### What is a Cultivar?

Once a unique plant has been selected, it can be identified by assigning it a cultivar name. "Cultivar" stands for cultivated variety, and cultivar names may be distinguished by placing them in single quotes following the scientific name for the species. For example, *Hydrangea quercifolia* 'Snow Queen' is a cultivar with showier flowers than the typical oakleaf hydrangea. Various registrars approve cultivar names and keep track of them much like hospitals keep track of birth certificates. For example, Dr. Elizabeth McClintock at the University of California in San Francisco is the registration authority for hydrangeas. If you want to name a hydrangea, you write to her for approval of the name and to register it. Most cultivars, whether woody or herbaceous, are propagated asexually (by cuttings or divisions, for example) to assure their exceptional qualities are carried to the next generation.

one of the most delightful displays of any flowering shrub. Fothergillas are in the witch-hazel family with winterhazels, and both bloom dramatically before the foliage has expanded, but otherwise, the flowers are dissimilar. Fothergillas produce creamy white flowers that resemble upright bottle-brushes.

'Blue Mist' wasn't named for its flowers though. Unlike the typical fothergilla, this clone has blue leaves, and that's what the name commemorates. The foliage provides contrast all summer if it's planted among other shrubs or perennials and in the fall the leaves turn a bright yellow. So this shrub provides interest in three seasons and should gain easy entry into gardens where space is relinquished only to plants providing long performances. *F. gardenii* stays



below 4 feet in height, so it's well-suited to small gardens.

The original plant of 'Blue Mist' was part of John and Lydia Morris's estate gardens when it became the Morris Arboretum of the University of Pennsylvania in 1932. Its origin before that is unknown. Tom Dilatush, a keen plantsman and nurseryman from New Jersey, showed enthusiasm for the plant in the '70s prompting the staff to pay closer attention to it. In 1987 they registered the cultivar name and introduced the plant. In 1990 it was granted the Pennsylvania Horticultural Society's Styer Award of Garden Merit. To date, it is the only named selection available of fothergilla, an American native shrub.

#### May to mid-June bloom

Next to flower in this dozen is *Calycanthus floridus* 'Edith Wilder,' a selection of carolina-allspice, which starts blooming the second week of May, but may still be in bloom as late as June 15 in the Delaware Valley. Burgundy-colored flowers, frequently in pairs along the stems, start out as balls of fleshy petals at the same time the foliage is expanding. Gradually the petals spread apart and ultimately the blossoms will become a couple of inches across and resemble miniature waterlily flowers. From a distance these dark flowers don't make an impression, but 'Edith Wilder' is best used near a doorway or patio because of its fragrance.

The abundance of flowers and their strong strawberry-pineapple aroma made the staff of the Scott Arboretum in Swarthmore, Pennsylvania, realize this shrub, which originally came from Edith Wilder Scott's garden, was an exceptional plant. (Some carolina allspices have little or no floral fragrance.) It was Edith Wilder who founded the Scott Arboretum in 1929 in memory of her husband, Arthur Hoyt Scott. She was an avid collector of native plants, so it's fitting the Arboretum staff named this American shrub in her honor.

Carolina allspice is trouble-free, although you may want to cut it back occasionally to create a denser habit or to contain its size. It is broad spreading, becoming 10 feet wide and equally tall in time.

Also blooming in May is *Rhododendron* 'Morris Gold,' a noteworthy deciduous azalea from the Morris Arboretum. Paul Meyer, the director of Horticulture at Morris, says that 'Morris Gold' resulted from a cross made by Henry Skinner, probably in the late 1930s, between *R. japonicum* and *R. luteum*. Skinner brought the plant to the Arboretum when he became



*Calycanthus floridus* 'Edith Wilder.'

curator there in the early '50s. In the late '70s when he was the director of the National Arboretum, he was on a walk with Meyer around the Morris Arboretum and singled out a showy azalea. It was one he had bred and brought there many years earlier. By this time Skinner was a renowned authority on azaleas; his assessment carried weight. Together Skinner and Meyer decided it should be named, hence 'Morris Gold.'

Meyer extols this azalea as a good landscape plant because it's stoloniferous, a rapid grower, easy to root (unlike many azaleas), and it can also be cut down if it gets overgrown since it resprouts from the ground. On top of that it's a knock-out in bloom. It turns into a light yellow cloud as flowers in clusters of 10 or more begin to open. Unfortunately, in wet years 'Morris Gold' is susceptible to mildew, and the other drawback is that no one is commercially propagating it yet. Meyer says that with so many named azaleas, it's difficult to gain acceptance for this selec-

tion, despite its many virtues.

In early to mid-May the pink flower buds of *Rhododendron* 'Hal Bruce,' an evergreen rhododendron, open into creamy yellow flowers 3 inches across with the pink dissolving to apricot around the outer edges of the petals. This elegantly flowering rhododendron, is from Winterthur's collection of Dexter Hybrid Rhododendrons.

The late Charles O. Dexter of Sandwich, Massachusetts, made crosses of *Rhododendron fortunei*, a majestic evergreen rhododendron from eastern China with *R. catawbiense*, an American evergreen rhododendron, and others with the aim of producing hardy plants with the beauty of *R. fortunei*. Dexter sold batches of seedlings from his crosses and H.F. du Pont bought thousands of them. Eventually du Pont selected 63 among those he had acquired, simply identifying them by number in the order they bloomed. In the early '80s, Harold (Hal) Bruce, who worked at Winterthur as curator as early as 1959, began to catalog and describe Winterthur's



collection of Dexter Hybrids, which had been largely ignored by rhododendron specialists due to lack of publicity. In the process, Bruce identified several outstanding clones among those du Pont had selected. Bruce wrote: "In garden value these selections are comparable to (or in many cases surpass) named Dexters from other collections. In addition, many of them bloomed unharmed after the record-breaking lows of the winter of 1981-82.... We are getting requests for plants or cuttings from Massachusetts to Georgia. From a horticultural point of view, these unique plants should be released to the public." In describing "number 18," Bruce noted that this one was "universally admired." In 1987, shortly before Bruce died, the staff at Winterthur named number 18 in his honor.

In the Azalea Woods at Winterthur there are several 25-year-old specimens of 'Hal Bruce.' Growing there, the plant has proven hardy to -15°. Ken Day, propagator at Winterthur, and his nursery staff are actively propagating 'Hal Bruce,' but they don't yet have sufficient stock to offer it for sale. Look for its debut in the trade at Winterthur in the next few years, and if you find your mouth watering at the thought of it, visit Winterthur to admire this selection in the meantime.

*Cornus sericea* 'Silver and Gold' blooms from mid-May through June and some years into July, but this shrubby dogwood is ornamental nearly year-round. The leaves emerge with an irregular band of creamy white around the outside and when its flattened clusters of small white flowers open, they harmonize with the variegated leaves. Unlike variegated plants with brightly colored flowers that seem gaudy in bloom (I have *Phlox* 'Nora Leigh' and *Weigela florida* 'Variegata' in mind), 'Silver and Gold' is refined in leaf. White berries form in late summer and have a similar effect. In winter its stems turn a bright yellow and can add dramatic and yearned for color to the winter landscape.

This plant started out as a sport (mutation) on a plant of *Cornus sericea* 'Flaviramea,' the so-called yellow twig

*continued*



dogwood, in Mrs. Lamot du Pont Copeland's garden, known as Mt. Cuba in Greenville, Delaware. A gardener took cuttings off the single branch producing variegated foliage in 1986, and they resulted in shrubs that produce only creamy-edged leaves. The name 'Silver and Gold' was registered the following year, referring to its light summer color and golden winter aspect. It received the 1990 Styer Award of Garden Merit.

Shrubby dogwoods are best planted in sunny situations and that may be even more important with this variegated selection to maintain vigorous growth, but it will take dry sites as well as waterlogged ones. To continue to have a colorful winter display of stems, cut the old stems to the ground once the bark turns brown and scaly. With a yearly pruning, this suckering shrub will also be kept to a medium size, 6 to 8 feet.

The possumhaw viburnum *Viburnum nudum* 'Winterthur' produces flat-topped clusters of creamy white flowers in late May and June. While the individual flowers are tiny, clusters measure 5 or so inches across and are set off by the shrub's lustrous rich, green foliage. In late summer the berries turn white then pink, then blue in the fall while the foliage turns a striking burgundy.

In 1961, Henry F. du Pont sent Hal Bruce on a plant collecting expedition to southern Delaware. Among the plants Bruce collected were two specimens of *Viburnum nudum* for Winterthur's viburnum collection. Bruce wrote of these some years later: "One is far more compact and well furnished with foliage, wide spreading in habit, abundant in flower and in fruit. It is spectacular throughout the month of October with its long-lasting berries, which after their characteristic and colorful changes, remain a bloomy damson blue against the shining foliage, green going to wine-purple. Harold Hillier, the famous English plantsman, was so enthusiastic about this specimen when he visited Winterthur that we decided to name it *Viburnum nudum* 'Winterthur' and disseminate propagating material of it." (*How to Grow Wildflowers and Wild Shrubs and Trees in Your Own Garden*, Hal Bruce Alfred A. Knopf, N.Y. 1976).

Now more than a decade after Bruce wrote that, this fine American native is catching on. Besides the beauty it offers, this shrub adapts to a variety of growing situations, taking wet shaded spots and sunny, well-drained sites with aplomb. And since its mature height is 5 to 6 feet, it fits into small gardens. To get good fruit set, it's



*Itea virginica* 'Henry's Garnet.'

said that you need another clone as a pollinator for 'Winterthur' and so Winterthur sells the plant in pairs.

#### June and July bloom

In June and July *Hydrangea macrophylla* subsp. *serrata* 'Blue Billow' produces a bounty of large flat clusters of intense blue flowers. In the center of each cluster are dozens of tiny flowers; the outside is ringed with showier papery flowers, characteristic of the lace cap hydrangea.

This plant, like *Viburnum* 'Winterthur' was discovered in the wild in the '60s, but on the other side of the world. Richard Lighty found this hydrangea on the slopes of Mount Halla on Cheju Do Island in Korea while on a USDA plant exploration trip for Longwood Gardens. In 1982 he gave a plant to Winterthur and a few years ago the staff there wanted to offer it to the public and so urged Lighty to name it. 'Blue Billow' is currently Winterthur's best selling plant; it has sold out each year since its commercial debut in 1987. It was also awarded the 1990 Pennsylvania Horticultural Society's Styer Award of Garden Merit.

'Blue Billow' is reliably hardy in the Mid-Atlantic states and grows best under light shade in acidic (pH 5.5 - 6.5) moist soil. The flower color depends on the soil acidity — in less acidic soils, the flowers tend to be

reddish. Before blooming, this plant is a 3-to 4-foot rounded mound of large shiny leaves, which contrasts nicely with fine-textured foliage.

During the summer slump, the gap in July between the peaks of spring and late season bloom, *Itea virginica* 'Henry's Garnet' makes its presence known by producing creamy flowers in strands up to a half-a-foot long off the end of nearly every new twig. While the individual flowers are small, together they make a graceful floral display, particularly for that time of year.

'Henry's Garnet' was first collected in 1954 in Georgia by Mary G. Henry, an avid plant collector who explored the U.S. for 40 some years, assembling a remarkable collection of native plants in her Gladwyne, Pennsylvania, garden, which is now the Henry Foundation. The Scott Arboretum received a plant of Mrs. Henry's clone in 1972 and after knowledgeable people repeatedly admired it, the arboretum staff decided to promote this sweetspire. Together with Josephine Henry, Mary's daughter, they settled on a name commemorating its discoverer and the plant's fall foliage color. Judy Zuk, then director of the Scott Arboretum\*, entered 'Henry's Garnet' in the Styer Award Program and in

\*Now president of Brooklyn Botanic Garden



## Sources:

These nurseries are retail and mail-order except where noted otherwise.

### *Caryopteris x clandonensis* 'Longwood Blue'

Carroll Gardens  
444 East Main St.  
P.O. Box 310  
Westminster, MD 21157  
301-848-5422

Wayside Gardens  
Hodges, SC 29695  
800-845-1124

North Creek Nurseries, Inc.  
(wholesale)  
R.R. 2, Box 33  
Landenberg, PA 19350  
215-255-0100

Gateway Garden Center (retail, no mail order)  
Rt. 41 (Lancaster Pike)  
Hockessin, DE

### *Calycanthus floridus* 'Edith Wilder'

Natural Landscapes  
(no mail order)  
354 N. Jennersville Rd.  
West Grove, PA 19390  
215-869-3788

### *Cornus sericea* 'Silver and Gold'

Gateway Garden Center (above)  
North Creek Nurseries (above)

### *Corylopsis* 'Winterthur'

Winterthur Museum and Gardens  
Winterthur, DE 19735  
302-888-4600

### *Forsythia* 'Winterthur'

Appalachian Gardens  
Box 82  
Waynesboro, PA 17268  
717-762-4312

Winterthur Museum and Gardens  
(above)

### *Fothergilla gardenii* 'Blue Mist'

Briggs Nursery (wholesale)  
4407 Henderson Blvd.  
Olympia, WA 98501  
206-352-5405

Natural Landscapes (above)

### *Hydrangea macrophylla* 'Blue Billow'

Gateway Garden Center (above)  
North Creek Nurseries (above)

Winterthur Museum and Gardens  
(above)

### *Itea virginica* 'Henry's Garnet'

Woodlander's, Inc.  
1128 Colleton Ave.  
Aiken, SC 29801  
803-648-7522

Carroll Gardens (above)

Natural Landscapes (above)

North Creek Nurseries (above)

Gateway Garden Center (above)

### *Lespedeza thunbergii* 'Gibraltar'

Shadow Nursery (wholesale)  
Route 1, Box 1095  
Winchester, TN 37398

Gateway Garden Center (above)

North Creek Nurseries (above)

### *Rhododendron* 'Hal Bruce'

Winterthur Museum and Gardens  
— not available yet

### *Rhododendron* 'Morris Gold'

Contact the Morris Arboretum for propagation material.

### *Viburnum nudum* 'Winterthur'

Winterthur Museum and Gardens  
(above)

1988 it was one of the first six plants to receive the Styer Award of Garden Merit.

Of the plant at Swarthmore, Zuk has said it "had no structural pruning in 12 years, yet shows a neat compact habit. The flower racemes are 6 inches in length, and each year the fall color is good, the foliage being purple, maroon, and scarlet."

'Henry's Garnet' has strong flowering summer interest, exceptional fall foliage interest, and it tolerates wet or dry sites, sunny or partially shaded ones. In the wild, sweetspire grows in wet, swampy areas — you can find it in the bogs of the New Jersey Pine Barrens and in the cypress swamps of southern Delaware — but if you go to Longwood Gardens, you can also see it thriving in the other extreme. At the west end of the conservatory a mass of 'Henry's Garnet' fills in a bed carved out of asphalt on an exposed south-facing slope.

## September bloom

Throughout the month of September, *Caryopteris x clandonensis* 'Longwood Blue' provides a low mound of fragrant bluish flowers complemented by silvery foliage. At Longwood Gardens, this

*Caryopteris*, or bluebeard, forms long matching borders leading to a classical garden temple. Plants from a number of sources had been planted in the borders over the years giving them an uneven look, so in 1981 the staff set about to create uniform borders using the best plant from the lot. This plant, named 'Longwood Blue' in 1983, has an upright growth habit and superior flowering and foliage. It was introduced into the trade in 1987.

While useful as a low hedge, 'Longwood Blue' can also contribute to perennial beds and borders. It won't crowd companions because the branches die back each winter and should be cut back close to the ground early in the spring. By September when the branches stop growing and produce clusters of flowers at their tips, shrubs are about 3 feet high and equally wide. The thin stems create a soft, billowy effect and if plants are spaced 2 to 3 feet apart, they blend together to form one mass. Numerous flower buds are produced in each cluster and they open gradually giving a month-long display. 'Longwood Blue' does best in full sun in a well-drained soil.

The last in this line-up, *Lespedeza thun-*

*bergii* 'Gibraltar,' also fills the month of September with a mass of bloom. It forms rose-purple pea-like flowers, each about ½-inch long, in 2-foot long clusters at the ends of stems. The stems, like the bluebeard, die back each year, but grow 6 to 8 feet tall each season. Cut back the old stems in late winter or early spring.

This strong-growing, floriferous clone of *Lespedeza* or bush clover, has been brought to the public's attention by William H. Frederick, Jr., a landscape architect who resides in Hockessin, Delaware. Frederick first noticed the plant in the 1950s growing on an old Wilmington estate known as Gibraltar. M.H. Rodney Sharp who developed the estate was a keen gardener, and it's possible he brought this Asiatic plant home from a visit he made to China and Japan in 1921. Frederick obtained divisions from the Gibraltar plant in 1982 and planted them in a sunny well-drained area in his garden. They are now clumps producing 50 to 75 stems each year and making beautifully mounded shrubs.

As is characteristic of other pea family members, this bush-clover has three-parted leaves and grows rapidly even in infertile

*continued*



## Where To See Flowering Shrubs Named in This Article

### William H. Frederick, Jr.

Ashland Hollow (private garden)  
Hockessin, Delaware 19707

Cultivar	Common Name	When to See
<i>Lespedeza thunbergii</i> 'Gibraltar'	bush clover	September
<b>Henry Foundation</b>		
801 Stony Lane Gladwyne, Pennsylvania 19035		
<i>Itea virginica</i> 'Henry's Garnet'	Virginia sweetspire	July
<b>Longwood Gardens</b>		
Kennett Square, Pennsylvania 19348		
<i>Caryopteris x clandonensis</i> 'Longwood Blue'	bluebeard	September
<i>Itea virginica</i> 'Henry's Garnet'	Virginia sweetspire	July
<b>Morris Arboretum</b>		
9414 Meadowbrook Ave. Chestnut Hill, Pennsylvania 19118		
<i>Fothergilla gardenii</i> 'Blue Mist'	witch alder	late April to early May
<i>Rhododendron</i> 'Morris Gold'		May
<b>Mt. Cuba Center for the Study of Piedmont Flora (private garden)</b>		
Greenville, Delaware 19807		
<i>Cornus sericea</i> 'Silver and Gold'	dogwood	mid-May through June
<b>Scott Arboretum</b>		
Swarthmore, Pennsylvania 19081		
<i>Calycanthus floridus</i> 'Edith Wilder'	Carolina allspice	May 15 to June 15
<i>Itea virginica</i> 'Henry's Garnet'	Virginia sweetspire	July
<i>Viburnum nudum</i> 'Winterthur'	possumhaw viburnum	June to July
<i>Hydrangea macrophylla</i> 'Blue Billow'		June to July
<i>Rhododendron</i> 'Morris Gold'		May
<i>Lespedeza thunbergii</i> 'Gibraltar' (test plot)	bush clover	September
<b>Winterthur Museum and Garden</b>		
Winterthur, Delaware 19735		
<i>Corylopsis</i> 'Winterthur'	winterhazel	late March or April
<i>Forsythia</i> 'Winterthur'	forsythia	late March or April
<i>Hydrangea macrophylla</i> subsp. <i>serrata</i> 'Blue Billow'		June to July
<i>Rhododendron</i> 'Hal Bruce'		early to mid-May
<i>Viburnum nudum</i> 'Winterthur'	possumhaw viburnum	May and June

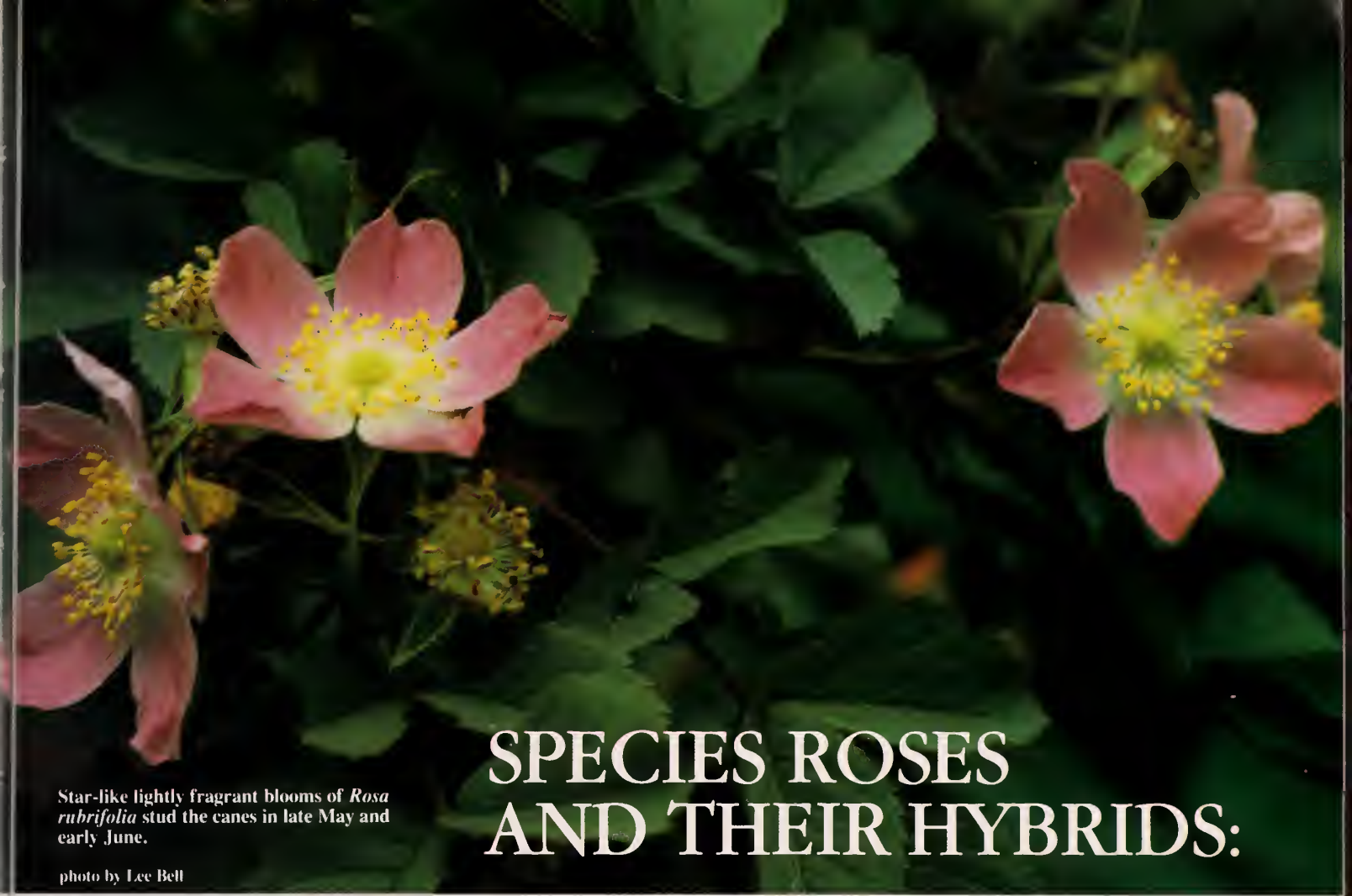
soils. During the summer before it blooms, the foliage makes a fine-textured mound with a hint of silver from the hairs on the undersides of the leaves.

Frederick has been sharing this clone with nurseries and friends and a number of them share his enthusiasm for the show it provides during a "low tide" time in the garden. Since it is now being propagated by

nurseries, Frederick registered it as 'Gibraltar,' using the name of the estate where he found it.

Knowing the places, people, and events behind great garden plants creates a sense of understanding and appreciation. So the next time you bump into 'Edith Wilder,' 'Hal Bruce,' or 'Blue Mist,' I hope they'll seem like friends.

Claire Sawyers is a horticulturist working at Mt. Cuba Center in Greenville, Delaware. She enjoys free-lance writing, regularly contributing to "Native Americans" for *Horticulture* magazine. She has also guest-edited three handbooks for the Brooklyn Botanic Garden: *Japanese Gardens*, *The Traveler's Guide to American Gardens*, and *Gardening with Wildflowers & Native Plants*. She serves on the board of the Garden Writers Assoc. of America.



Star-like lightly fragrant blooms of *Rosa rubrifolia* stud the canes in late May and early June.

photo by Lee Bell

## SPECIES ROSES AND THEIR HYBRIDS:

### *Undemanding Flowering Shrubs For The Adventurous Gardener*

 By Judith C. McKeon

Few flowers appeal more to the senses than the rose. Its name conjures up an image of soft, sweetly scented blooms that perfume the air on a warm June day. Surely wild roses were originally brought into garden cultivation for their scent, distinctive flower color, or edible fruits. Species roses and their hybrids are associated with old-fashioned styles of gardening. The delicate single flowers, graceful line foliage and attractive hips enhance the garden with color, scent, texture and seasonal interest. Species roses integrate well with perennials and shrubs in the cottage garden; they are excellent candidates for naturalizing in the wild garden. Those that colonize the seaside thrive in the toughest urban conditions. Selected species and their hybrids also prove useful in the landscape for screens, hedges and mound-ground covers.

As a group, species roses are free of the many disease and pest problems that plague modern hybrid tea roses and their kin. With a resurgent appreciation for antique flowers associated with informal gardening styles,

and a growing desire for zero pesticide use in the home garden, species roses and their hybrids appeal to ever-widening circles of gardeners. If you are an adventurous gardener who has given up on growing roses or were warned off by their high maintenance requirements, why not take a walk on the wild side? Undemanding species roses and their hybrids are among the easiest flowering shrubs to cultivate.

#### *ornamental characteristics*

Species roses are graceful upright, arching, or mounding deciduous shrubs characteristically armed with prickles. Individual species vary in size from quite low to medium-sized shrubs, while others attain 10 feet. The New England shining rose grows to only 24 inches, while a mature specimen of the golden rose of China reaches eight feet by four or five feet wide.

The five-petal or single flowers typically cover the shrubs in late spring and early summer, with repeat bloom on selected hybrid forms. Distinctive stamens of many single flowers contrast with the petals

creating a bicolor effect. The hybrid rugosa rose 'Frau Dagmar Hartopp,' for example, produces deep pink buds opening to large silver-pink scented flowers with centers of golden yellow stamens.

Compound or divided leaves with small, serrated leaflets account for the fine-textured appearance of the species roses. Several species display excellent red, orange or yellow fall color, particularly the North American natives and the Japanese rose (*Rosa rugosa*). In late summer, the colorful crop of fruits or rose hips on many species and their hybrids provides late season interest and attracts birds to the garden.

#### *distinctive specimen roses*

Distinctive foliage is displayed by the redleaf rose, *Rosa rubrifolia* (syn. *Rosa glauca*), an excellent specimen shrub in all seasons. The remarkably beautiful gray-blue leaves tinged with burgundy create a handsome contrast to the red stems. The small star-like, lightly scented flowers are pink with a white eye and stud the canes in clusters in early June. Mahogany-red fruits

*continued*



In late May and early June, *Rosa hugonis* produces a profuse bloom of single pale yellow flowers with distinctive golden centers.



Intensely fragrant blush pink blooms of *Rosa* 'Stanwell Perpetual' are produced in June with excellent repeat bloom in late summer.

ripen in late summer and foliage colors to yellow in autumn. In winter the red stems are quite effective in the snow. A graceful, loose shrub from four to six feet, *Rosa rubrifolia* is a valuable specimen rose for many garden situations. Its blue-gray foliage associates well with both perennials and shrubs. *Rosa rubrifolia* can be trained against a wall or fence and tolerates light shade. A European mountain species widely grown in Britain and well-loved by rose enthusiasts and flower arrangers alike, the redleaf rose is a four-star specimen plant that deserves greater use in our region.

The chestnut rose makes a handsome upright specimen shrub to eight feet with ferny, light green foliage. Large, pink single blooms with pronounced yellow stamens are produced in late May and early June. Flowers are sweetly scented. Bristles cover both flower buds and yellow-orange fruits. Attractive exfoliating bark on older canes provides winter interest.

The wingthorn four-petal rose makes an upright, vase-shaped shrub to 10 feet, which provides interesting architectural form in all seasons. The handsome specimen is grown for its thorns and delicate, fern-like foliage. Spectacular winged thorns of translucent scarlet arm the new growth and make a beautiful and effective display through summer. Small white four-petaled flowers are produced in late May. Prune out older canes annually to encourage vigorous new growth on which the red thorns are carried. Remove outside older canes to maintain the upright, vase-shape habit and conserve space in the garden.

*Rosa moyesii* and its hybrids are large upright shrubs with masses of single flowers in late May and early June. In late summer, the spectacular crop of flask-shaped, orange-red hips rivals the fruit production of any rose group.

'Highdownensis' is an excellent hybrid

Moyesii producing light crimson, fragrant single flowers in late May and early June followed by an excellent crop of orange-red hips in late summer. It is a large, upright dense shrub to 12 feet. More compact, floriferous hybrids with excellent repeat bloom but fewer hips include 'Nevada,' which produces single white blooms with golden stamens, and its pink sport 'Margarite Hilling.' Both make beautiful, arching bushy shrubs from six to eight feet. Mahogany-red canes with few thorns are effective in the winter landscape.

#### yellow roses

Yellow roses are cherished for there are few among the species. The golden rose of China is a well-known garden favorite. Lovely cupped, single lemon-yellow flowers with pronounced golden stamens are produced in late May and early June. The golden rose of China is an upright, arching shrub from six to eight feet tall and five feet wide. The fine-textured foliage is handsome throughout the season and turns to bronzy-orange in fall. *Rosa hugonis* prefers full sun and poor soils.

'Harison's Yellow,' another garden favorite, is a *Rosa foetida* hybrid raised by Mr. Harison in his New York City garden in 1830. Flowers are deep yellow, loosely double and cupped with golden-yellow stamens. Blooms are produced in late May and early June. 'Harison's Yellow' is a free-flowering shrub with an upright, arching habit from five to seven feet tall. The fern-like foliage is attractive through the season. Both *Rosa hugonis* and 'Harison's Yellow' associate well with other antique roses and in informal plantings with perennials and shrubs.

#### specimen shrubs for small gardens

'Stanwell Perpetual,' a hybrid of the scotch rose, perfumes the air on a warm June day. Its fragrant double, blush-pink

flowers are produced throughout the season, with the main bloom in June. "A most treasured possession" in Graham Thomas's words, 'Stanwell Perpetual' mounds, arches or rather tumbles to a height of about four feet. An excellent prickly shrub with gray-green fine foliage, 'Stanwell Perpetual' can be used as a mounding ground cover or informal hedge and is an excellent choice for tumbling over a wall. It associates beautifully with perennials and other shrub roses in an informal border. 'Stanwell Perpetual' tolerates light shade, but for best flower production, place in full sun.

The 'Apothecary Rose' is a beautiful, small shrub rose with a profuse, fragrant bloom in June. The showy flowers are semi-double, deep pink to light crimson, with golden-yellow stamens. Round red hips ripen in late summer. The 'Apothecary Rose' makes an upright, bushy shrub to three or four feet with handsome dark green foliage. Dried flowers of the 'Apothecary Rose' were used medicinally for centuries and its traditional home is in the physic or herb garden.

The striped sport of the 'Apothecary Rose,' 'Rosa Mundi' (*Rosa gallica versicolor*), bears a remarkable flower of deep pink to light crimson with various striped patterns of white. It, too, is fragrant. In all other respects 'Rosa Mundi' is identical to the 'Apothecary Rose.' Both are excellent shrubs, which integrate well in mixed plantings of perennials and other shrub roses. Underplantings of gray-leaved perennials contrast handsomely with the dark green leaves of the gallicas. Both are suitable for use as a hedge. Plant in a sunny, well-drained situation. Prune in early spring to encourage flowering.

#### roses for tough situations

The Japanese rose (*Rosa rugosa*) is a thorny, dense upright to arching shrub with



Single pink flowers of *Rosa woodsii fendleri* appear in late May and early June.

leathery, rugose (wrinkled) dark green foliage. Mauve-pink, large single flowers with distinctive yellow stamens are produced in June with repeat bloom. Flowers are well-scented. The large tomato-red fruits ripen in late summer. Fall color is golden-bronze. A colonizer of the seaside, its tolerance of rocky, sandy soils and salt spray make it an excellent candidate for tough urban conditions characterized by reflected heat, salt spray from de-icing agents and poor, dry soils. Few shrubs are better adapted to parking area plantings.

A vigorous upright shrub to six feet tall, *Rosa rugosa* makes an excellent impenetrable hedge, screen, or windbreak. Two of its excellent hybrids also tolerant of tough urban situations include: 'Frau Dagmar Hartopp,' and 'Blanc Double de Coubert.'

'Frau Dagmar Hartopp' forms a dense, bushy shrub, three feet high and four feet wide. Its foliage is typical of the parent with characteristic dark green, rugose leaves. Scented flowers are single, light pink produced nearly continuously throughout the season. Large cherry-red hips ripen in late summer; fall color is an attractive bronze-yellow. 'Frau Dagmar Hartopp' makes an excellent hedge, ground cover, or specimen.

'Blanc Double de Coubert' produces intensely fragrant, double white flowers in June with repeat bloom. It is a dense, bushy shrub with typical rugose foliage, fall color and hips. Mature shrubs grow to five feet by four across. 'Blanc Double de Coubert' is a superb specimen shrub favored by Gertrude Jekyll. Clip hedges and prune specimens lightly in spring.

#### roses for the wild garden

The eastern North American natives are useful roses for naturalizing in the wild garden. *Rosa palustris* and *Rosa virginiana* are native to Pennsylvania.

The swamp rose produces its fragrant,

pink blooms later than most species in late June and July. Fall color is red-orange and the mahogany-red canes are effective in winter. In garden soils, the swamp rose forms an upright, suckering shrub to five feet. It is also at home in a wet site.

The Virginia rose (*Rosa virginiana*) makes a suckering shrub from three to five feet with excellent glossy foliage. Single pink flowers are produced in June; red hips ripen in late summer and are effective through the winter, borne on its red stems. The excellent fall color is orange-red.

The woods rose (*Rosa woodsii fendleri*) is an upright shrub to six feet, which bears lilac-pink flowers in May. The excellent round, red fruits ripen in late summer and provide an effective display through autumn. Its bluish-green foliage is attractive through the season with fine fall color of orange-red in autumn.

The shining rose (*Rosa nitida*), the smallest of the eastern North American natives, grows to only 24 inches from stoloniferous stems. Deep rose-pink, fragrant flowers are produced in June; red fruits ripen in late summer. The small glossy leaves, handsome through the season color to brilliant red-purple in autumn. Easily grown in regular garden soils, *Rosa nitida* is a bog species and also thrives in a wet site. Its dwarf size makes it an excellent choice for a low ground cover, foreground shrub or for use in the rock garden.

#### getting started

Species roses and varietal forms are available from rose nurseries, which specialize in antique roses. They are shipped bareroot in spring or fall. Give young plants a good start and they will perform admirably in the garden for a lifetime or longer. Soak the roots of bareroot roses in a bucket of water overnight or for at least several hours before planting.

#### Sources for Species Roses and Their Hybrids:

The Antique Rose Emporium  
Route 5, Box 143  
Brenham, TX 77833  
Catalog, \$2  
Tel: (409) 836-9051

Heritage Rosarium  
211 Haviland Mill Road  
Brookeville, MD 20833  
Catalog, \$1  
Tel: (301) 774-2806

Heritage Rose Gardens  
16831 Mitchell Creek Drive  
Fort Bragg, CA 95437  
Catalog, \$1  
Tel: (707) 984-6959; 964-3747

High Country Rosarium  
1717 Downing at Park Ave.  
Denver, CO 80218  
Tel: (303) 832-4026

Hortico, Inc.  
723 Robson Road  
R.R. 1  
Waterdown, Ontario  
Canada, L0R 2H0  
Tel: (416) 689-6984

Lowe's Own Root Rose Nursery  
6 Sheffield Road  
Nashua, NH 03062  
Catalog, \$2  
Tel: (603) 888-2214

Pickering Nurseries, Inc.  
670 Kingston Road  
Hwy 2, Pickering, Ontario  
Canada L1V 1A6  
Catalog, \$2  
Tel: (416) 839-2111  
*extensive listing*

Roses of Yesterday & Today  
802 Brown's Valley Road  
Watsonville, CA 95076  
Catalog, \$2  
Tel: (408) 724-3537

Wayside Gardens  
Hodges, SC 29695  
Tel: (800) 845-1124

#### planting

Plant roses in a sunny site with loamy, well-drained garden soils; flower and fruit production will be maximized. Many

*continued*

## SPECIES ROSE AND THEIR HYBRIDS

### ORNAMENTAL CHARACTERISTICS OF SPECIES AND THEIR HYBRIDS

	HEIGHT	COLOR	REPEAT	FRAG	HIPS	FALL
<i>R. hugonis</i> , golden rose of China	6'	yel				X
<i>R. nitida</i> , New England shining rose	2'	dp		XX	XX	XXX
<i>R. palustris</i> , swamp rose	5-6'	pink		X	XX	XXX
<i>R. roxburghii normalis</i> , chestnut rose	6-8'	pink		XX	XX	
<i>R. rugosa</i> , Japanese rose	4-6'	mp	X	XXX	XXX	XXX
<i>R. rubrifolia</i> , redleaf rose	4-6'	pink		X	XX	XX
<i>R. omeiensis pteracantha</i> , petal rose	10'	w			X	
<i>R. virginiana</i> , Virginia rose (syn. <i>R. sericea</i> f. <i>pteracanthis</i> )	3-5'	pink		X	XXX	XXX
<i>R. woodsii fendleri</i> , woods rose	6'	pink			XXX	XXX
Hybrid foetida:						
'Harison's Yellow'	5-7'	yel [D]		X		
Forms of <i>R. gallica</i> :						
'Apothecary Rose'	3'	dp		XXX	X	
'Rosa Mundi'	3'	dp/w		XXX	X	
Hybrid <i>moyesii</i> :						
'Highdownensis'	8'	dp		XX	XXX	
'Nevada'	6-8'	w	X			
'Marguerite Hilling'	6-8'	pink	X			
Hybrid <i>Rugosa</i> :						
'Frau Dagmar Hartopp'	3x4'	pink	X	XX	XXX	XXX
'Blanc Double de Coubert'	5x4'	w [D]	X	XXX	X	XXX
Hybrid <i>spinosissima</i> :						
'Stanwell Perpetual,' scotch rose	3-4'	lp	X	XXX		

#### Key

COLOR	=	Flower Color
REPEAT	=	Repeat Bloom
FRAG	=	Intensity of Fragrance
HIPS	=	Effective Fruit Set
FALL	=	Fall Foliage Color
X	=	Degree of Density

FLOWER COLOR:	dp	=	deep pink
	mp	=	mauve pink
	lp	=	light pink
	w	=	white
	D	=	double flower

species, however, will tolerate light shade. Only the swamp and bog roses will accept a wet site. Amend heavy clay soils with organic matter. Prepare planting holes about 24 inches wide by 18 inches deep. Plant grafted plants with the bud union at soil level. Irrigate thoroughly. Hill soil around the canes to prevent drying. Remove the soil mounds with a stream of water when roses leaf out. When planting in fall, the soil mound can be left in place until spring. Irrigate young plants in dry periods while they are becoming established. Fertilize annually in spring with an all-purpose garden fertilizer (i.e. 5-10-5) or top dress with an organic fertilizer.

#### pruning

The species roses discussed here are upright, arching or mounding shrubs from two to ten feet. They require little pruning and if space permits are best left to attain their full height and graceful habit. Once established, mature shrubs can be pruned by removing older canes. Stolonerous shrubs like *R. virginiana* and *R. palustris* can be cut to the ground to encourage new canes, and rejuvenate the planting. Clip hedges in spring to maintain the planting and encourage flowering.

Species roses and their hybrids are undemanding flowering shrubs that enhance the garden with scent, color, texture, and

seasonal interest. Valued for their delicate flowers and colorful hips, species roses associate well with old-fashioned shrubs and perennials in an informal setting. They're also useful as ground covers and hedges. All of the roses recommended here are completely hardy in the Delaware Valley area, disease-free, require little pruning, and can be grown with success in the home garden.

●

Judith C. McKeon is rosarian at the Morris Arboretum of the University of Pennsylvania and a member of the board of the Philadelphia Rose Society.

*Choice indoor shrubs  
grown by eight  
experienced gardeners  
in the Delaware Valley*

# HOUSE SHRUBS:

## *Non-Hardy Flowering Shrubs*



 *By Mary Lou Wolfe*

One of my early growing up memories is of my father inviting me into his tiny Illinois greenhouse one winter night to sniff and try to find the source of an indescribably sweet smell. I was tall enough to reach the benches to point out the target plant and old enough to remember its name, "sweet olive." I later learned its botanical name, *Osmanthus fragrans* and, predictably, acquired it as an adult as soon as I had a cool indoor growing space. Each fall as I crowd my summering collection back into my small greenhouse I ask myself "Does this scraggly *Osmanthus* deserve the space it takes up?" Then I remember its haunting fragrance and its lovely associations for me and back it goes. I had never thought of this plant as a non-hardy flowering shrub but it fits the description: a woody plant, branching from the base, not hardy in the Delaware Valley, with the capacity to flower indoors.

### *Toni Brinton*

I discovered that PHS member Toni Brinton grows *Osmanthus fragrans* superbly in her West Chester area solar greenhouse. For her, too, it has nostalgic connotations. She and husband Ted spent the first 14 years of their married life in the South and met *Osmanthus fragrans* in North Carolina where it is hardy. The plant I saw at the Brintons' was 17-20 years old. It thrives with night temperatures of 45-50°. It is fertilized with a weak solution of 15-30-15 Peter's fertilizer in every watering from January 15 until May, when it is summered outdoors until September. Toni top prunes this plant in May before sinking the whole pot into the ground in semi-shade. She root prunes it every five years. While this *Osmanthus* is in the greenhouse she sprays it (and all the plants) with Safer's Insecticidal Soap every other week. The *Osmanthus* fragrance was haunting when I saw it in early March, its white flowers miniscule among the new reddish leaves.

*continued*



Toni Brinton pruning her *Osmanthus* in March.

photo by Mary Lou Wolfe



photos by Mary Lou Wolfe



Carol Lindemann and the Azalea 'Variegated Dogwood' in the Lindemann's garden room where the non-hardy shrub thrives. ▶



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## *Carol and Ed Lindemann*

A showier shrub that Carol and Ed Lindemann grow in their handsome new garden room is Azalea 'Variegated Dogwood.' When Ed purchased it several years ago at Ledden's in Sewell, N.J., he was warned that it was not hardy. It has been perfect for the Lindemann garden room, which has night temperatures at 58°, a ceiling fan and a window that opens into the adjoining kitchen to give good air circulation. The azalea has been trained in "standard" shape and bloomed gloriously this year all through March. The Lindemanns top prune it before summering it outdoors until fall. Hibiscus, oleander and a gardenia are some of the other tender shrubs that bloom in this garden room that works so well for plants, dogs and humans.



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## Patty Wurts

Patty Wurts gardens in Blue Bell and exhibits often in the Philadelphia Flower Show. Some of her favorite tender flowering shrubs are the serissas. These dwarf shrubs that produce tiny funnel-shaped flowers are native to Japan and China. They have been used as house plants for some time but only recently did people realize how easily and successfully they could be trained into interesting shapes. The *Serissa foetida* 'Variegata' that Patty Wurts showed me is trained on a circle of screen secured to a round loop of sturdy wire anchored in an 8-inch pot. Patty purchased her plant by mail from Logee's

and potted it in a mix of potting soil, sand and perlite, for good drainage. Around February 1 she begins fertilizing with a 20-20-20 mix. Her serissas have been pest-free so far although she suspects they could get scale. Her greenhouse operates with a constant fan and night temperatures of 50°. Wurts believes that a twice-a-week power spray of room temperature water helps keep these plants healthy. With its tiny white-edged leaves and prolific lilliputian blooms the *Serissa foetida* is a handsome plant to use occasionally for table decoration.

*continued*

Patty Wurts's *Serissa foetida* is trained on a circle of screen anchored in an 8-inch pot.





## Orville Bullitt, Jr.

Frustration with one of my PHS annual plant dividends, a *Vireya Rhododendron*, led me to visit its propagator, Orville Bullitt, Jr. My plant, *Vireya Rhododendron laetum*, flowered twice in my greenhouse in 1985 and has produced only leggy stems and awkwardly spaced foliage ever since. Bullitt donated to PHS plants grown from seed he had collected in New Guinea. He also grows *Vireya* from seed obtained from the American Rhododendron Society seed exchange. The fascination with this tender equatorial shrub is its flowering habit; *Vireya* can bloom at any time of the year, often in late fall and winter and the colors that are appearing in various species and hybrids include apricot, yellow, white and red. Bullitt has at least 100 *Vireya* seedlings under fluorescent grow lights in his basement, growing a procession of them since 1978. This project requires staying power as it takes seven years from seed to bloom. Where *Vireya* are native in Borneo and New Guinea they often grow as epiphytes. Therefore in cultivation they need a fairly

permeable potting mix. Bullitt prepares this mixture: four gal. Promix to ½ gal. sharp sand to two gal. perlite. To this he adds one tbsp. Peters 21-7-7, one tbsp. calcium carbonate, 1 tsp. fritted\* trace elements, and two tbsp. liquid soap (e.g. Ivory Liquid) as a wetting agent. The principle reason he repots is to check for decay of the compost. He fertilizes the *Vireya* on a schedule he describes as "casual" using ¼ the recommended concentration. Seeing the Bullitt *Vireya* and admiring the blooming plants grouped among other foliage plants in his sunny living room window, I resolved to keep my leggy specimens. I've learned that they bloom on old wood and that bloom may be triggered by letting the *Vireya* dry out a bit in late summer. That apricot bloom on a dreary November day is certainly worth waiting for.

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\*A combination of trace elements heated to liquid form, which becomes a ground glass-like substance. Available commercially at garden centers.



Above: *Rhododendron laetum*.  
Below: Orville Bullitt, Jr. grew the *Vireya Rhododendron laetum* from seed he collected in New Guinea.

photos by Mary Lou Wolfe



**Sources:**

*Osmanthus fragrans*

Meadowbrook Farm  
1633 Washington Lane  
Box 3007  
Meadowbrook, PA 19046  
(215) 887-5900

Waterloo Gardens  
200 N. Whitford Road  
Exton, PA 19341  
(215) 363-0800

Azalea 'Variegated Dogwood'  
Various tender azaleas available in  
spring from:

Ledden's  
Center & Atlantic Aves.  
P.O. Box 7  
Sewell, NJ 08080  
(609) 468-1000

*Serissa foetida*

Logee's Greenhouses  
55 North St.  
Danielson, CT 06230  
(203) 774-8038

Meadowbrook Farm (above)  
Waterloo Gardens (above)

Vireya *Rhododendron*

Greer Gardens  
1280 Goodpasture Island Rd.  
Eugene, OR 97401  
(503) 686-8266

Vireya Specialties Nursery  
2701 Malcolm Ave.  
Los Angeles, CA 90064

American Rhododendron  
Soc. Seed Exchange  
Paula Cash, Secretary  
14885 S.W. Sunrise Lane  
Tigard, OR 97224  
Membership: \$21;  
List by request.

*Medinilla magnifica*

Logee's Greenhouses (above)

Gardenia

Generally available in local  
nurseries, greenhouses and  
garden centers in fall and  
winter.

*Brunfelsia calycina (pauciflora)*

Logee's Greenhouses (above)

*Ochna serrulata*

Carter Seeds  
475 Mar Vista Dr.  
Vista, CA 92083  
(800) 872-7711



The Mickey Mouse berry *Ochna serrulata* does well in Peggy Bowditch's sun room.

## Peggy Bowditch

Peggy Bowditch counts on a number of non-hardy flowering shrubs to contribute a succession of bloom in her new garden room in Chestnut Hill. *Leptospermum* and a camellia were handsome, but it was a plant completely new to me that caught my eye. Peggy discovered it a few years ago at a Garden Club of America event when she was lecturing in northern New Jersey. This plant drops all its leaves in January and February. Its yellowish flowers are insignificant. But after flowering it produces new, slightly bronzy foliage and stunning bright red sepals that frame a black berry-like

fruit. It is *Ochna serrulata*, also called Mickey Mouse Berry. As much as I look at and admire this shrub I can't figure out the Mickey Mouse angle, but I can certainly appreciate its airy growth habit (to 5 ft.) and attractive fruits. Bowditch purchased this plant three years ago from Merry Gardens. She pots it in Pro-mix and gives it a watering of Luster Leaf micronized iron when it starts its spring leaf-out. It thrives in the garden room, which has floor-to-ceiling windows, and a night temperature of 50-55°. It summers outdoors with all of the Bowditch collection.

*continued*

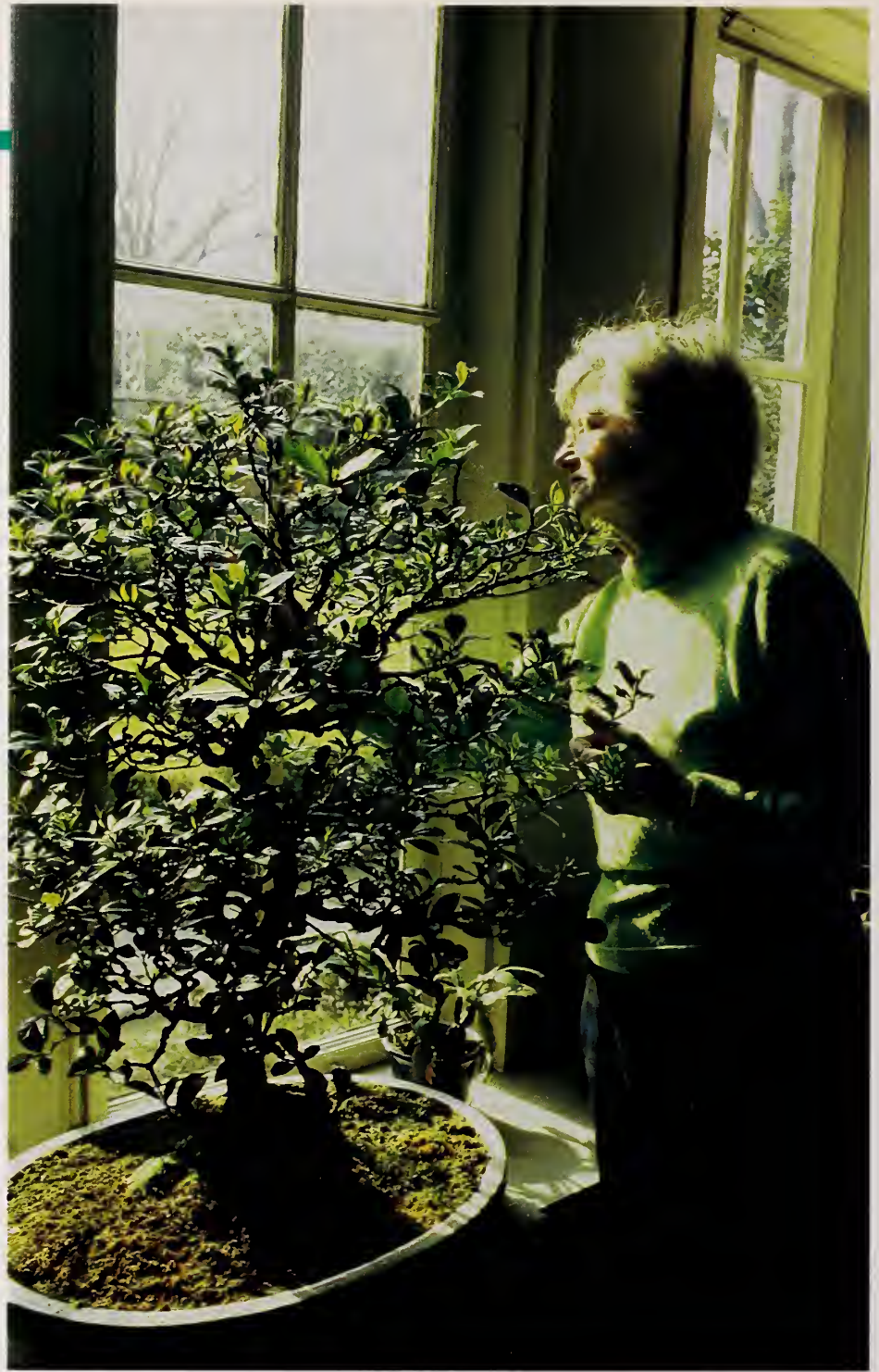


## Ernesta and Fred Ballard

Choosing just one non-hardy shrub to describe from Ernesta and Fred Ballards' collection would be like going to the Philadelphia Flower Shop and stopping at the bottom of the escalator. In the Ballards' home and garden these plants are treasured objects, grown and trained for decades and seasonally displayed as beautiful accents. June visitors to the garden look for the *Brunfelsia calycina* with its startling blue-violet flowers. This shrub can be forced into earlier bloom but Ernesta keeps it at around 40° night temperature to retard its bloom for display on the terrace in June and July. Christmas guests enjoy the *Pyracantha* 'San Jose' with its clusters of crimson berries. Not hardy in the Delaware Valley, this plant, purchased years ago from Monrovia Nursery, winters in the Ballard fernery. It blooms in April and is set outdoors for the summer. Ernesta keeps it pruned to a tight columnar shape and root prunes it every two or three years.

A shrub that Ernesta keeps in the house all winter and enjoys on the terrace in summer is *Medinilla magnifica*. She grew this plant, native in the Philippines and Java, from a cutting 25 years ago. It thrives in the house because it does not require low night temperatures and enjoys filtered light. *Medinilla* blooms for the Ballards in June and July on the terrace, producing pendulous coral-pink flowers with purple anthers. The Ballards root prune this plant every two-three years by sawing (with saw pointed down) between pot edge and root ball.

Ernesta and Fred Ballard are experts in bonsai culture and the plant that impressed me most was a 35-year-old gardenia grown as a bonsai. It rates the sunniest eastern window in their cool living room and grows in an oval bonsai container about 4 in. deep. This same plant, considerably smaller, appears on the cover of Ernesta's 1962 book, *The Art of Training Plants*. One of Ernesta Ballard's maxims states that if a plant is planted in properly mixed soil, in the right sized pot and has good drainage, it can be watered every day. For this plant she considers the right soil mix to be four parts compost to one part large-grained sharp sand. This venerable gardenia is beautifully proportioned. A few copper training wires are just barely visible on some of its branches. Grown in this cool, sunny room,



Ernesta Ballard started this *Medinilla magnifica* from a cutting taken 25 years ago. It blooms on the terrace in June and July, producing coral pink flowers with purple anthers.

its only pests have been occasional mealy bugs controlled with Safer's Insecticidal Soap spray. The Ballard gardenia blooms in late April and May. One can imagine its fragrance filling the living room.

All the plants I've described on my late winter tour of "house shrubs" in the collections of some of the Delaware Valley's most experienced gardeners, have special virtues that justify the time, effort and space required to grow them. Whether you choose your indoor shrub for bloom, inter-

esting seed pods, handsome foliage or fragrance, you may enjoy it for many years. It may become the star of your indoor plant collection or, like my scraggly "sweet olive" produce some personal magic. Mine makes me four feet high again and curious in a long-gone glasshouse.

Mary Lou Wolfe, a writer-photographer, who also gardens, is a frequent contributor to *Green Scene*.


photo by Anne S. Cunningham



Double rose of Sharon in the Ren Community Garden in West Philadelphia.

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# FLOWERING SHRUBS- CITY HEROES

 *By Anne S. Cunningham*

The paint stopped peeling years ago on this house in West Philadelphia. Old boards cover the windows, and a "City Property — Do Not Enter" sign hangs upside down on the front door. What might have been a small front yard is a dusty rectangle filled with street trash tumbling in the wind. But right in front, a seven-foot-tall rose of sharon (*Hibiscus syriacus*), grows untended, bursting with fist-size pink flowers throughout the steamy summer months.

City shrubs are a hardy lot. The hot sun beats down on them just as it does on their country cousins, but the urban transplants face additional heat radiated off nearby walls and absorbed by the concrete pavement. The concrete cover also prevents rain from soaking the ground around, so shrubs are at our mercy for supplementary water. Some city shrubs, tucked in corners next to tall buildings, see only a few minutes of sun as it passes overhead at midday. (At the same time, these protected corners can provide microclimates that nourish plants not usually hardy this far north.) Fierce winter winds funnel through city streets, tearing at the delicate branches that stubbornly survive. Carbon monoxide and other air pollutants don't help.

Yet gardeners from all over Philadelphia tell of flowering shrubs that thrive in their neighborhoods. Their affection for these sturdy plants shines through every description. They use their shrubs' foliage on multiple stems to hide or decorate a wall or to soften a harsh corner. Perhaps even more than in the country, the flowers and berries that shine forth and the fragrance that greets people as they pass, brighten days and lift spirits.

### *flowering shrubs from the ground to the roof in West Philadelphia*

Barbara Truman could be the most exuberant gardener in West Philadelphia.\* Her flowering plum is one of the few trees on Larchwood Street, and she has a front yard so impressive her neighbors often bring guests over to show off the pride of their block.

Rhododendrons and azaleas flourish in the rich, well-prepared soil she has piled in her front yard. Every time she travels, she brings home living souvenirs, and every inch of ground is covered with shrubs that flower at different times, creating a colorful sequence from early spring through fall.

\*For more information about Barbara Truman's gardens see "Where Do Your Gardens Grow? Upstairs and Downstairs and on the Patio-o-o" by Jane Pepper, *Green Scene*, March 1982.

Just as an azalea from Virginia starts to drop its salmon-colored flowers, a rhododendron behind it takes over with large purple flowers, and a small shrub rose in front presents perfect yellow blossoms.

As a nurse at the Veteran's Administration Hospital, Truman works on different shifts, so her gardening time is whenever she's awake at home. She says she "doesn't have time to fool with plants that are temperamental. If they keep getting mealybugs or some other pest, I throw them out. I don't need that aggravation."

Truman fertilizes with Miracle-Gro and doesn't use pesticides. But diseases and bugs rarely have a chance to spread through her garden because she knows the instant something's wrong. "It's all personal," she says. "Someone could touch one leaf and I'd know it."

Over the years, Truman has trained *Pyracantha* around her front lamppost and loosely around the trunk of her Japanese maple tree as protection. *Pyracantha* are champion city shrubs that flower, produce berries and thrive whether they are tightly



photos by Anne S. Cunningham

Barbara Truman's front garden in West Philadelphia is a showplace for neighbors. Rhododendrons and miniature yellow roses lend color to the garden before the potted impatiens imbedded in the topiary bloom and engulf the limbs as the summer wears on.



'Apothecary Rose' (*R. officinalis*) in Pennsylvania Hospital's Physic Garden.

trimmed and espaliered or they're full, loose and virtually ignored.

### Center City

In his professional landscape maintenance career, Michael Williams has worked with plants under the best and worst of the city's growing conditions. He knows which shrubs work and how to highlight each one's assets.

For eight years, Michael worked with the Philadelphia Committee of the Garden Club of America tending the Pennsylvania Hospital Physic Garden on 8th and Spruce Streets, featuring plants, shrubs and trees with medicinal properties. Several varieties of shrub roses, including the 'Apothecary Rose' and cabbage rose, produce hundreds of blooms in the late spring/early summer garden, and they don't require constant attention. Williams recommends treating shrub roses with superphosphate and Rose-tone to prolong their bloom time and enhance their color.

In a shady walled-in corner of the Physic Garden, a native mountain laurel (*Kalmia latifolia*) offers what some experts consider to be the prettiest of all spring flowers. Farther along the tall brick wall, a large native tree-like shrub, called a fringetree or

old man's beard, (*Chionanthus virginicus*) shows off long delicate flowers that look their best just as the leaves are developing in late May and early June. In front of the fringetree is a scotch broom (*Cytisus scoparius*), a smaller shrub with grass-like stems and delicate yellow spring flowers. Brooms haven't been used as much as they could in the U.S., but they thrive in European cities even when there's poor soil, dirty smoggy air and hot dry conditions.

Michael Williams now has his own landscaping business in Northeast Philadelphia. His favorite easy-flowering shrubs for the city are roses, azaleas, bayberries if they're kept pruned, hydrangeas, forsythias, and the shrub dogwoods. Two of his favorite native shrubs in the holly family that tolerate the city's hot summer weather, are fairly drought resistant, and grow in small planting spaces: evergreen inkberry (*Ilex glabra*), and deciduous winterberry (*Ilex verticillata*) with great looking red/orange berries hanging in drupes.

Williams recommends dwarf varieties of the above shrubs for containers that sit on balconies or other small city spaces. He's even had success using dwarf boxwood in window planters.

### for all seasons

Joanne Miller is another professional who works with a wide range of flowering shrubs. She runs Horticultural Services, a Warrington, Pa.-based landscaping and maintenance business, that tends private gardens, historic house gardens, and public spaces throughout Philadelphia.

Miller likes to remind her customers that flowering shrubs are just as beautiful and even more appreciated in the cold weather. Fragrant, golden-flowered witch hazels (*Hamamelis*) can bloom in November, December, January, February and March depending on the species and the weather. Winter jasmine (*Jasminum nudiflorum*) is another winter-blooming treasure, not usually hardy under severe conditions, but it does well in a protected city garden. It tolerates poor soil, is moderately drought-resistant, and has opened as early as January if there's a warm spell. Forsythias bring early spring to any city plot.

Like the winter jasmine, camellias can grow outside under the right city conditions, where they could not survive if they were planted in the open Pennsylvania countryside. Miller is particularly fond of the camellia that blooms in the ultraprotected environment of the walled-in garden at the Hill-Physick-Keith House on 4th Street.

Another underused plant that Miller recommends is the Siberian peashrub (*Caragana arborescens*). It has bright yellow flowers in May, then a 1- to 2-inch pod in summer that makes a popping noise when it opens. It grows quickly, is hardy under extremely cold conditions, thrives in spite of drought, salt, winds and pollution; it's perfect for the city.

Espaliers provide a great opportunity to enjoy large shrubs in the city, even when the horizontal growing space might be limited, because the plants are kept trimmed and trained along walls. Miller trains hydrangeas as espaliers and says the smaller varieties of hydrangea survive nicely as container plants in the city as long as they receive sufficient water. The climbing hydrangea (*Hydrangea anomala* subsp. *petiolaris*) is technically a vine, but it becomes so full and covers walls so thoroughly, it has the effect of a well-trained espaliered shrub.

Adequate water is the biggest problem for city shrubs, according to Miller. Whenever possible in city gardening spaces, she installs a drip irrigation system with a timer. Where budgets are tight, she recommends a soaker hose that slowly oozes water, such as Moisture Master that comes in 50- and 100-foot lengths and can be cut to any size.

Another peril for city plants is what Joanne Miller calls urban wildlife: rats, mice, squirrels and birds. Food from nature is scarce and small animals will dig up bulbs and travel to the nearest green space for tender new shoots on flowering shrubs in spring. Miller cautions urban gardeners to plan carefully the location of their shrubs that produce berries; while it's fun watching the birds feed, it's not fun cleaning up what's left behind by larger birds. She tells about one gardener who put a lovely statue under a tall flowering shrub: during the shrub's berry season the statue is almost unrecognizable because it's covered with squished fruit and droppings.

### a master city gardener

Jean Bodine has the master gardener's touch. Her modesty about her own garden in Society Hill leads visitors to think they too could create a garden as special as hers, even though Jean and her husband Jim spent years in the country and almost a decade in the city perfecting their horticultural skills.

By carefully choosing each plant for a specific role in their garden, the Bodines have created a city yard with a distinct country feeling. Delicate pink Gumpo azaleas in front of thick rhododendrons along the brick wall give the feeling of a woodland setting. They have a sitting area surrounded by bright annuals, a prospering strawberry bed, a small coldframe for year-round parsley, winter greens and spring propagation. Lush, flowering clematis winds up and around an outside iron staircase, and graceful shrubs subtly decorate the vertical spaces instead of being nailed against the walls.

Jean Bodine's horticultural knowledge led them to try unusual flowering shrubs, not always with the anticipated results. They have good success with a *Kerria japonica*, even though it's planted along a wall in a shady corner. The bright yellow flowers are about 1 1/2 inches across and last for two or three weeks from the end of April to early May. The Bodines are less pleased with their *Enkianthus chinensis*. One year it has a profusion of blooms, the next year the flowers are sparse. Under normal conditions, it's a narrow upright shrub showing white or creamy yellow flowers with red veins in May and June and brilliant orange or red leaves in the fall.

Jean Bodine likes to see green in her winter garden and has tried several different broadleaf evergreen flowering shrubs. Slow-growing rhododendrons and small azaleas work well. *Skimmia* grew easily for her in the country, but not in her city



*Pyracantha coccinea* on St. Peter's Way in Society Hill.

garden. Maybe, she speculates, it's because *skimmia* likes constant moisture, and the city's intense heat combined with small planting spaces dry out the soil in between waterings.

The neighbors enjoy the willowleaf cotoneaster (*Cotoneaster salicifolius*) on the sidewalk outside the Bodine's kitchen window. It is semi-evergreen with graceful arching branches and has small white flowers in May and June followed by berries that turn bright red. This cotoneaster, and others with weeping branches, are effective in planting boxes, cascading over walls, hanging from balconies and in other similarly dramatic situations possible only in the city.

The Society Hill neighborhood around the Bodine's house is filled with evidence that flowering shrubs and the city are compatible. *Abelia x grandiflora* cascades from planting beds onto brick sidewalks. It grows about 3 feet tall, with light pink flowers that start in late June and continue throughout the summer and early fall. A magnificent evergreen cherry laurel (*Prunus laurocerasus*) has fragrant white flowers in April and May that give way to purplish-black fruits in summer. Cherry laurel does well in sun or shade, so it doesn't mind being planted next to a wall or under a tree.

One of the most impressive of all the flowering shrubs in Society Hill is the crape myrtle (*Lagerstroemia indica*) on Lawrence Court. It's not supposed to survive winter weather this far north, but the protective wall, underplanting of shrubs and thick mulch around the base keep this beautiful tall shrub in fine condition.

Experts and amateurs agree about the outstanding qualities of flowering city shrubs, but not all shrubs make a good first impression. When Philadelphia Green handed out shadblows (*Amelanchier*) a few years ago, some recipients wondered why it had been chosen. After a few seasons, according to Mildred Peterkin at the Sun Circle Garden on 17th and Westmoreland Streets in Philadelphia, they're praising the shadblow for its spring flowers, purplish-black berries, striking fall color and winter branches that give the shrub four-season interest, as well as its tolerance to varied growing conditions. Says Peterkin, "I've fallen in love with them and I'm collecting all the seedlings for my friends."

Anne S. Cunningham is a frequent contributor to *Green Scene* and *The Philadelphia Inquirer*.





# Flowering Shrubs

 By Julie Morris

*Horticulturist for Blithewold Gardens & Arboretum, and a former librarian, the author picks her favorite books about flowering shrubs dating back to her days as a student at the Pennsylvania School of Horticulture.*

When I began thinking about books on flowering shrubs I was transported back in time to my years at the Pennsylvania School of Horticulture in Ambler. The campus overflowed with flowering shrubs; they were classroom subjects and part of the landscape. Our courses followed the English school tradition of lots of practical work and classes that lasted through the gardening season. We learned to identify, prune and plant flowering shrubs and how to use them in garden design. Their names were as decorous as the plants themselves; *Deutzia gracilis*, *Kolkwitzia amabilis*, etc. They were part of the landscape that had evolved over the more than 40 years the school had existed. They were perfectly suited to the campus design that featured long borders of flowers, hedges, trees, and shrub borders, which enhanced walkways, accented steps and paths and showed off evergreen plantings. The school had just become part of Temple University but still reflected a gentler time when young women studied to become garden designers, estate and farm managers. A time perhaps more suited to the inclusion in garden plans of high maintenance plants such as flowering shrubs. Indeed it wasn't until the decade of the 1960s, which followed my school years, that "low maintenance" was to become a key phrase in selling plants. Deciduous flowering shrubs and herbaceous perennials went out of favor for awhile. Gardening is now once again America's favorite pastime, and over the past 15 years or so perennials

the green scene | july 1990



photo by Derek Fell

An updated revision of Isabel Zucker's 1966 book has been reissued as *Flowering Shrubs and Small Trees*, [August '90] with color photos by Derek Fell. The Roland Garden in Rydal, Pennsylvania, was photographed for the book and includes a woodland path bordered with rhododendrons, azaleas, pieris, hemlocks and dogwood.

and deciduous shrubs have reemerged as important elements in the garden for the diversity and structure they give to the overall design.

## *Shrubs and Vines for American Gardens*

The only book in the collection I've assembled for this article that was in print when I was a student is Donald Wyman's *Shrubs and Vines for American Gardens*. First published in 1949, it has been revised and reprinted over the years and remains a useful basic reference. Wyman was horticulturist at the Arnold Arboretum for many years where he was able to record the

growing habits and requirements of hundreds of shrubs. The order of bloom charts, lists of foliage colors and the chapter on shrubs for various purposes are great quick reference tools. His list of recommended plants encompasses most of the book. Wyman gives the vital statistics for each plant as well as its cultural requirements along with suggestions for use in the landscape.

## *Garden Shrubs and Their Histories*

Knowing where plants come from helps us understand their growing requirements and often how to use them in our own gardens. In *Garden Shrubs and Their*

continued



*Histories* Alice Coats goes well beyond basic background information: she finds the poetic and romantic aspects of shrubs as well as the historic. She traces the origins of more than 100 shrub families, going back in many instances to original sources for her references. We once again understand the important role the plant hunters and plant enthusiasts played in our horticultural heritage. The author definitely has her favorite shrubs and generously pays tribute to them. For example, she writes about viburnums, "the versatile beauties that adorn every season," and includes a bit of poetry by Cowper, "... flower globes, light as the foamy surf that wind severs from broken wave." Coats follows their history from the 15th century to the plants introduced by E.H. Wilson in 1901 and the crosses made to improve the fragrant species in the 1920s and 1940s. There is high adventure as well, since the author includes accounts of shipwrecks and piracy endured by the early plant hunters. Alice Coats gives us the personalities as well as the plants by including a section of explorers' biographies, especially those noted for their collections of foreign trees and shrubs.

### **Flowering Shrubs**

For many gardeners and nurserymen there was never a decline in interest in flowering shrubs, and for them Isabel Zucker's book *Flowering Shrubs*\* was a real boon. It is a book I've used ever since it was first published in 1966. Indeed while I worked at PHS, we offered it as part of the R. Gwynne Stout Memorial Traveling Library, which was a collection of gardening books PHS lent to local public libraries. Like all good garden writers Isabel Zucker was a gardener. She grew many of the hundreds of plants she wrote about. Those she didn't grow she observed in nurseries and botanical gardens in the U.S. and abroad. Zucker wrote about plants that are hardy from zones 6 through 1. Deciduous and evergreen shrubs are included and often pictured in more than just their flowering season. Plants with interesting seed pods, branch structures or winter twigs are highlighted.

When asked what her favorite shrub was Isabel Zucker's answer was *Kolkwitzia amabilis*, beauty bush. It is trouble free and

lovely with pink tubular flowers followed by fuzzy grey seed heads. She admits though, as most of us do, that each shrub is her favorite as it comes into bloom.

A section on small trees to plant with shrubs enhances the value of the book by including plants that should be used more in the home landscape. Zucker describes *Amelanchier* (service berry) and *Chionanthus* (fringe tree), two trees in my garden that herald the spring and summer seasons.

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*Flowering Shrubs* is a complete reference with bloom charts and landscape advice as well as complete descriptions of nearly 600 shrubs. Now that a revised edition (called *Flowering Shrubs and Small Trees*) is about to be published we can look forward to chapters on new cultivars and up-to-date purchasing information. Many of the plants I grow result from reading Isabel Zucker. These include fothergilla, daphne, *Enkianthus* and several viburnums.

### **Delaware Valley Authors**

#### **100 Great Garden Plants**

Three books by Delaware Valley authors have influenced the plant selections I've made for my garden over the past 15 years. The first, written by landscape architect William H. Frederick Jr. is *100 Great Garden Plants*. It not only includes a section devoted to shrubs but offers ideas on effective plant combinations throughout the text. Many of the combinations are pictured in the color photographs that illustrate this useful book.

#### **Fragrant Year**

Léonie Bell, coauthor and illustrator of the *Fragrant Year*, is not only an enthusiast for old roses but writes about many other kinds of fragrant shrubs and small trees including other garden favorites of mine: the fragrant azaleas, and sweet bay magnolia, which I planted so I could enjoy its fragrance as I go in and out my back door.

*Calycanthus floridus*, the carolina allspice, is described with great feeling. "The large rugose leaves, the stems, even the fig-shaped seed pods have a spiciness reminiscent of sassafras or bayberry. Best though are the long-petaled red-brown flowers, sweetest just as the center petals part. They smell of green tea and Damson plum preserves and occasionally of strawberries."

### **How to Grow Wildflowers and Wild Trees and Shrubs in Your Own Garden**

I fondly remember many forays with Hal Bruce into bogs, woodlands and sand dunes when he was working on his book, *How to Grow Wildflowers and Wild Trees and Shrubs in Your Own Garden*. The title may be unwieldy, but it does reflect the extent of the collection of plants Hal wrote about. Years before he thought about writing the book, Hal was rescuing wild plants doomed to be destroyed by parking lot or building construction. Throughout the book there are sections on native or naturalized shrubs suitable for garden use. Always a keen observer, Hal Bruce's descriptions take in minute details that can't help but enhance the appeal of a certain plant. Writing about one of his favorites, the oakleaf hydrangea, *Hydrangea quercifolia*, Hal says "The fawn or light reddish brown exfoliating bark, very attractive in winter, is very distinctive. The new branches are rust-felty, and the leaves, deep green above and whitish below in summer are reddish bronze when unfolding and deep orange in the autumn. There is about the plant a suggestion of red pigment behind the green and white throughout the year." Another quote from the book is appropriate in this year of the 20th anniversary of Earth Day: "Perhaps the most compelling reason for using native American plants in our gardens is the chance that by so doing we might help save a species from oblivion. There will be some hope for the next 'last stand' if it is found in somebody's garden."

### **Gardening in the Shade**

Another book that pleads for environmental awareness is Harriet Morse's, *Gardening in the Shade*. Writing nearly 30 years ago, the author expressed concern about the over-collection of native plants. She argues for "intelligent use of natives." In a direct yet gentle style Morse writes

\*See selected reading for revised title.

about plants, including many flowering shrubs, that tolerate shade. There are generous descriptions of *Amelanchier*, *Calycanthus*, *Clethra*, *Chaenomeles*, *Cornus*, *Daphne*, *Enkianthus*, *Forsythia*, *Hamamelis*, *Hydrangea*, *Kerria*, *Ilex*, *Philadelphus* and many more plants. The author offers up entire planting schemes that are well illustrated in fine black and white photos. She writes about the garden at night as well as through the seasons. Describing the autumn and winter color of a group of shrubs, she writes: "The jewel-like tones of the sassafras — emerald, mottled, tourmaline, amber are in harmony with viburnum, *Enkianthus* and Virginia creeper, the color of whose leaves as the sun shines through is like all the wines of Burgundy." The book has been reprinted and it is a treat to reread something written with such effortless style and to look through the author's eyes to the woodland edges where the "fringes sparkle."

## Shrubs

A book that sparkles from start to finish is *Shrubs* by Roger Phillips and Martyn Rix. The fourth in a series that includes books on roses, bulbs, and trees, *Shrubs* is no less inviting or superbly produced. It is a book of color photographs and short plant descriptions of nearly 2,000 plants. Basic cultural information is included in the introductory sections but the main part of the book is devoted to illustrating and describing the plants. The photographs show the plants' leaves anywhere from 1/4 to 1/2 their actual size. Photos compare plants within one genus, such as the photo showing the subtle and not so subtle differences between 16 *Potentilla*. The color plate of leaves in their autumn color is lovely enough to be lifted out and framed. Plants with variegated foliage, berries or different forms are pictured. Every shrub the reader might hope to find is illustrated. Little is omitted. There is almost a breathless excitement about the plants in the book. Breathtaking close-ups juxtaposed with photos of plants in their native habitat vividly illustrate the habit of growth of individual plants. *Shrubs* can be studied over and over, and the reader will have no trouble finding something new to see or learn each time.

## Manual of Woody Landscape Plants

Equally breathtaking but for other

reasons is Michael Dirr's *Manual of Woody Landscape Plants*. At first glance this big book with line drawings and full descriptions of hundreds of plants looks as though it was written for professional horticulturists. There is, however, as much useful information for the keen gardener as there is for the student of horticulture. The sections on plant morphology and the

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*Describing the autumn and winter color of a group of shrubs, Morse writes: "The jewel-like tones of the sassafras — emerald, mottled, tourmaline, amber are in harmony with viburnum, Enkianthus and Virginia creeper, the color of whose leaves, as the sun shines through is like all the wines of Burgundy."*

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extensive glossary do make it look like a text book, and I assume it is used for teaching. The information on culture and landscape use, combined with all the notes from first-hand observation, make this book a "must" for all gardeners with a serious interest not only in shrubs that flower but all woody plants. Dirr has a real enthusiasm for the plants he writes about and has seen growing under a variety of conditions all over the country. His work as a teacher and researcher has paid off handsomely.

Dirr's book is much more personal than *Taylor's Guide to Shrubs*, which serves as an excellent quick reference with scores of color photos and very brief descriptions. Taylor's shrub book is perhaps most worthwhile as part of the entire series of *Taylor's Guides*.

Ultimately, what makes these books worthwhile is that they are written by people who are passionate about plants. People who went out into their gardens, into nurseries, woodlands, wild areas and botanic gardens. They weren't afraid to touch the plants and be touched by them in return.

Julie Morris is horticulturist at Blithewold Gardens and Arboretums in Bristol, Rhode Island. She originated "The Books and the Green World" feature when she was PHS librarian from 1970-76, and is a frequent *Green Scene* contributor.

## Selected Reading:

*How to Grow Wildflowers and Wild Shrubs and Trees in Your Own Garden*

Hal Bruce  
Alfred Knopf, NY, 1976

*Garden Shrubs and Their Histories*  
Alice M. Coats  
Vista Books, London, 1963

*Taylor's Guide to Shrubs*  
(Gordon DeWolf ed.)  
Houghton Mifflin Co., Boston,  
1987

*Manual of Woody Landscape Plants*  
Michael Dirr  
Stipes Publishing Co., Illinois, 1983

*100 Great Garden Plants*  
William H. Frederick, Jr.  
Alfred A. Knopf, NY, 1975

*Gardening in the Shade*  
Harriet K. Morse  
Charles Scribner's Sons, NY, 1962

*Shrubs*  
Roger Phillips and Martyn Rix  
Random House, NY, 1989

*The Fragrant Year*  
Helen Van Pelt Wilson and  
Leónie Bell  
M. Barrow and Co., Inc., NY, 1967

*Shrubs and Vines for American Gardeners*  
Donald Wyman  
MacMillan Co., Inc., NY, 1969 &  
1977 editions

*Flowering Shrubs*  
Isabel Zucker  
P. Van Nostrand Co., Inc.,  
Princeton, NJ, 1966  
(The revised edition is called  
*Flowering Shrubs and Small Trees*.  
The revision and color photos were  
done by Derek Fell, a Bucks  
County, Pa., photographer and  
writer. The new edition, with 400  
color photos and illustrations,  
published by Grove Weidenfeld, is  
due August, 1990. The 1966  
edition is still available in the PHS  
Library; the new edition is on order.)

All books listed here are available  
through the PHS Library.

# Pruning Flowering Shrubs

 By Eileen Gallagher

Pruning is a practical skill and gardening art form passed down from gardener to gardener like a good family recipe. These recipes, under the watchful eyes of many grandmothers, evolved through a process of experimentation. The systematic blending of precise ingredients accompanied by first-hand experience and good judgement cultivated a tried and true formula. One that could be counted on to come out right every time. Bolstered with confidence and grandma at your side, the fun of adapting and varying a recipe initiates that spark of creativity that leads to personal expression.

Conscientiousness and a love of plants are two fundamental ingredients in the pruning recipe. When I was a Professional Gardening Student at Longwood Gardens, these and other words of wisdom were passed on to me by Ed Broadbent, section head and master pruner. I worked with Ed for one and a half months pruning a *Carpinus betulus* hedge by hand. Before my newly sharpened pruners could make their first cut, I had to familiarize myself with the characteristics of the individual plant: its natural form, habit and rate of growth, height, spread and time of flowering.

Good pruning is the selective removal of branches without changing the plants' natural appearance or growth habit. Pruning improves the health of any plant by cutting out dead, diseased, broken and overgrown branches that interfere with new growth. Pruning controls the shrub's size, shape, flower and fruiting habits. With some shrubs, the new growth stimulated by pruning is a more intense color than on the old.

Flowering shrubs can be deciduous or evergreen. They come in a variety of different growth habits with upright, wide-spreading, arching or horizontal branching habits. Only after considering all these factors should anyone begin to prune a plant. Remember: the future shape of a shrub depends upon the training carried out in the early years.

## why prune

1. Removing dead, diseased or obviously weak branches only improves the appearance of your shrub; it eliminates breeding sites for insects and diseases.

2. Selective thinning changes the density of the plant, opening the center to allow

more air and light to enter, which stimulates interior growth making a leggy plant look fuller. This technique also lessens wind resistance, making a plant less subject to storm damage.

3. Pruning out older wood on many shrubs stimulates growth of new wood, thus rejuvenating an old, declining plant. The new wood will have better flowers or brighter color and form.

4. Prune to develop a special form or shape as in hedges, espalier and topiary work. Shearing is used more than pruning for creating particular shapes. (Shearing is cutting back a branch anywhere along the length of a stem. The effect is to concentrate new growth below the cut.)

5. Remove dead flower clusters and developing seed pods. On such plants as rhododendron, *Pieris* and lilacs, the seed pods develop at the expense of the next season's flower buds. So, always remove the seed pods unless they have a specific ornamental value. Frequently, when the seed pods are not removed flowering occurs cyclically. In such cases the flowers are generally better every other season.

## how to:

No matter what the reason for pruning, three basic approaches accomplish the end result. They are rejuvenation pruning, thinning and heading back.

**Rejuvenation pruning** is the most severe method. It's used on older plants that have become too large or contain considerable unproductive wood. The plant is pruned by cutting off the oldest branches at or near the ground level, leaving the young stems. If there aren't many younger stems, remove about one-third of the older wood each season over a three-year period to keep the overall shape of the plant. If there are plenty of newer stems, remove some of

## PRUNING GUIDE FOR SOME COMMON FLOWERING SHRUBS

### Group 1 — Prune after flowering. Bloom on previous year's wood.

#### *Azalea*

*Berberis thunbergii* — Japanese barberry

*Buddleia alternifolia* — butterfly bush

*Calycanthus floridus* — carolina allspice

*Cytisus scoparius* — scotch broom

*Deutzia gracilis* — slender deutzia

*Forsythia x intermedia* — forsythia

*Hydrangea macrophylla* — bigleaf hydrangea

*Kerria japonica* — Japanese kerria

*Kolkwitzia amabilis* — beautybush

*Philadelphus coronarius* — sweet mockorange

*Spiraea thunbergii* — thunberg spirea

*Stephanandra incisa* — cutleaf stephanandra

*Syringa vulgaris* — common lilac

*Viburnum*

*Weigela florida* — weigela

### Group 2 — Prune early spring. Bloom on new wood

*Abelia x grandiflora* — abelia

*Buddleia davidii* — butterfly bush

*Callicarpa dichotoma* — purple beauty berry

*Caryopteris x clandonensis* — bluebeard

*Clethra alnifolia* — summersweet clethra

*Hibiscus syriacus* — rose of sharon

*Hydrangea paniculata* — panicle hydrangea

*Potentilla fruticosa* — bush cinquefoil

*Spiraea x bumalda* — bumald spirea

*Viburnum*

### Prune in early spring for effective bark, twig or foliage effect.

*Cornus alba* — tatarian dogwood

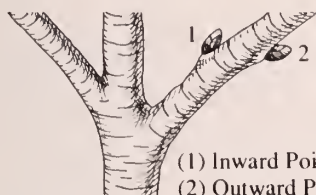
*Cornus sericea* — redosier dogwood

*Cotinus coggygria* — smokebush

*Salix* species

This technique will remove the flowering wood and they will not bloom.

them along with the older branches to help the plant's appearance. Such heavy pruning may stimulate an excessive number of new sprouts either from the root system or on the remaining branches on the plant. Prune out this new growth to retain the quality and desired density of the plant.



(1) Inward Pointing Bud  
(2) Outward Pointing Bud

**Thinning** is done by cutting an entire twig or branch where it is attached to the main stem. Occasionally some stems are cut off at ground level to thin the plant. This method is best applied to plants that are too dense. By cutting off most of the inward growing twigs inside the plant you can influence the remaining portions to grow towards the outside of the plant.

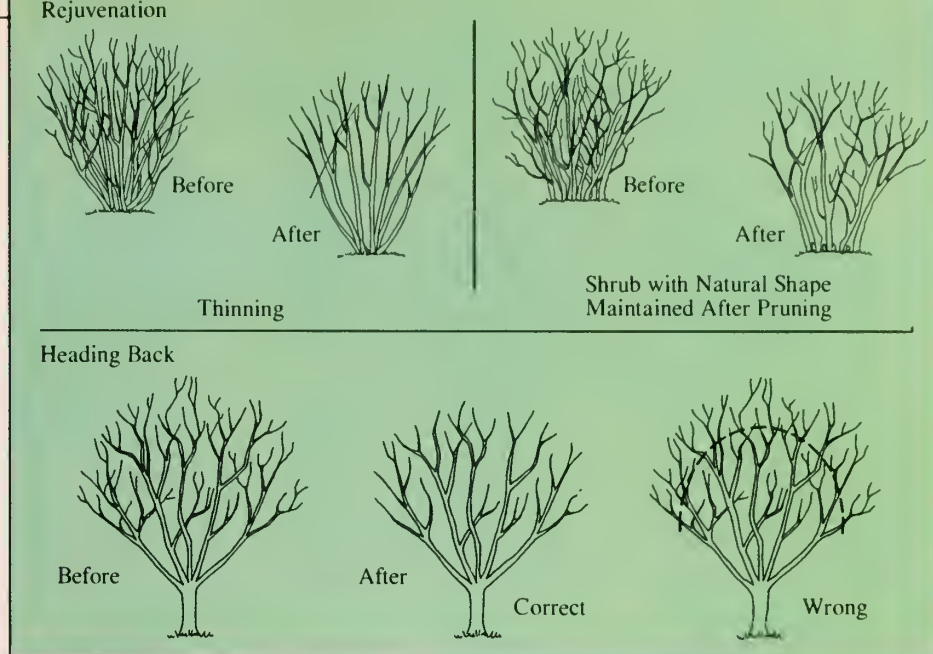
**Heading back** reduces the overall size or height of a plant. Do this by cutting a terminal portion of a branch or twig back to a bud or another side branch. The shape of the plant can be controlled by the location of the bud that is left at the end of the twig. An inward pointing bud will produce growth towards the center of the plant, making it denser; an outward pointing bud will do the opposite. Heading back stimulates the development of smaller shoots and buds lower on the cut stem and results in dense growth. Excessive heading back in a single season will cause more growth to develop than was removed by pruning. To be effective, heading back should take only a small percentage of the top growth off in any one season. On large vigorous plants, heading back and thinning can work together to keep a plant within bounds. Thinning helps open the center, and heading back controls the height of the plant.

Homeowners frequently rely on pruning to solve a variety of design problems on their property. If you find that pruning is needed every season to keep a specific plant within your predetermined bounds, consider removing that plant to another more suitable location. The choice of plant for your landscape plan is a matter of personal taste limited by size, climatic and soil conditions. The proper selection of the right plant for height and spread at maturity can reduce the need for pruning.

### when to prune

Deciding when to prune is almost as difficult for some people as selecting what or how to prune. Actually you need remember and follow only a few simple rules.

Shrubs may be grouped according to



their flowering habits (see examples in box).

**Group 1.** Prune shrubs that flower in the spring after blooming. These flowers are borne on the previous year's wood. Shrubs in this group e.g. azaleas, deutzia, forsythia, etc. benefit from annual pruning, when wood may be cut out immediately after flowering, allowing the maximum period for the young growth to develop in the extra light and air. The extent of the pruning varies with the plant and the season.

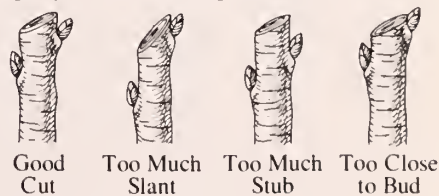
**Group 2.** Prune shrubs that flower in mid to late summer on the current season's wood or growth in early spring, when the overwintering buds begin to break out from the living wood. At this time, the top growth that was left for protection during the winter will easily show just where to make the cuts in the spring. Fall pruning after flowering also works well on this group unless they develop ornamental fruits. In this case, prune in the spring after the fruit has dropped over winter. Remember, fall pruning should be done after the plant is dormant (after the first hard freeze). If shrubs are pruned before the dormant season, new growth stimulated by the pruning will not harden before winter. Tender new growth developing late in the season is susceptible to winter injury. Summer flowering plants generally suffer the most from late season pruning. Unless you can prune these types immediately after flowering, it is better to wait until the following spring before growth begins.

**Group 3.** Shrubs that produce flowering spurs on the older wood normally develop from year to year and are found even on the really old wood of the main branches. Examples can be found among the rose family, which includes roses, *Chaenomeles* spp., *Potentilla*, *Kerria*, *Spiraea*. Normally, a

free-growing shrub of this group needs little if any pruning. Instead, shoot production in the early years, followed by spur formation, results in a balance between growth and fruiting. In confined spaces, not pruning rather than pruning may give better results. Stopping during the growing season checks growth and encourages spur formation and flowering.

### some don'ts when pruning

- Never leave short stubs when you make a cut. Always cut the twigs close to the main stem. Short stubs do not heal quickly and make an opening for diseases and insects.
- Never cut all the stems or shoots of a plant at the same height. It gives the plant a "crew cut" look and stimulates excess top growth on the plant.
- Never leave a stub without a bud at the end to continue growing. Slant the cut slightly so a small portion of the twig



remains above the bud.

This horticultural recipe for pruning flowering shrubs is based on a process of experimentation that has been tried and tested over many years. With this recipe, experience, common sense and your own creativity, you can rise to meet the challenge in your own backyard.

Eileen Gallagher is a neighborhood coordinator in Philadelphia Green. She received her training at Longwood Gardens in the Professional Gardener's Training. She served a one-year internship at the Morris Arboretum.

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. . . the May/June issue of *Green Scene* is outstanding. It's inspiring and informative. Panagiotis Chletcos and Samuel Henley put the rest of us to shame.

Thank you.

Diane Harding, Bryn Mawr, PA

## Yellow Clivia

When my father-in-law told me he'd bought a yellow clivia at his local garden center in Palo Alto, California, I said, "Impossible. They're very rare and cost a fortune. I just read about them in *Green Scene*." So he sent me the enclosed photographs as proof. What do you suppose happened?

Elisabeth Keiffer, Wakefield, RI

**Kathleen A. Mills**, horticulturist, Wilmington Garden Center, replies

"The yellow clivia is an outdoor plant in the warmer climates, just now becoming available at some of the better nurseries on the West Coast. It is still an extremely rare houseplant here in the East. A yellow clivia sold for \$1,000 at the Auction this year." (Wilmington Garden Center Rare Plant Auction held at Longwood Gardens, Kennett Square, PA, April 27.)

\*

## Violas

I was interested in Betty Barr Mackey's article, "Secrets of Violas" (March *Green Scene*), as I, too, really enjoy their perky flowers and weaving habit in the garden. In her article Mackey states that she previously had problems with germinating viola seeds.

Both Park's "Success with Seeds" and the booklet which Thompson & Morgan provide state that violas need dark to germinate. They also suggest a short period in moistened medium in the refrigerator for several days, or weeks, respectively, prior to starting germination. I have had great success with this method, only "Bowles' Black" and "White Perfection" not germinating as profusely as I would have liked.

We have just had an intensely cold period here, (0°F overnight), accompanied by wind chill factors of -35°, after which I was amazed to see self-sown viola tricolors cheerfully blooming between the front path and the lawn, with the flowers totally undamaged by the cold. They really did lift my spirits on a miserable day, on which all my "Snow Bunting" crocuses had succumbed.

Helen du Toit, Pittstown, NJ



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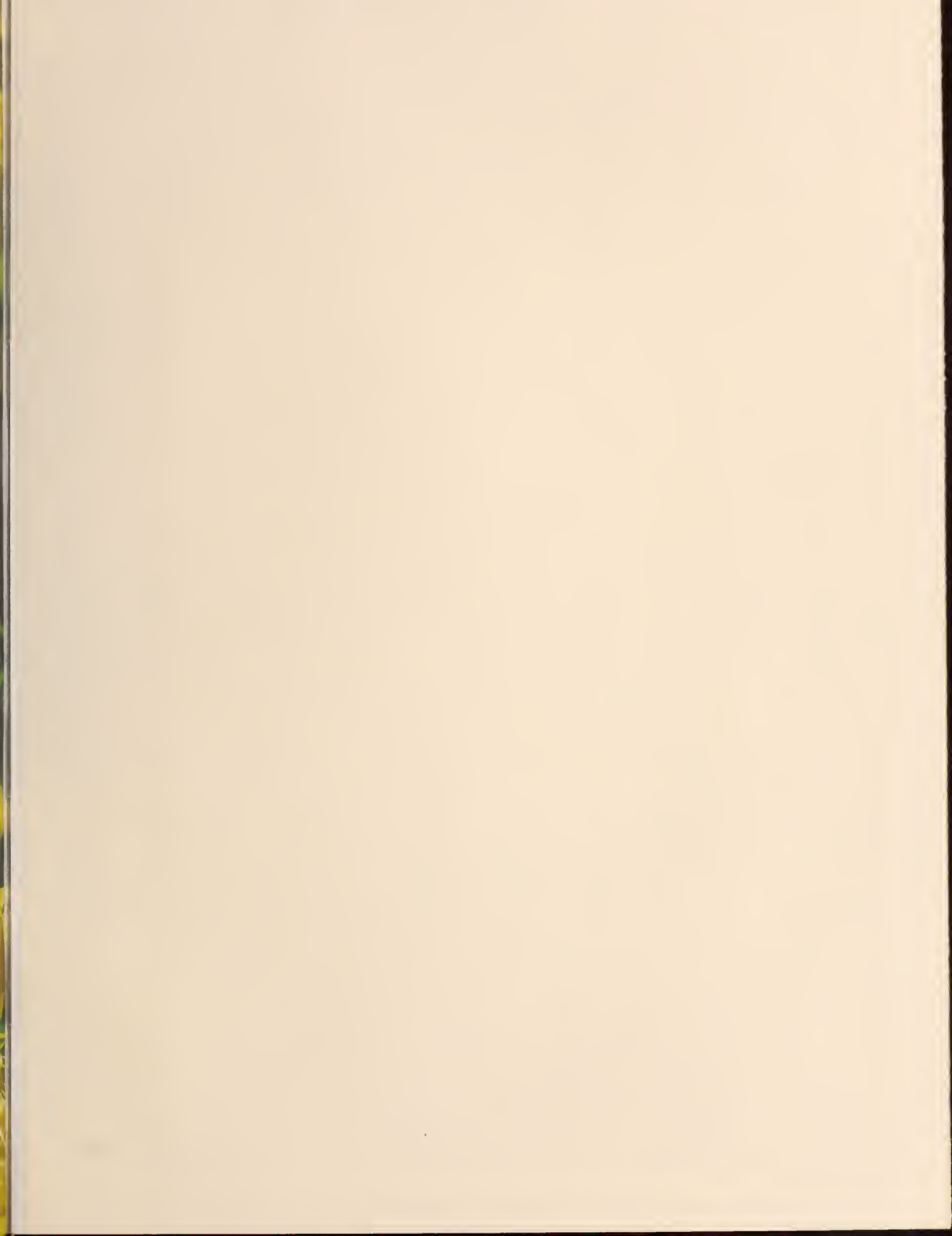
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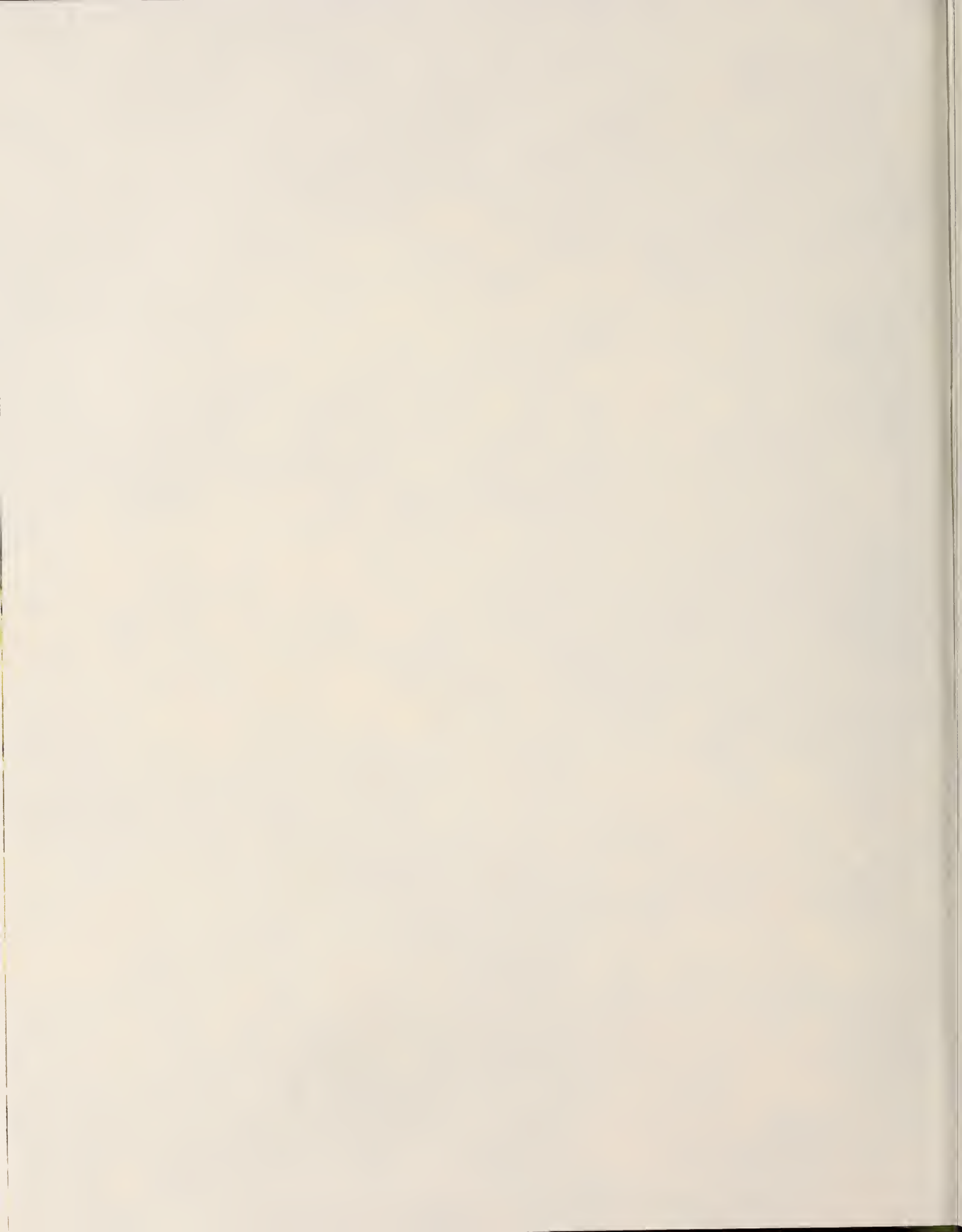
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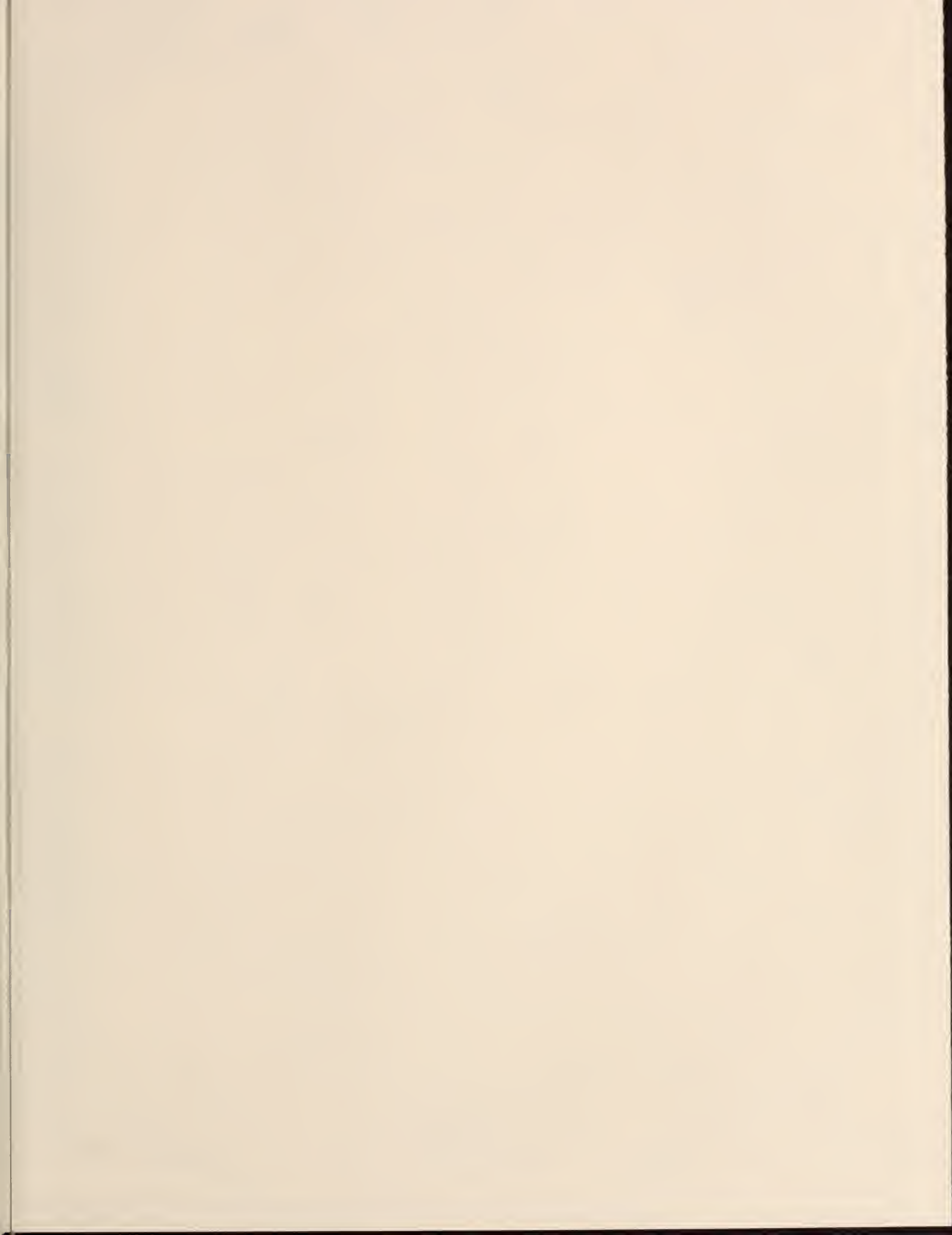
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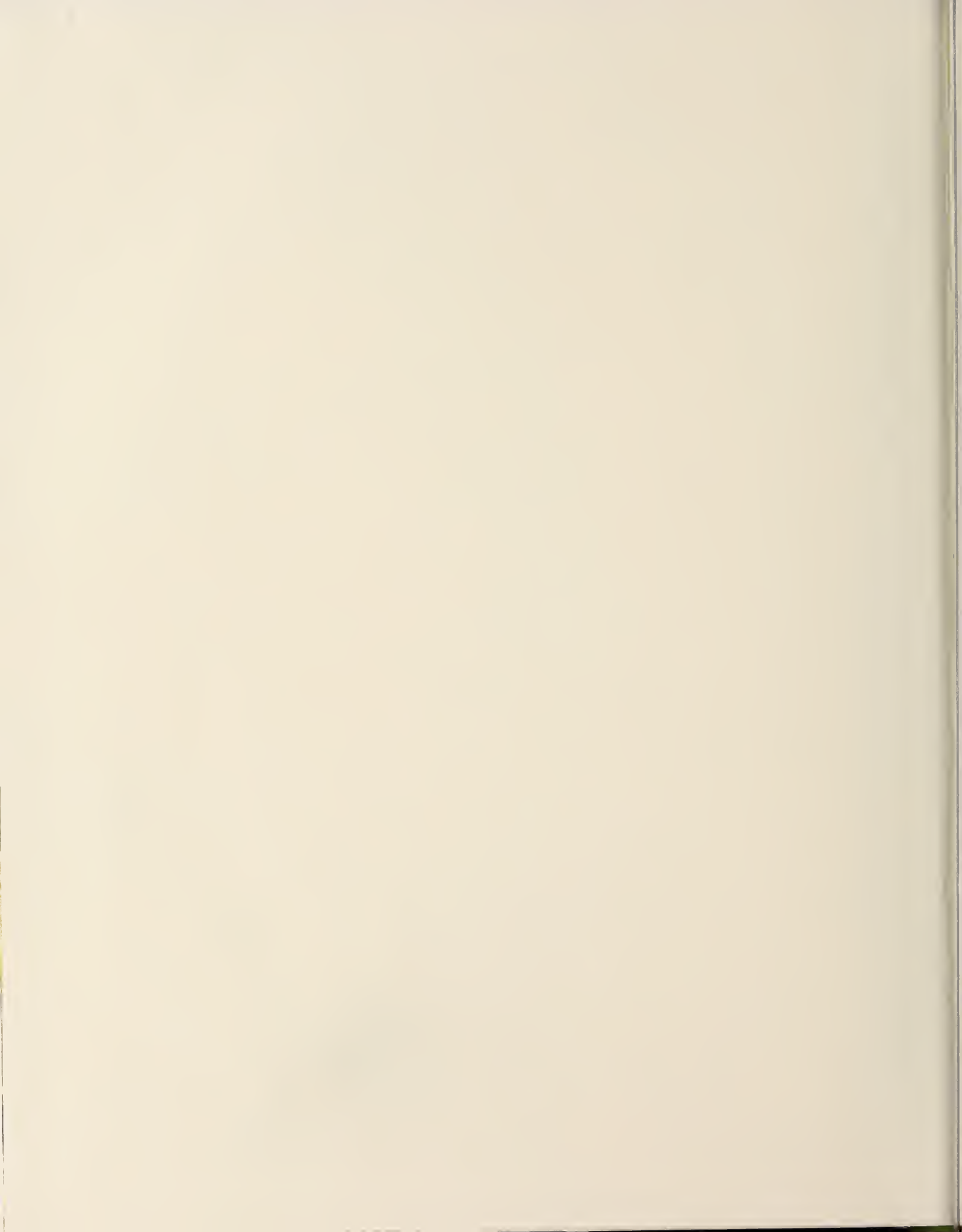
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