

# AMERICAN HORTICULTURIST

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The image suggests a woodland pool deep in a hidden forest, but these tree ferns and sedums actually grow in a California back yard, and the pool is man-made. For more on this lovely work of art, turn to page 19. Photograph by Pamela Harper.

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ON THE COVER: Poppies are now in bloom throughout the fields of the Antelope Valley in California. Tour these remarkable wildflower fields with us, beginning on page 24. Photograph by Bill Ross.

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## GUEST EDITORIAL

# HELP GUIDE US IN NEW DIRECTIONS

The American Horticultural Society is the happy recipient of a generous donation of *Franklinia alatomaha* from the National Arboretum and Plant Introduction Station at Glenn Dale, Maryland. Dr. William Ackerman has been trying to develop mutant variations of *Franklinia* through two processes: the treatment of seed with gamma rays (irradiation), and the treatment of germinated seed with colchicine to double the chromosomes. In time, I am sure we will hear more results of this research, but it is exciting to know that work is being done on this species, which holds such a mystical fascination for gardeners everywhere.

The acquisition of our Franklin trees is an appropriate way to mark the beginning of a new era at the American Horticultural Society. *Franklinia alatomaha* was named by the early American botanist, John Bartram (the King's Botanist), for his fellow Philadelphian, Benjamin Franklin. Both men embodied the 18th-century version of the American dream. Bartram, the humble Quaker farmer, took up Latin as an adult so that he might communicate with fellow plantmen of many nationalities.

As most serious gardeners know, Bartram found the unique colony of *Franklinia* trees on the banks of the Altamaha River in Georgia while on a plant collecting trip in 1770. Within several generations, the colony had vanished, and the tree became extinct in the wild. It has been preserved from total extinction only through loving cultivation by man for these 200 years. Its welcome, creamy blossoms in September and October, and deep scarlet foliage in the fall, make it prized by gardeners on both sides of the Atlantic. To have a grove of this legendary species now gracing our own Potomac River slopes, preserved as a direct descendant from Bartram's garden, and cherished by generations of members to come, is befitting both *Franklinia* and the American Horticultural Society.

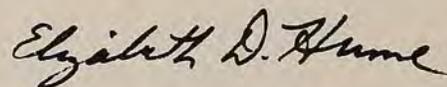
John Bartram and Ben Franklin both understood the value and challenge of continuing to search and learn throughout their lives. Today, "continuing education" is an important program in many cultural in-

stitutions as well as colleges. Programs at museums, art and nature centers and at botanic gardens are recognized and valued as healthy complements to our highly structured, specialized formal education system. AHS plays a significant role in non-traditional education through its dedication to furthering knowledge of horticulture in America. Our Education Department is now committed to new growth, and we ask you, our members, to grow with us.

In the next year or two, we hope to hold several regional study seminars, probably on weekends at college campus or botanical garden sites, with a practical program and minimal expense. Regions will be chosen for membership concentration and geographical variety. A certificate may be awarded upon completion of a prescribed number of seminar hours accumulated over several years. We are looking for recommendations of good speakers or teachers in your area and for possible dormitory-conference sites.

We are also looking at horticultural education programs in the nation's schools. We aim to produce a sound, basic elementary curriculum aid on gardening principles and plants. The Charleston Spring Symposium is behind us, and our 1983 Philadelphia Annual Meeting is just around the corner in September. Please come and be a part of developing these new directions.

On the attached Member Response Card, please express your interests in our present programs, and guide us in new directions you would like us to take. Thank you for taking the time to give us your thoughts. We hope to bring you fuller membership benefits as a result. To teach nurturing skills and reverence for what is left of our dwindling natural world is an exciting challenge. Grow with us and flower.



Elizabeth D. Hume  
Director, Education

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# THE AMARANTH FAMILY

**W**hen Cortez arrived on the shore of the New World he found vast stores of grain held in tribute to Montezuma by the natives. A plant grown in the tropical highlands and domesticated by the Aztecs long before the Spanish Conquest was nourishing one of the world's most advanced cultures. Besides being a staple food, it also played an important role in religious festivals. This pale-seeded grain was amaranth, several species of *Amaranthus* of the family Amaranthaceae.

In modern times this group of half-wild plants appears to have a future as a rich nutritional source of both grain and leaf protein that could help feed a hungry world. They are important to rural farmers in Central and South America and to hill tribes in Asia, New Guinea and parts of Africa.

Amaranths are plants whose photosynthesis is exceptionally efficient. They germinate and grow well under adverse conditions, are easily cultivated and adapt well to the rural farmer's small plots and mixed cropping. Furthermore, they are relatively easy to harvest by hand and to cook. The seeds are produced in prodigious quantities. Carbohydrate content of seeds is comparable to that of true cereals, but in protein and fat amaranths are superior. In addition, they have nutritious leaves that are extensively eaten as a boiled vegetable.

According to the National Academy of Science, "three species of *Amaranthus*—*caudatus*, *cruentus* and *hypochondriacus*, are largely neglected candidates for increasing protein production in developing countries. . . . Analyses and feeding experiments demonstrate that *Amaranthus edulis* (considered a race of *A. caudatus*) grain is rich in protein and exceptionally high in lysine, one of the critical amino acids usually deficient in plant protein. The seeds of all three species are high in protein."

Of the three major species, the most widely grown is *A. hybridus* var. *erythros-tachys*, formerly *A. hypochondriacus*, which

Not a tree

A plant, a leaf, a blossom, but contains  
A folio volume. We may read, and read  
And read again, and still find  
Something new

—James Hurdis (1763-1801)



A relative of our garden celosia, known botanically as *Amaranthus*, may compete with wheat, corn and rice some day as a world food crop. Robert Rodale of *Organic Gardening* magazine believes it will one day be a familiar household name.

# GARDEN DESIGN

The Fine Art of Residential Landscape Architecture

SPRING 1983



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is currently found in Mexico, Guatemala, Iran, India, Afghanistan, the Himalayas and parts of China. *A. caudatus* is cultivated in Andean regions of Argentina, Peru and Bolivia; *A. cruentus* in Guatemala.

Scientists are trying to breed amaranth varieties that will combine the best qualities of productiveness and disease resistance so that this grain can compete with wheat, corn and rice.

The Rodale Organic Gardening and Farming Research Center began in the early 1970's a far-sighted horticultural program to develop a tamed amaranth that could fit better into farm and garden growing programs. Comparable research is under way in California and Mexico. Problems remain in achieving the full potential as a modern crop, but results have been encouraging.

Robert Rodale wrote in *Organic Gardening* magazine (July 1982), "A few years from now, amaranth is probably going to be a word every American will recognize. People will know that amaranth grain is tasty, nutritious, and important to our agriculture and food system."

What is this wonder plant now renaissance? *Amaranthus* is a genus of about 50 species of coarse annual herbs native to mild and tropical climates in many parts of the world. Some of them are coarse weeds. Their minute flowers without petals are often conspicuous because they are congested in chaffy, brightly colored clusters. Seeds develop in one-seeded, bladder-like achenes. The name *Amaranthus* is based on Greek words meaning "not to wither," in reference to the durability or everlastingness of some species. Their garishly colored foliage and red or green spiked inflorescence have been emphasized in production of ornamental forms.

Amaranths grown for grain are pale seeded. Their appearance, flavor and popping capability cause them to be preferred. The grain is usually parched and milled, or it may be cooked as gruel. Young plants are often gathered as potherbs. Wild, dark-seeded varieties are those generally used as potherbs and ornamentals; they are not suitable for grain.

The various species in cultivation include ornamentals familiar to gardeners from as long ago as the 18th century. Dark seeded with red leaves, they can be found listed in garden seed catalogs as summer poinsettia, fountain flower and Joseph's coat. One that is grown for greens is known as Chinese spinach or tampala.

Classification of *Amaranthus* species varies among sources. Their worldwide spread, variety of form and colors and diverse uses have contributed to confusion in species nomenclature. Following are some of the commonly recognized species.

*Amaranthus albus*, a widely dispersed plant, though not known as an amaranth, is the tumbleweed, which is native to mid-western United States. After the leaves fall in autumn, the wind blows the stalks out of the ground, and on flat western prairies they are blown across the open spaces as tumbling balls.

*A. caudatus* (meaning tail-bearing)—love-lies-bleeding, tassel flower; a five-foot annual tropical native, variously listed by seedsmen under other species names.

*A. cruentus* (meaning blood red)—prince's feather, red amaranth; treated by some as a variety of *A. hybridus*.

*A. hybridus*—green amaranth, pigweed, wild beet; the variety *erythrostrachyus* is prince's feather.

*A. retroflexus*—green amaranth, red-root pigweed; a 10-foot tropical weed found over a great part of the United States.

*A. tricolor*—tampala, fountain plant, Joseph's coat; a four-foot annual with variable foliage. A plant often called *A. gangeticus viridis*, Chinese spinach, is actually a race of this species.

The amaranths constitute only one genus out of more than 60 in this worldwide family of everlastings, the Amaranthaceae. All are known for their small, scaly flowers, often in showy masses. Variety in foliage color extends through green and yellow to intense red and almost black. Like the *Amaranthus* species, many of the others too are weedy, but ornamentals abound.

Gardeners esteem the ornamental forms for the tropical landscape effect attainable with their use.

From South America come the several species of *Alternanthera*, so named for alternate stamens, five fertile and five sterile. Flowers are rarely produced in cultivation because these tender plants are used for carpet bedding or as dwarf serpentine borders and as such are sheared for uniform height. The three species commonly used, ranging in height from three inches to six or eight, probably are of Brazilian origin. Their leaf colors are green with red blotches, red and yellow, or red and copper. The succulent foliage is edible.

Crested flowerheads resembling a cockscomb identify *Celosia cristata*. The velvety cockscomb is often fantastic, some-

times grotesque. It is only one of a large genus grown for the chaffy flower clusters. A tropical Asiatic weed, *C. argentea* is a parent of this celosia. Cockscomb is an old-fashioned flower much improved for modern garden uses and for dried arrangements. The plumosa group of this species, often referred to as *C. plumosa*, is clothed for half its height with long, silky, feathered plumes. Either the broad, fan-like type or the feathery ones provide glowing red, yellow and orange plumes for summer-long show and winter bouquets. The name celosia is from the Greek, "a burning," on account of the seared appearance of the flowers.

An American annual named for a prominent German physician and botanist is *Froelichia*. Commonly called cottonweed, it is a woolly, hairy annual; one species, *F. floridana*, is native from Delaware to Florida and one, *F. gracilis*, is native to prairies of Kansas, Nebraska, Colorado and Texas.

*Gomphrena globosa*, globe amaranth or immortelle, a ubiquitous dried flower of flower marts and farmer markets, is deservedly popular. For colorful winter bouquets it is a first-class everlasting. Its red, pink, white or orange heads of bloom superficially resemble clover. It comes from the tropics of the eastern hemisphere and is an annual in our gardens.

*Iresine herbstii* is bloodleaf or gizzard plant. A woolly harvest garland of ancient Greece is the allusion in its name because of the woolly calyx of its clustered white flowers. Its common names are descriptive of the crimson coloring of both leaf and stem. Native to South American tropics, where it may grow to six feet, it is used in temperate climates as a summer bedding plant. As an indoor pot plant under artificial lights, it requires constant pruning to retain good form and to prevent legginess. In the florist trade it is sometimes offered as *Achyranthes*.

Pink and white flower heads covered with delicate hairs give a fluffy appearance to the blooming *Ptilotus manglesii*, a striking Australian species for annual gardens or for the greenhouse.

Aztec wheat, Chinese spinach, summer poinsettia, cockscomb, tassel flower, prince's feather, tumbleweed. The Amaranthaceae. Not a tree, a plant, a leaf, a blossom, but contains a folio volume. ♣

—Jane Steffey

Jane Steffey is the Society's horticultural advisor.

## HORTICULTURAL EXPLORATIONS



Two different parts of the world offer you the glory of autumn color—New England and the Orient. The American Horticultural Society offers you these trips that are planned exclusively for our members and friends. Besides visits to public and private gardens, see historical and cultural sights.

### NEW ENGLAND (October 3-14)

This is one of the world's most beautiful areas in the fall. An in-depth horticultural visit to Massachusetts, Connecticut and Rhode Island. Besides the foliage, visit natural reserves and private gardens. See Weston Nurseries, White Flower Farm, Berkshire Garden Center, Naumkeag Gardens, the beautiful homes of Newport, Cape Cod National Seashore.

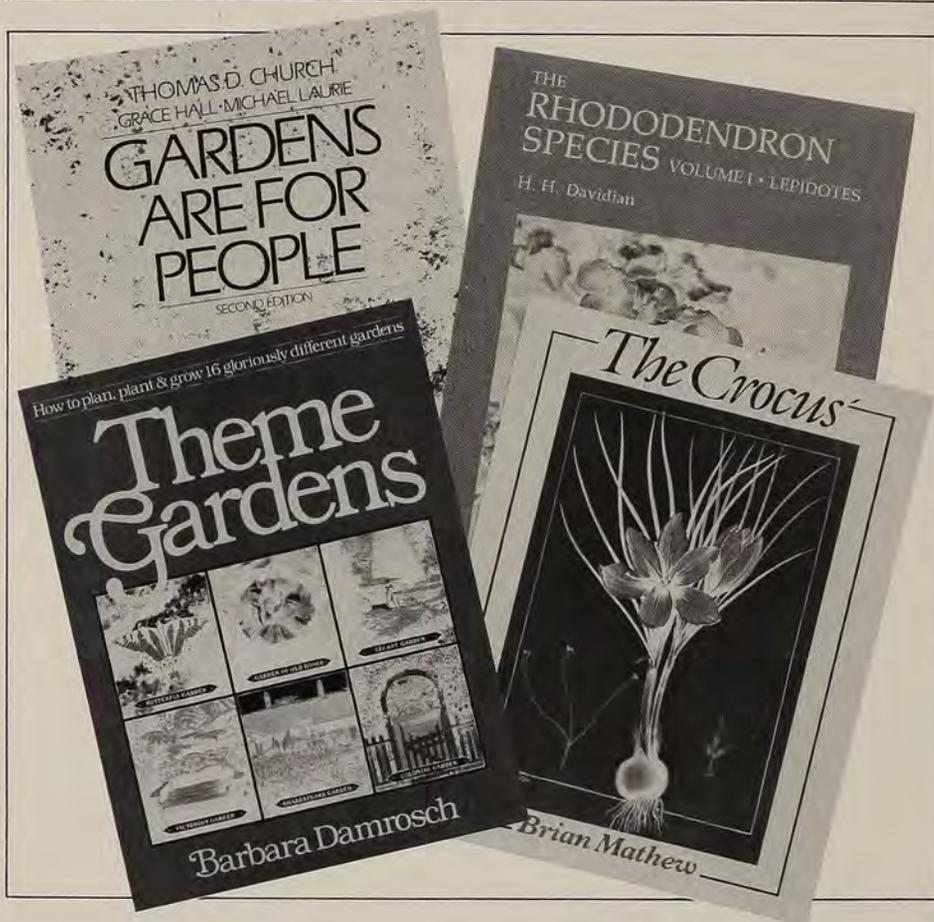
### FALL ORIENT (November 1-24)

Our annual trip to Japan, Hong Kong and Taiwan. This is chrysanthemum season, climatically the finest period of the year. The most unusual and enriching parts of this itinerary are the visits to select Japanese private gardens, a privilege rarely available to tourists. Also learn of Japan's art, handicrafts, culture, food, history and scenery. In Taiwan see "the tradition of Old China," visit private homes in Hong Kong.

Other horticultural explorations available in 1983 are: Bermuda (April 30-May 7), Spring Japan (April 28-May 18), Spring and Fall England (May 12-26 or Sept. 7-21), Germany and IGA '83 (May 26-June 9 or Sept. 6-20), Canadian Rockies (July 16-30), South Africa (Sept. 9-30).

For any of these programs, please write to the Education Department, American Horticultural Society, Mt. Vernon, VA 22121 for your free brochure. OR telephone 1-703-768-5700.

## BOOK REVIEWS



### GARDENS OF A GOLDEN AFTERNOON.

Jane Brown. Van Nostrand Reinhold. New York, New York. 1982. 208 pages; hardcover, \$29.95. AHS discount price, \$22.50 including postage and handling.

### MISS JEKYL.

Betty Messingham. David and Charles. North Pomfret, Vermont (3rd printing). 1982. 195 pages; hardcover, \$24.95. AHS discount price, \$21.50 including postage and handling.

To many, the name of Gertrude Jekyll is synonymous with the English cottage garden. Born in 1843, she grew up in an atmosphere and an era of formal and often gaudy Victorian gardens. As a young lady of private means she was prevented by convention from being a part of the more Bohemian lifestyle of the artist. But she was a naturally talented artist and an avid gardener, and it was through her gardens that she had and continues to have an

enormous influence on design. Beginning in 1899 she wrote 14 books about various aspects of garden design, the best of which was published posthumously in 1937, five years after her death. All of them are still in demand and still read today. It was also in 1899 that she met a young architect, Edwin Lutyens. Their professional collaboration has left a lasting mark on garden architecture.

*Gardens of a Golden Afternoon* is the story of the gardens that were the joint product of Jekyll's and Lutyens' genius. The book is beautifully illustrated with many color photographs and details of garden design. *Miss Jekyll*, on the other hand, is primarily a biography, but because of the nature of the subject, it, too, deals extensively with design. Both books are well written, and the overlap in subject matter is minimal. For the gardener interested in the English cottage garden or the history of an important influence on garden design, I strongly recommend these two books as a pair.

### THE CROCUS.

Brian Mathews. Timber Press. Portland, Oregon. 1983. 127 pages; 96 color plates. Hardcover, \$50.00. AHS discount price, \$42.00 including postage and handling.

This book may prove to be a source of extreme frustration. The excellent descriptions and colored plates clearly define and illustrate the 80 species that occur in the genus *Crocus*. Unfortunately, very few of them are available to the interested gardener—so much of what is offered in the horticultural trade is of hybrid origin. On the other hand, many species that are available are sold with either no name or else some equally meaningless common name coined for the occasion. For the serious gardener who wants to know, this work will allow him to identify crocus species he may have and may very well send him on a quest for more.

### THE RHODODENDRON SPECIES—VOLUME I—LEPIDOTES.

H. H. Davidian. Timber Press. Portland, Oregon. 1982. 431 pages; hardcover, \$59.95. AHS discount price, \$51.00 including postage and handling.

This is the first of a three-volume work to be published jointly with the Rhododendron Species Foundation. When finished, it will be the most complete treatment of *Rhododendron* published in the last 50 years. Each species is described in detail, and mention is also made of horticultural value and hardiness. It must be pointed out that the author does not hold with some of the newer taxonomic arrangements proposed for the genus, but he clearly states his reasons for this different point of view.

### THEME GARDENS.

Barbara Damrosch. Workman Publishing Company. New York, New York. 1982. 224 pages; softcover, \$10.95. AHS discount price, \$8.95 including postage and handling.

Plans for 16 different gardens make this an unusually worthwhile book for the beginning gardener. The colonial garden, the winter garden, the children's garden and the butterfly garden are just a few of the themes chosen. For each garden a typical plan is presented showing where the selected plant materials are to be placed. Sketches of how each garden will change with the advancing seasons add to its value. Although these gardens are designed for

planting in the northeastern part of the country, sections on how to adapt the design to other regions of the country and how to vary the size to meet your own individual requirements are also included. The plant lists are illustrated with colored line drawings, and a bibliography is given for each garden theme for the reader who wants to know more.

### AGAVES OF CONTINENTAL NORTH AMERICA.

Howard Scott Gentry. University of Arizona Press. Tucson, Arizona. 1982. 670 pages; hardcover, \$49.50. AHS discount price, \$46.45 including postage and handling.

The agaves are a dominant feature of North American deserts. As economic plants they have had a considerable effect on the development of the meso-American civilizations and even today are an important source of fibre and alcoholic beverage, as well as a significant part of many garden plantings in the dryer regions of the country. The majority of species are native to continental North America—this complete taxonomic treatment deals with 136 species. This work is directed at taxonomic botanists and as such is a major contribution in the field, but because of the importance of agaves in desert gardening throughout the world, many gardeners will also find this book a much needed guide through what has until now been a most confusing complex of species and varieties.

Each species description is accompanied by clear and precise line drawings and good photographs as well as the usual distribution map. Identification keys separated by geographical region are a further aid to the gardener in search of the proper name.

### GARDENS ARE FOR PEOPLE.

Thomas D. Church. (Edited by Grace Hall and Michael Laurie). McGraw-Hill Book Company. New York, New York. (2nd Edition). 1983. 256 pages; hardcover, \$37.50. AHS discount price, \$31.50 including postage and handling.

Thomas Church began his career as a landscape architect in the 1930's and in 1955 published the first edition of *Gardens Are For People*. This book, which explained his thoughts and illustrated his designs, has long been considered a classic work in landscape architecture. Now, following his death in 1978, a new edition of his book has been prepared that brings up-to-date the record of his achievements. This is not a reissue of the earlier book. Although Church's thoughts on design principles are still the basis for the text, all of the illustrations are new, and most of the gardens shown are those he designed after 1955. Like its predecessor, this latest edition is destined to set new standards in the field of landscape architecture. ☉

—Gilbert S. Daniels

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

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# Two Popular Victorian Garden Magazines

BY ARTHUR O. TUCKER

Two popular gardening magazines from the turn of the century came to my attention when I was 16. My father and I were at the home of a used book dealer in Pennsylvania. While my father was looking for antique automobile advertisements in period magazines, I busied myself reading a modern seed catalog.

"I think I have something here that might interest you," the book dealer said. "Just a minute. Here they are. Are you interested in these? They came from an attic in Lehighton."

The book dealer had laid before me a stack of *Park's Floral Magazine* and *The Mayflower* from 1894 to 1924.

"You can have the lot for \$2.00."

I hesitated. After all, this was my allowance for a whole week. But, then, I usually spent it on books, seeds, bulbs or plants (the latter money thus returned to my parents in the form of landscaping—a good deal for them now that I think about it).

I gave in. "Okay, I'll take them."

Now I am glad I had low sales resistance. A check of the *Union List of Serials* reveals few holdings of either magazine. Are there any public holdings of vol. 30 (1894) of *Park's Floral Magazine*? Is the copy on my bookshelf the only one left? I hope not. Apparently, this sort of popular magazine was considered as ephemera and discarded with the seed catalogs and newspapers of the time.

*The Mayflower* was published by John Lewis Childs of The Mayflower Publishing Co. at Floral Park, New York. Volumes 1-22 were published c. 1884 to 1906. In 1906 *The Mayflower* was incorporated with *Floral Life* (which merged with *Household Journal* in 1908). As an example of circulation volume, the December 1896 printing of *The Mayflower* numbered 250,000 (yet the *Union List of Serials* lists only three copies still extant).

*Park's Floral Magazine* was published by George W. Park at Libonia, Franklin Co., Pennsylvania. This magazine was essentially an extension of the seed catalog offered by Park. Volumes 1-62 were published 1871-1926. As an example of cir-



ulation volume, the February 1898 printing numbered 361,500 but eventually climbed to 800,000 in 1919. An attempt was made to resurrect *Park's Floral Magazine* in 1964, but insufficient circulation curtailed publication in 1969. In the views of their publishers and readers, both magazines were really horticultural clubs. The letters to *Park's Floral Magazine* usually began "Dear Floral Sisters" or "Dear Floral Friends." The articles and letters were exuberant about gardening but tinged with what we would now view as maudlin Victorian sentimentality.

The following letter, entitled "Some front yards and what they contained," is from the August 1894 issue of *Park's Floral Magazine* and exemplifies the typical Victorian garden of the common man cluttered with geometric beds, gazing balls, birdbaths, etc. This formal "bedding out" was deplored by later Victorian writers such as Gertrude Jekyll.

*Last spring in front of a porch covered with Clematis Virginica [C. Virginiana] and*

*Cinnamon Vine a half-circle was made to fill the space between the steps and a path. This was filled with Geraniums. Fancy-leaved, which had been kept in pots in the house and cellar during the winter. The pots were sunk so as not to be seen. The edge was a row of Mad. Salleroi Geraniums. All had been started from cuttings of one plant. This Geranium will not keep in the cellar. It must have light and heat. A circular bed not far from this was filled with Coleus of different colors and edged with Alternantheras. A bed of Cannas near the corner of the fence was edged with Arabis Alpinus [A. alpina] while a row of Amaryllis Atamasco [Hippeastrum sp.], known as Rose Lilies, was put inside the edge. This yard had two or three large old trees in it. A long bed near the fence held a general mass of Geraniums in the center, and back near the fence were Double Hollyhocks, Daturas, Helianthus cucumerifolius [H. debilis subsp.] and other tall plants, while the edge was old-fashioned Clove Pinks.*

*Another yard which was much admired was on the north side of the house. The porch was covered with vines. The bed on the west side of this porch was filled with house plants in pots. The edge was blue Ageratum, the plants of which had been started from cuttings taken from a plant which had done duty in the house all winter. Oh, what a mass of flowers; and they were unusually fine, always being cut and yet always ready. The bed on the other side of this porch had pots of Fuchsias and Asparagus plumosa [A. setaceus] sunk in it. Back of these were Ferns and Cosmos, while the edge was of magnificent Pansies, and however many were given away, it always seemed full.*

*Beaver Co., Pa., Aunt Susie*

*(Note—Luxuriant vines about the porch, and a few groups of choice plants and shrubs tastefully arranged in the grass plot always make a home attractive and add to the happiness of the inmates. It's a very simple matter, home adornment, but it means much to the refined taste.—Ed.)*

The Victorian house plant was a robust

THE

# MAYFLOWER



18 FEB 97





GLADIOLUS CHILDSI.

SPOTTED CALLA.

MONTBRETIA

GLOXINIA.

TUB. BEGONIA.

SHOOFLY PLANT.

HELIOTROPE.

PALM.

JAP.

CHRYSANTHEMUM.

MAYFLOWER PREMIUM.

SCARLET PANSIES.

species indeed! Not only did it have to endure low and uneven temperatures because of a lack of thermostatically-regulated central heat, but coal soot, gas leaks and drafts were also constant problems. Frost was a constant worry if no one was home to tend the fires. Sara Clare of Orange County, Indiana wrote in the February 1894 issue of *Park's Floral Magazine* of her problems with frost but noted that "I have repeatedly saved frozen plants by letting them thaw gradually and in the dark."

The parlor plant of this era was typically a cool greenhouse plant. Some house plants of the Victorian era were violets, heliotropes (very popular!), cinerarias, fuchsias, snapdragons, verbenas, "nasturtions," Mexican primroses, Chinese primroses, English primroses, *Lobelia erinus*, petunias, smilax (*Asparagus asparagoides*), carnations, *Catharanthus roseus* (*Vinca rosea*), Guernsey lily, balsams, gloxinias, morning glories, farfugium (*Ligularia tus-silaginea*), callas, calceolarias, marguerites, cyclamens, cape jasmine, abutilons, stocks, jasmine, night-blooming tobacco and forced hardy bulbs. Oh, and let us not forget the cast-iron plant, *Aspidistra elatior*. With the low light of the heavily-draped window to prevent fading of the velvet and horsehair interior, the cast-iron plant was really the only plant to survive. A shame that more house plant companies do not carry the cast-iron plant today. Those ridiculous interior decorators who somehow assume that plants will grow in sparsely-lighted, unused fireplaces should know this plant!

One house plant that we cannot grow today is the musk plant, *Mimulus moschatus*. As noted by the editor of *Park's Floral Magazine* in the June 1894 issue, this was "highly prized by some on account of the musk-like odor of its foliage. It is of dense, globular form, and each plant appears like a bouquet in itself." Unfortunately, apparently due to inbreeding by a few seed companies, the gene for musk scent was lost around World War I.

The following illustration and letter in the February 1897 issue of *The Mayflower* struck me as a novel way to grow the asparagus fern (*Asparagus setaceus*; formerly *A. plumosus* or *A. tenuissimus*).

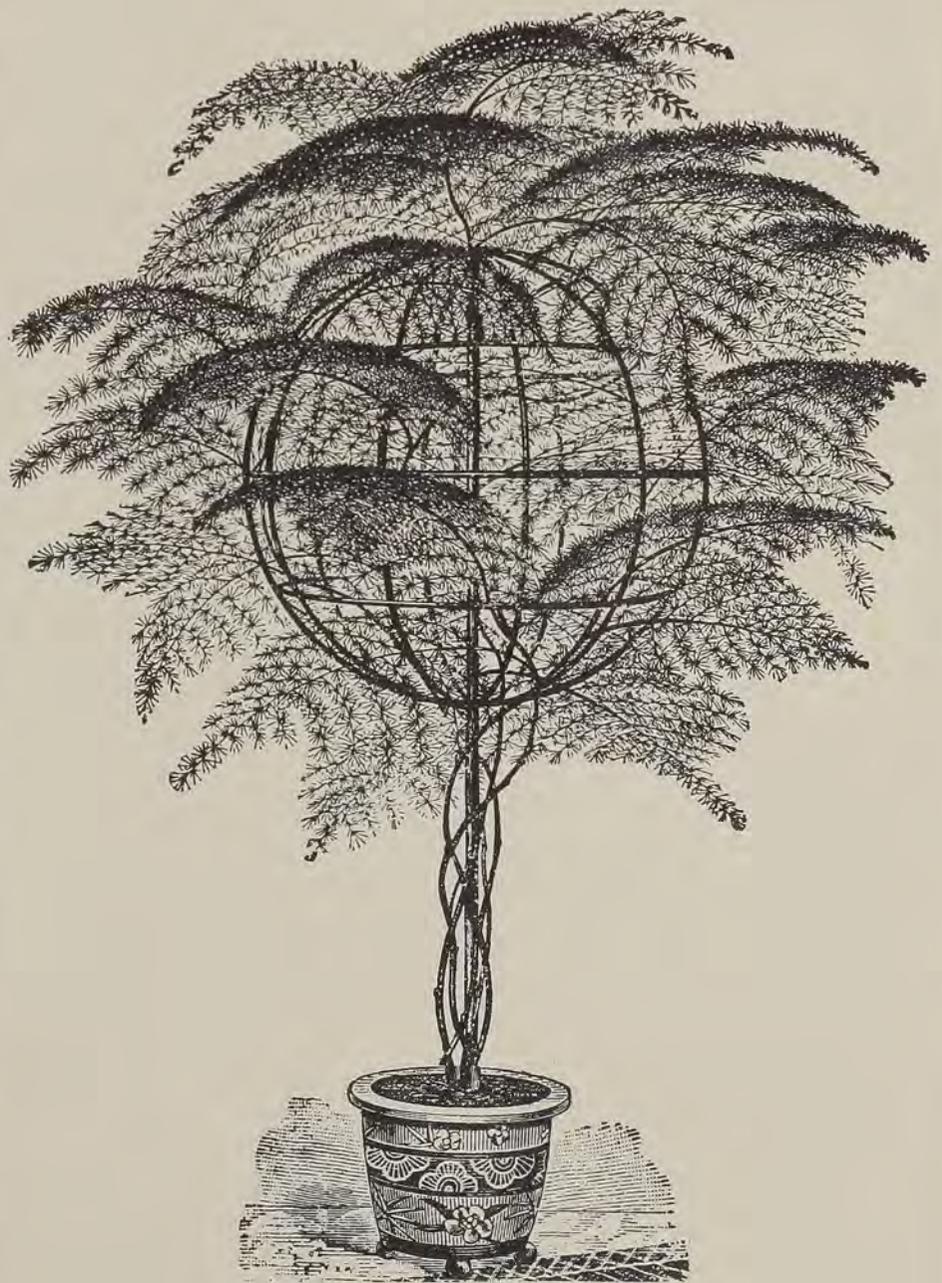
*The fine, misty foliage of the common vegetable Asparagus has doubtless been admired by everyone familiar with it. Imagine that plant changed into a delicate climber, with much finer and more filmy*

*foliage, transforming everything it touches with the most airy and delicate greenery imaginable, and you may have a faint conception of the appearance of the Climbing Asparagus (A. tenuissimus). It may be trained in a great variety of ways, like Smilax,—on strings or on trellises, of which there is a great variety of shapes to choose from. Trained over windows or white curtains, the effect is bewitching in the extreme. For bouquets and cut flower decorations generally the foliage is particularly suitable, and will keep for several days after being cut, without wilting or changing color. It is easy to grow and manage.*

Nancy Lee, N. Y.

Outside, problems also had to be surmounted. The tea roses of 1840-1890 were scarcely hardy enough for most gardens. The following letter is from the September 1897 issue of *The Mayflower* and illustrates a method that might be adapted for a plant grown in an area where it is only marginally hardy.

*My friend had a beautiful Tea Rose growing in her yard. She was versed in flower lore and knew that it ought to be removed to the cellar for the winter, but—she had no cellar. Neither were her windows adapted to flower culture. Of course the Rose could be pruned back and mulched, but there was always the pos-*



CLIMBING ASPARAGUS.

sibility of its dying or freezing, and it did seem too bad to sacrifice all those lovely buds. She debated with herself, then her woman's wits came to the rescue. An old barrel, having both heads knocked out, was placed over the Rose bush and held firmly in position by a banking of earth on the outside. The top of the barrel was covered by several broken panes of window glass (large size) and in this embryo greenhouse the Rose thrived [sic] and bloomed all winter, furnished at Christmas-time two full-blown Roses and three exquisite buds. In severe weather, and on windy days, the glass covering was further protected by a covering of boards and mats, and on mild balmy days the whole was removed for a little while to give the Rose an airing. "No," said my friend critically, "the barrel is not artistic—but the Rose is! Cleverer heads than mine may plan a more slightly protection for it, but as for me, 'I spare the wolf to save the lamb in the wolf's own jaw.'"

Genevieve Hays, W. Va.

I had few encounters with my paternal grandfather, but I do remember his manure tea and his prolific garden. Directions for preparing manure tea vary, but the following is from the June 1894 issue of *Park's Floral Magazine*.

*Liquid Fertilizer*,—a barrel filled with barnyard manure, with a spigot at the bottom, is often used to produce a liquid fertilizer for many kinds of flowering plants as well as *Chrysanthemums* and *Roses*. Close the spigot and fill the barrel with water until it will hold no more. Allow it to stand for a few hours or a day or more, according to the strength of the manure. Then draw the liquid off. Do not apply oftener than once in two weeks if the material is strong.

In spite of organic gardening, insects and other vermin still abounded. For house plants, soapy water baths and/or alcohol-dipped cotton swabs cured aphids, scale, mealy bugs and mites. We still employ the Bordeaux mixture as a fungicide, but fortunately, concentrated Paris green (arsenic trioxide copper acetate) has fallen by the wayside. Birds were always encouraged, and castor bean plants were planted to rid the yard of moles. Tobacco dust extracted in boiling water and then cooled was claimed to be effective against aphids, flea beetles and ants. Ground cayenne pepper also eradicated ants from pot plants, as few gardeners used pasteurized potting soil, and ants and earthworms were acciden-

tally brought into the house. Kerosene emulsion was also another popular remedy for most insects. The following letter, from the October 1896 issue of *Park's Floral Magazine*, sounds interesting, but I have never tried it.

*Horse Chestnuts for Insects*.—I find *Horse Chestnuts* a splendid thing to destroy all sorts of insects on flowers. Take a dozen, break up fine, pour two quarts of water on, let stand for a day, and spray the infested plants with the liquid.

Adams Co., Pa. Mrs. Eliza A. Zigler

The following letter, from the September 1896 issue of *Park's Floral Magazine*, also sounds interesting but, again, I have not tried it.

*Alum Water for Insects*.—When I find green lice on my plants I spray them with alum water. I use a stiff brush, and draw my fingers quickly across the bristles. I have *Verbena*, *Calceolaria*, *Heliotrope* and *Feathered Celosia*, all of which are particularly prone to become infested with insects, and since I spray with alum water the foliage has become large and luxuriant, and there is not a crawling thing to be seen. Alum is cheap, easily procured even in country villages, and has the additional advantage of being clean and free from smell, which is more than can be said of most of the horrible compounds we have hitherto considered a necessary evil.

Rockland, Me. Adelia F. Veazie

In spite of the Victorian adage that "children should be seen and not heard," this letter, from the May 1895 issue of *Park's Floral Magazine*, illustrates that children were encouraged in gardening.

*For The Children*.—A flower-bed belonging exclusively to the children in a family, in which they may dig and plant and cut flowers when they please, for mamma's birthday, for the church on Children's Day, for May-baskets or for Decoration Day makes home dearer to the young folks, and is one way of teaching them the blessedness of giving and laboring for others.

San Bernardino County,

Cal. S. Rosella Kelley

Often a third of *The Mayflower* was devoted to recipes for using garden produce. Typical recipes included gooseberry catsup, lemon shrub, maple-spruce beer, ginger beer (for the harvest field), celery knob sauce, pickled raspberries and bran-died tutti frutti. I close with these two recipes: *Lemon-Tea Frozen*, from the April 1897 issue of *The Mayflower*, and *Raisin*

*Cheese*, from the September 1896 issue of *The Mayflower*.

*Lemon-Tea Frozen*.

Add a little more sugar than [sic] is agreeable to one quart of tea made rather strong, and when cold add sufficient lemon juice to impart a tart, refreshing flavor. Freeze until mushy. Serve in punch glasses.

*Raisin Cheese*

Pare, core, and slice a dozen fine, large tart apples; add to them a pint of sugar and a half-pint of sweet cider, and stew slowly until tender; have ready stoned five pounds of fine, large, pulpy raisins and simmer them, separate, with two cups of boiling water; let them simmer slowly until the raisins are perfectly soft, and the whole a thick mass; it may be necessary to add a little boiling water during the cooking to prevent burning; they must be stirred steadily as it thickens. Rub them through a colander, add the apples, and rub the whole through a coarse sieve; return to the kettle and simmer, and stir until the whole is a smooth, still mass; pack in bowls, and in serving slice thin and dust with powdered sugar, seal when cold, like jelly. This is delightful eaten either with whipped cream or with ice cream and delicate cake.

The latter half of the 19th century saw the birth of many journals. Newly formed botanical, horticultural and agricultural societies issued their own periodicals. Some seed companies and nurseries also started their own magazines.

Many Victorian gardening magazines in America were born, flourished and then died. Others were incorporated into existing journals in a complex family tree. Be on the lookout for these journals: *Magazine of Horticulture, Botany and all Useful Discoveries and Improvements in Rural Affairs* (Boston, 1835-1868); *Lady's Wreath and Young Ladies' Magazine, Embellished with Splendid Steel Engravings, Colored Flowers, Music, etc.* (Philadelphia, Boston, Worcester, 1842-1848); *Horticulturist and Journal of Rural Art and Rural Taste* (Albany, 1846-1875); *Florist and Horticultural Journal* (Philadelphia, 1852-1855); *Gardener's Monthly and Horticulturist* (Philadelphia, 1859-1875); *Tilton's Journal of Horticulture* (Boston, 1867-1871); *American Gardening* (New York, 1872-1904); and *Vick's Family Magazine* (Rochester, 1878-1909).

Arthur O. Tucker is Research Associate in the Department of Agriculture and Natural Resources at Delaware State College, Dover.

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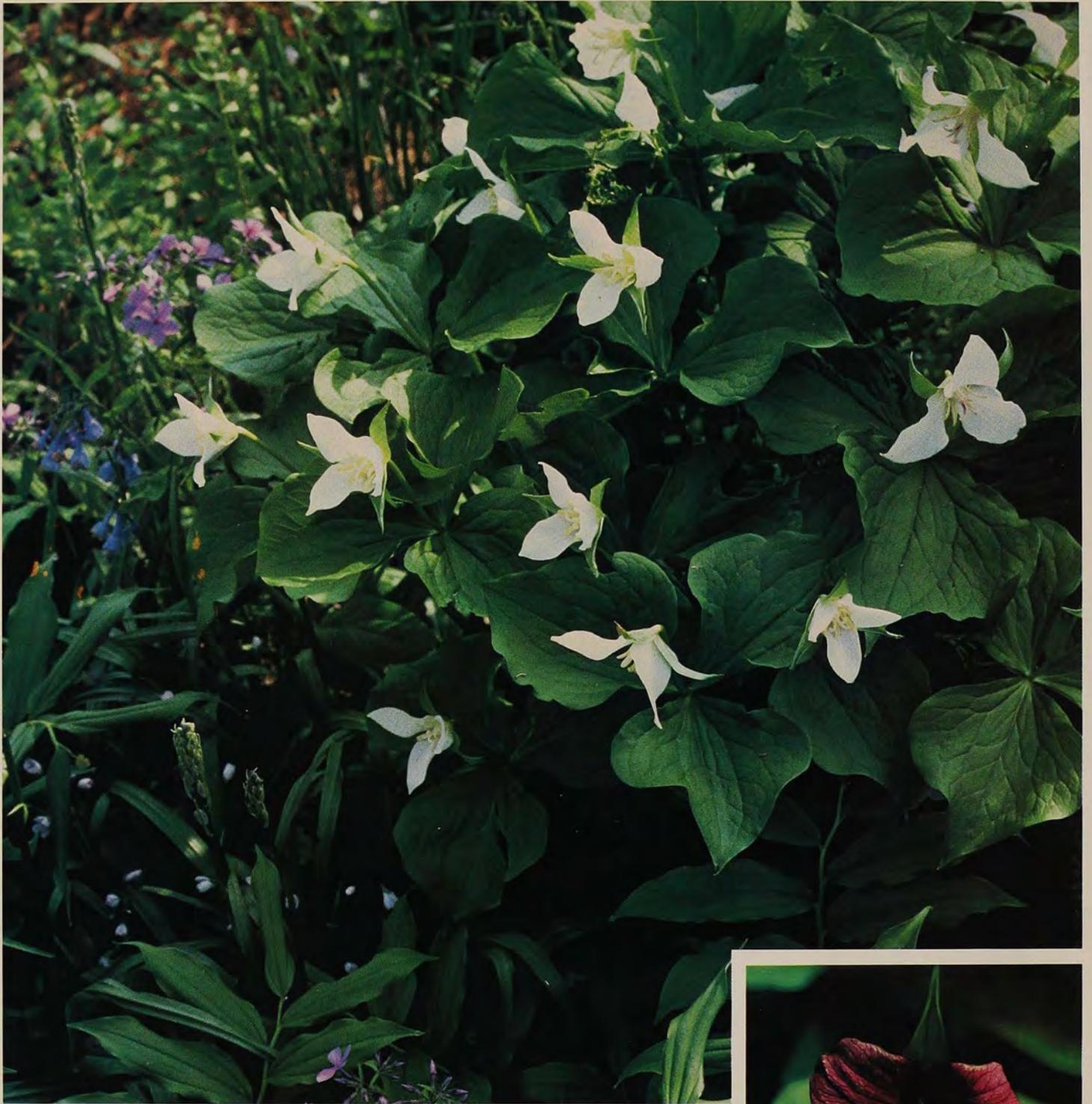
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# Trilliums

TEXT BY DR. THOMAS A. FRETZ  
PHOTOGRAPHY BY PAMELA HARPER

Of all native North American wildflowers, probably none are more universally known and appreciated than the trilliums. Whether you have come to know these plants as trilliums, wake-robins, whitewood lilies or birthroot, most of us realize that they signal the arrival of spring.

This genus, originally described by Linnaeus in 1753 as having only two species, *Trillium cernuum* and *T. erectum*, now represents about 30 species of herbaceous perennial herbs and takes its name from the Latin *tres* or *triplum*, alluding to the three broad leaves arranged in a whorled fashion below each flower. Being a member of the Liliaceae or lily family, the flowers are borne singly at the summit of an erect stem and each has three conspicuous petals that can be white, pink, purplish or yellow, three green or greenish-colored sepals and six stamens. Although commonly thought to occur only in eastern North America, trilliums are also found in the temperate forests of eastern Asia and western North America.

In our gardens, the trilliums are easy to grow, requiring a shady to partially-sunny location and a rich, loamy soil to which generous amounts of organic matter, such as peat moss, compost or leaf mold, have been added. They are also useful plants for rock gardens or in naturalized woodland areas. In fact, they should be used more often.

Of all the trilliums, the best known is *T. grandiflorum*, commonly called the giant white trillium or trinity lily. This species has the widest North American range of the entire genus, extending from Quebec to Florida and west to the Mississippi River. The flowers of *T. grandiflorum* are two to three inches in length, pure white, fading to a rosy-pink as they senesce and are surrounded by a cluster of six cream-colored stamens.

Growing to a maximum height of 18 inches, the giant white trillium is a spectacular plant in any woodland setting, requiring only loam and leaf mold to quickly establish itself. Interspecific hybridization is frequently observed, resulting in the numerous forms that are found in nature, including several double flowered types and a pink flowering form, *T. grandiflorum* var. *roseum*, which is commercially propagated and sold.

Often considered as a miniature of *Trillium grandiflorum*, *T. nivale*, the snow tril-

lium or dwarf wake-robin, grows to a height of eight inches. Another small but excellent trillium, *T. petiolatum*, which is native to the western United States, grows to only six inches in height and has purplish flowers. Both of these dwarf trilliums do best in sheltered locations.

The nodding trillium, *T. cernuum*, also has white flowers that are usually less than one inch in length and formed at the end of a drooping stalk, thus appearing to be hidden by a canopy of leaves. Although it has a range similar to that of the giant white trillium, the nodding trillium appears less often in nature.

*Trillium erectum*, the purple trillium, otherwise known as stinking Benjamin, brown Beth, birthroot or squawroot, grows to 15 inches in height and has flowers with erect brownish to brown-purple petals one inch or less in length. Having a native range from southern Ontario to the mountains of Georgia, this species is commonly and most easily identified by the rather unpleasant odor of the flowers.

Of the other trilliums commonly found in our native woodlands, *T. sessile*, the wake-robin or toadshade, is the earliest of the species to flower. Within its native range, which extends from western New York south to Georgia, Mississippi and Alabama and with western limits to Missouri, *T. sessile* grows to a height of one foot, or slightly more in cultivation.

*T. sessile* is easily distinguished by its handsomely marbled foliage and large, reddish-purple flowers (sometimes described as chocolate-colored) borne without a flower stalk (*sessile* means without a stalk). Several forms of *T. sessile* exist, including the form 'Rubrum', with more intense red-colored flowers, and a white flowering form, 'Album.'

The painted trillium, *T. undulatum*, perhaps the most interesting and unusual species, is considered the most difficult to cultivate. Whether in flower or not, the painted trillium has several identifiable characteristics, including its slender, wavy leaves and attractive white flowers, with characteristic crimson or purplish-marked veins at the base of each petal.

The last of the trilliums to flower include *T. discolor*, *T. catesbaei* and *T. vaseyi*. *Trillium discolor* is an extreme dwarf with marbled foliage. This rare plant has green-colored petals that are rounded at the apex and when fully open expose a cluster of dark stamens.

The pink trillium, or rosy wake-robin, *T. catesbaei*, previously acknowledged in

the botanical literature as *T. stylosum*, reaches a maximum height of 18 inches and supports nodding pink flowers that fade to a deep rose with cream-colored anthers as they mature. The foliage of the pink trillium, native to the mountainous areas of North Carolina, Georgia and Alabama, often appears bronze or reddish.

The largest of the late flowering trilliums, *T. vaseyi*, a native of the southern Appalachians, reaches a mature height of two feet. With slightly recurved dark-purple or maroon petals and tan or amber-colored anthers, the flowers of *T. vaseyi* are often up to four inches in diameter.

The wake-robins can generally be propagated by seeds or division. For best results sow seeds in peat as soon as they are ripe, and place them in a cold frame or other protected area. Do not expect immediate germination, since numerous reports in the scientific literature suggest the seeds exhibit double dormancy and thus require two periods of low temperature stratification separated by a period of warm, moist stratification before germination can occur. When sowing outdoors or in a cold frame this means germination will occur after the second winter. Gardeners who do not have a cold frame or a suitable area for outdoor sowing may want to try stratifying seed in a moistened medium in their refrigerator. Place the seed in damp (not wet) peat and leave it in the refrigerator for three months. Follow the first cold period with three months at temperatures of 60° to 70° F, and another three months in the refrigerator. Germinate the seed at temperatures of from 60° to 70° F.

As soon as the seedlings are large enough to handle, move them to a permanent location in the garden. Seedlings usually flower within five years.

Divide existing rootstocks in the fall and replant the separated plants in a moist, well-drained area with ample organic matter in the soil. Division may be done in the spring, but fall is preferable.

There are, of course, many other trilliums to cultivate. Be sure, if you have a woodland setting, to strategically place a few wake-robins so they might alert you of the arrival of spring. The trilliums are among the most fascinating of our native plants, very dependable in the woodland garden and need to be used more frequently. ☛

Thomas A. Fretz is Professor and Head of the Department of Horticulture at Virginia Polytechnic Institute and State University, Blacksburg, Virginia.

LEFT: *Trillium erectum* forma *albiflorum*;  
INSET: *Trillium erectum*.



28 years of labor produced this breathtaking San Francisco area garden. ABOVE: A "stream" of *Echeveria* meanders by a bank of *Aloe striata* hybrids. RIGHT: Tree ferns and the tips of *Sedum X rubrotinctum* 'Aurora' are reflected in this man-made pool.



# A Garden Work of Art

TEXT AND PHOTOGRAPHY BY PAMELA HARPER

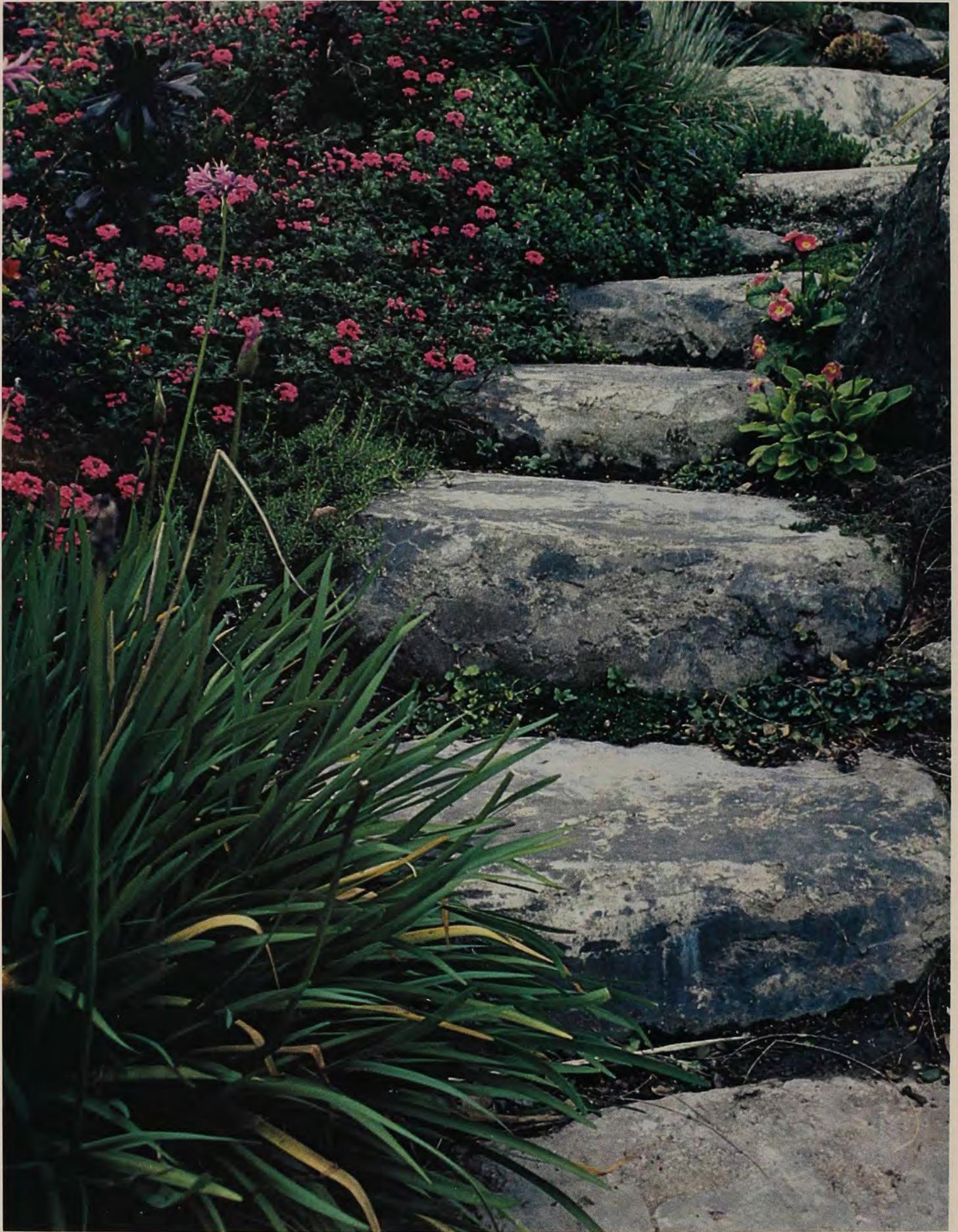
**M**any consider fine gardens to be a greater art form than fine paintings, because of their greater complexity. The gardener works with materials that continually change in size and color, get disfigured by pests and weather and sometimes die. The lighting changes from hour to hour, day to day, season to season. There are many similarities but, unlike the painter, the gardener can never say “it is done” and lay the brush aside. Gardens and paintings alike may be imitative or creative, but when Jean-Baptiste Corot wrote that a painting is “a landscape seen through a particular temperament,”

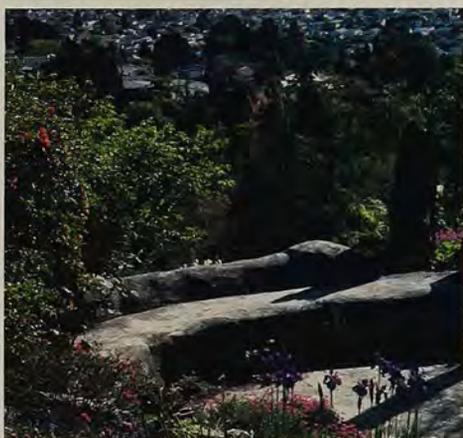
he wasn't referring to paint-it-by-numbers pictures but to that skillful interpretation of individual vision, that exploration of hitherto untried techniques, which constitute a work of art. In his California garden Harland Hand has found new ways of applying paint to the garden canvas.

The house sits atop a steeply sloping half-acre site with a breathtaking view across San Francisco Bay to the city beyond. At night it becomes a sea of twinkling lights, as magical as fireflies in the darkness. The garden, 28 years in the making, is no less enchanting than the view. A mosaic of strongly contrasting dark and

light areas is the basic motif, inspired by groupings of dark conifers interspersed with areas of light-gray granite in the Sierras. Steps and stepping-stone paths pass between dark islands of trees and shrubs. The design is strong, not at all haphazard, yet paths have the seemingly random flow of laid down strings of pearls.

Concrete takes the place of granite. Some statistics: Nearly 200 cubic yards of concrete have gone into the construction of paving slabs, stepping-stones, a planter-faced cliff 60 feet wide and up to 12 feet high, 15 seats and ledges, 19 pools and over 200 boulder-like steps. If this evokes





OPPOSITE: *Verbena* and Pacific Giant primroses line one of many paths in this garden. The steps may look like stone, but they are, in fact, made of concrete—fashioned by the owner. ABOVE AND TOP: Whether looking back up to the house or out toward the bay, the view is breathtaking. *Aurinia*, *Aeonium* and *Muehlenbeckia* vie for attention. RIGHT: The concrete paths often narrow to a toe-hold, forcing the garden visitor to take note of every crevice.



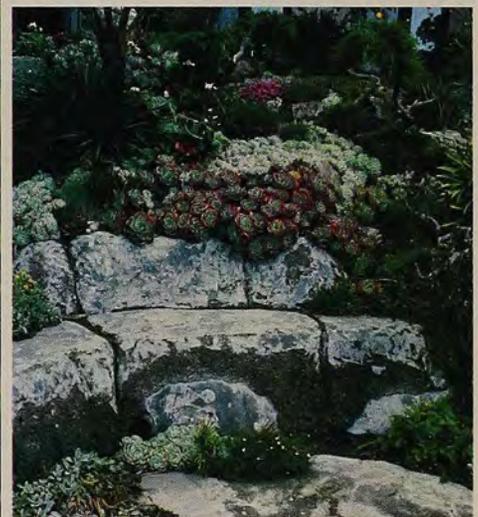
an institutional image, set it aside; here is concrete made bold yet flowing by avoiding straight lines, angles, geometric curves, flat surfaces and regular shapes. No levelling devices, plumb lines, forms or molds were used. Levels were gauged by eye, and structures sculpted into shape from a mix of five parts sand to one of cement. Aggregates were abandoned because the pebbles made sculpting difficult. Surface textures, aided by natural weathering, now seem lichen or shadow dappled, achieved by sprinkling wet surfaces unevenly with dry cement and smoothing this to irregular shininess. Benches, slabs and stepping-stones were tapered upward so that rather than stand on the surface they seem to rise up from below, like ducks in water, ice-

bergs and most natural rock formations. Because mold-made evenness makes artifice apparent (compare false teeth with those nature provides), steps and paving stones are varied in size and shape. They are—forgive the pun—Hand-crafted. In the early stages a bulldozer was brought in to shape the cliff, but all other work has been done by the owner.

This is not a “natural” garden. Says its maker: “That which is art is not nature, and that which is nature is not art.” The intent was not to use concrete for making imitation rock, but to explore the nature of the concrete itself. Why should it look harsh and unyielding when it is, after all, rock made malleable? A sculptor takes the solid rock and out of it chisels his vision.

Here, combining the skills of sculptor and potter, the vision has been shaped with trowel and hand out of liquid rock. So successful has this been that natural rock in the garden seems more an embellishment, an ornamental feature, while the concrete is an integral part of the garden’s flow; the concrete, that is, seems more “natural” than the natural rock.

Paths and steps lead to “rooms,” 12 of them on different levels, partly walled with trees and shrubs and paved with large, roughly elliptical concrete slabs. Plants fill the crevices, their colors and textures combined in many different ways. There is striking dark-light patterning where the greens of thyme and flowerless chamomile (*Chamaemelum nobile* ‘Treneague’) flow



LEFT: Succulents, here *Sedum X rubrotinctum* 'Aurora' and *Echeveria elegans*, are favorite additions to this garden. TOP: 19 pools are incorporated into this backyard slope. ABOVE: The "Antimacassar Couch." OPPOSITE: *Rhododendron* 'Noyo Chief' frames this bird's-eye view of the distant hills.

over gray paving and become, by contrast, almost black, as also do tufts of mondo-grass (*Ophiopogon*). Gray-foliaged plants are used in quantity: steps and paving are often seamed with woolly-gray lamb's ears (*Stachys byzantina*) or snow-in-summer (*Cerastium tomentosum*) for a gentle merging of gray with gray. Snow-in-summer is a rampant plant, but with roots trapped in chinks between concrete slabs, spread is controlled. The concrete has other practical advantages: it holds heat on cold nights, keeps roots cool and moist during hot, dry days, and the concrete-covered soil does not erode as it otherwise might on this steep slope. There are no large, unbroken concrete surfaces, so water (often a scarce commodity, whether rain or hose-

supplied) is not lost through run-off but percolates through crevices.

Books on landscape design give proportions for steps that enable the user to gallop along at a uniform pace, and for two or more to walk abreast. Here the approach is more Japanese, using ploys to halt the pace and induce contemplation. Steps, though bold, encourage lingering. At one point they are narrowed by overflowing plants to little more than a toehold—a firm toehold, though; no step or stone in this garden wobbles. Visitors pause, look around, wonder for a moment whether this is the way to go. There's a satisfying, slightly guilty feeling of treading where one should not.

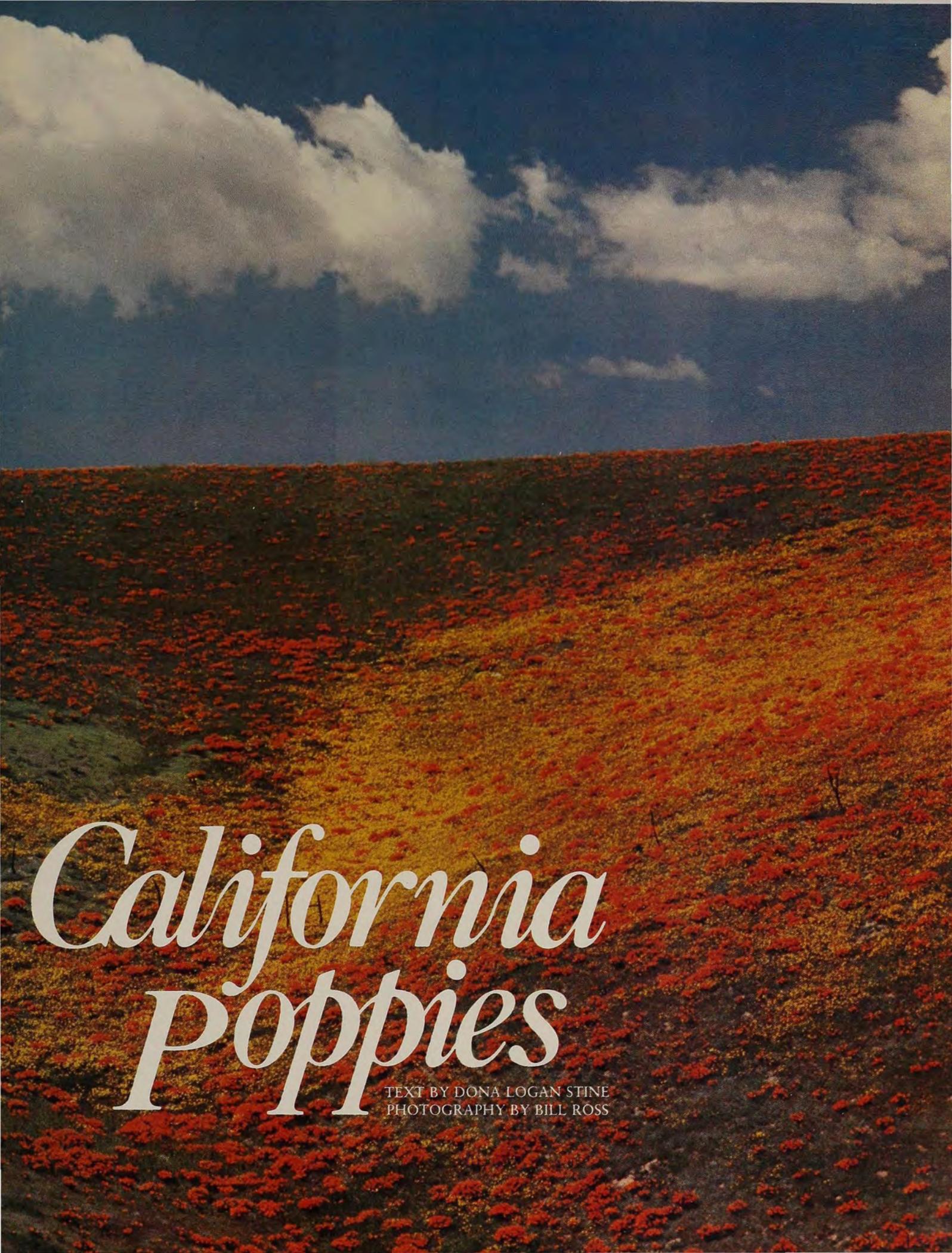
Paved areas are furnished with concrete

benches, sofas and hassocks of a shape and bulk not drawing-room delicate but club-room comfortable. One couch of overstuffed proportions, its back against a bank, sports an antimacassar of pink and gray-green *Echeveria elegans*, a cushion of yellow alyssum and an armrest of gnarled rosemary. A shawl of pink-bobbled *Polygonum capitatum* is casually flung over another bench. Pools—dark eyes in the pale face of the concrete—reflect the garden's many moods. No artificial color was used, the effect sought being not the see-the-bottom sterility or artificial blue of a swimming pool but the mysterious dark reflectiveness of the woodland pool with a natural balance of organisms. Four parts sand to

*Continued on page 32*







# *California Poppies*

TEXT BY DONA LOGAN STINE  
PHOTOGRAPHY BY BILL ROSS



Seventy-five miles north of Los Angeles in the high desert of the Antelope Valley, nature puts on a spectacular show each spring. Most Californians are familiar with the beautiful California poppy, *Eschscholzia californica*, yet when they visit the poppy fields of the Antelope Valley they are unprepared for the sight they see. From a distance the rolling hills to the west look as though a giant hand had thrown orange and yellow paint across the land. At closer range the hill becomes a sea of orange contrasting sharply with the yellow of goldfields (*Lasthenia chrysostoma*, formerly *Baeria chrysostoma*) and the clear blue sky. Owl's clover (*Orthocarpus purpurascens*) turns other hillsides a luscious burgundy, and the blue of the lupine (*Lupinus*) joins in everywhere. It is said that the early explorers called California "The Land of Fire." On the California coastal range the brilliant-colored hills were used as landmarks, and the sea captains relied on them as beacons because they were clearly seen far out at sea. In 1903 the State of California named the poppy its state flower.

Poppy plants measure from eight to 24 inches in height, and the bright-orange blossoms are from four to six inches across. Blooms borne early in the season generally are the largest. *E. californica* is an annual or perennial with thick, greyish-green stems and leaves that branch out from the base. The leaves are much dissected into narrow segments, and each plant produces many flowers. The buds have narrow, conical caps that split lengthwise and fall to the ground as the four-petaled flowers unfold. The seeds are housed in a narrow, elongated pod, which, when reaching maturity splits with great force and scatters the seeds for several feet. The sunny slopes of the Antelope Valley then lend themselves to the growing habits of the poppy. Local observers say that the life span of the plant is from three to four years. There has not been an in-depth study made of the poppies in this area, but enthusiasts hope that one will soon be started.

It is impossible to predict from year to year which fields will bloom. One year a field may be ablaze with poppies, and the next year the same field may not produce a single flower. Old timers say that even when the desert has been blessed with an abundance of rain it does not necessarily mean there will be an abundance of wildflowers. Some think that agriculture and the grazing of sheep have contributed to the diminishing fields, although others say there has always been grazing in the area, and the poppies have flourished.

Desert wildflower seeds have a special



PRECEDING PAGES: A panoramic view of poppies and coreopsis growing in the Antelope Valley near Lancaster, California. ABOVE and OPPOSITE: *Eschscholzia californica*, the California poppy, is an annual or perennial whose seed pods split with such great force they scatter seed for several feet, partly accounting for this flower's prolific growth.

inhibitor in their seed coat that prevents germination until conditions are just right for the survival of the plant. Enough rainfall is needed to wash away the inhibitor, and the proper temperature is necessary or germination will not occur. Even if there has been sufficient rain but the temperature goes to one extreme or the other the seed will not germinate. Thus, the desert will bloom only when conditions are right.

In May of 1981 the west side of the Antelope Valley was invaded by vast swarms of grasshoppers. They attacked the

poppy fields and never stopped eating until every flower, leaf and bud was completely consumed. Within two days the fields were stripped bare. There was nothing left but the skeleton of the plants, which caused deep concern for future crops. Fortunately, the spring of 1982 brought many pleasant surprises. Nature showered the Valley with an abundance of flowers of all kinds. The poppy fields were beautiful although not as plentiful as some years. The red-stemmed filaree (*Erodium cicutarium*) turned the

*Continued on page 34*

# Long-Flowering Perennials

TEXT BY FREDERICK MCGOURTY  
PHOTOGRAPHY BY PAMELA HARPER



ABOVE: *Chrysogonum virginianum*. BELOW: *Chrysanthemum X superbum* 'Little Miss Muffet'. RIGHT: Perennials in this garden include *Chrysanthemum*, *Astilbe*, *Lilium*, *Filipendula*, *Coreopsis* and *Stachys*.



A blessing and a curse of perennials is that most of them have a flowering period of just three weeks, which leaves 49 other weeks of the year to think about. This is a long time even if the gardener is good at anticipation. Indeed, the bloom time of some well-known perennials, including bearded iris and peonies, is much less, especially if there happens to be a spring thunderstorm when they are in flower.

My wife Mary Ann and I remember leaving home in Connecticut one Memorial Day weekend for a five-day visit to Ontario. In our garden Oriental poppies were in bud, with promise of six-inch-wide flowers as bright as the vermilion bridges of Chinese gardens. The drive across rural New York was an unexpected pleasure, and not even the State Chamber of Commerce could have painted a more idyllic scene than nature did. The fields were aglow with ox-eye daisies, soft-pink ragged robin (*Lychnis flos-cuculi*) and phlox-mauve dame's rocket (*Hesperis matronalis*), immigrants from Europe that lease the meadows of the northern states for a few weeks late each spring. The temperature was in the high 80's each day we were gone. Upon our return home there were no Oriental poppies to be seen.

Why then do we bother with them, the poppies, peonies and bearded iris? Well, they do have a classic form that other flowers don't. A feral relative of bearded iris, the yellow flag (*Iris pseudacorus*), was even thought sufficiently worthy by the Bourbons to serve as the emblem of French royalty, the *fleur-de-lis*. I would like always to have a few of these plants, but they should not form the basis of a garden if season-round interest is the aim.

## Gardens for What Seasons

Of course, if one would like flowers on the same plant through the season, annuals will do their thing in good stud fashion. A lot of people like to have the same kind of garden in September as in June. Depending on their arrangement, these gardens can be singularly boring, even more





*Rudbeckia* 'Goldstrum' with *Miscanthus sinensis* 'Variegatus'...

*With most perennials, the hotter the summer, the briefer  
the flowering, especially if they happen to be July or  
August bloomers.*

so than those, which after a brief sputter of neon azaleas, close their floral shop by June 1. In the case of the former, there is no hint of the coming season, nothing to look forward to except repetition of the present, until sudden death overtakes them on a frosty autumn night. They are frequently riots of color, which may be fine if kept from public view, but as the late Edward Hyams pointed out in this connection, a riot is by any account ugly.

Even though the hot metals of the tropics are all too often present in the constitutions of annuals, soft colors can be had by the score, especially in snapdragons, petunias and impatiens. Ironically, in many a garden the more subdued sorts of annuals can serve as a backbone, providing continual color through the mild months. At the same time, for vertebrae, there is a succession of perennials having fairly short bloom periods to provide variety, to evoke the seasons, to give something to look forward to. In May there are columbines, June goatsbeard, July lilies, August liatris, September monkshood. This makes possible an ever-changing kaleidoscope, which is more interesting (and restful) than a riot.

#### Maintenance and Time Factors

I am a lazy gardener, subscribing to the view that no man should have a garden larger than his wife can take care of. However, there has to be a compromise, for my spouse, curiously, feels that no woman should have a garden larger than her husband can tend. Annuals do require replanting each year, perennials don't (though some need more uprooting and shuffling about than the new grower suspects), so the greater part of our own garden is devoted to perennials. It is almost as simple as that.

Our own tastes evolve, and these are more or less reflected in the garden, though there are times when the garden seems to go its own stubborn way. For better display and extra moments for croquet, we decided to give over a fairly sizable portion of our garden to long-blooming perennials, essentially those that bloom six weeks or more. The sense of continuity is now greater, and there is less clutter, although I still trip over an occasional peony. Next

summer I may even take up parachute jumping.

A list of selected stalwarts will vary according to where one lives, as I discovered several years ago while visiting a friend in North Carolina. I spent some time extolling the merits of a perennial of southern origin, thread-leaved coreopsis (*Coreopsis verticillata*), including its lengthy bloom period, which in northern Connecticut averages six weeks in midsummer but which in at least one variety extends to the first killing frost in autumn. On this September day in Winston-Salem the temperature was in the upper 90's, my friend's garden was wilted, and so were we. She gave me a blank stare and drawled, "My, you Yankee garden writers do go on! Give it three weeks here, in a good year." With most perennials, the hotter the summer, the briefer the flowering, especially if they happen to be July or August bloomers. Even in a single garden the length of bloom varies according to the site of the border, an important factor being that bright afternoon sun accelerates the demise of flowers.

#### Everbloomers, So To Speak

I can think of only two or three perennials that will bloom from spring until autumn in northern gardens—the native bleeding heart (*Dicentra eximia*) and its very similar western relative *D. formosa*, and the diminutive southerner, green-and-gold *Chrysogonum virginianum*. The typical American bleeding heart is a slightly scruffy little thing that the eye wanders over, despite the plant's finely cut foliage and continual bloom. *Dicentra eximia* itself is usually relegated to the semi-woodland area but pops up from seed in odd places around the garden, even in sunny locations, where it can fend for itself tolerably well. One is not tempted to show it to neighbors. The flower color is pink, but the sort which has been through too many cycles in the clothes-washer. Over the years deeper tints have been distilled through hybridization and selection, but they fade to the color of a half-rotted apple, and the spent blossoms should be removed, if only for appearance's sake. This is a good practice with most perennials, and in some in-

stances it extends the flowering period. 'Bountiful', 'Luxuriant' and 'Zestful', though they sound more like soaps than dicentras, are thought to be improvements.

Fortunately some plants, like people, overcome their humble origins, and the white-flowered form of *Dicentra eximia* is an excellent example. It blooms from spring to frost, fades well, and has attractive gray-green foliage. In addition, its young 'uns come essentially true from seed if no plants of the foetid pink-flowered type are around. The ruggedness of the species is retained, and plants are remarkably shade tolerant.

*Dicentra eximia* 'Alba' is for some reason considered a rock gardener's plant, the rock gardener's practical definition of a rock garden plant being one that he likes. (Butterfly-weed and cardinal flower, regardless of height, are also adopted rock garden plants). No matter, this white bleeding heart fits well into a number of garden niches, as does a white counterpart of the western *D. formosa*. I like it as an informal edging to a shaded border or in small groups toward the front. Every so often one also encounters a fine white and light-pink flowered variant of *D. formosa*, which would add grace to any woodland garden. Readers should not confuse any of these dicentras with the old-fashioned bleeding heart that has lady's-locket flowers, *D. spectabilis*. This blooms briefly, if magnificently, in spring.

What a pity that it is mainly northerners and Californians who write the garden books and sometimes give "common" names of their choice to plants of other areas, even though there may be names already well established there for them. It's a bit like the touring British horticulturists on the American lecture circuit who refer to giant sequoia as wellingtonia and are surprised when the audience looks confused. For years I was unaware that the little yellow daisy that botanists call *Chrysogonum virginianum* had any vernacular name but golden-star. Wyman told me so and, what's more, so did Bailey. What higher canonization could there be?

Then one day I happened to marry a southern girl and we started to talk about plants. After a couple of months extolling

*Continued on page 37*

one of cement was the mix for the pool concrete, reinforced with (depending on the size of the pool) chicken wire, wire fencing or reinforcing rods, sandwiched within four inches of concrete. Some function just as reflecting pools, others are deep enough for waterlilies. Wire-vine (*Muehlenbeckia axillaris*) makes a dark, uneven stain as if of trickling water over the rim of a combination planter-pool, and nearby *Lithodora diffusa* in flower might be the reflected blue of the sky.

Not without reason has the book *The Secret Garden* been a classic through three generations of children and their parents. A robin flies over the wall. What lies beyond? The allure of mystery. Many of the paved rooms in this garden are concealed from each other and from the house, a series of secret gardens, satisfying the longing to suppose that something magical lies over the garden wall or around the next bend. And it does. Perhaps the magic of reflected tree-fern fronds etched on an inky, seemingly fathomless pool. Perhaps a patch of the rare little *Pleione* orchid in a shady nook. Or a plant tapestry: snow-in-summer intermingled with ferny-leaved, magenta-flowered *Geranium incanum*; or the ruby-tipped, jelly-bean leaves of *Sedum X rubrotinctum* 'Aurora' with dark wire-vine and blue-gray *Echeveria* rosettes. The line between real and imagined becomes tenuous: a fruiting lemon bush seems a bauble-hung tree from a fairy tale; two black metal herons fish in a "stream" of hen-and-chicks *Echeveria* with luminous gray-green rosettes that simulate water shimmering over pebbles, an illusion aided by *Aloe striata* hybrids lining one bank like exotic trees, reaching toward the water with branched sprays of orange flowers.

This garden is not taken in at a glance. Towards the end of a week I still found each day some detail missed before, or one experienced differently in the changed light, or approached from a different direction. All does not immediately meet the eye. Indeed it doesn't! Some of the benches are monuments to the failures inevitable when experimenting with new techniques. Interred inside them is rubble from benches that collapsed and ponds that leaked while the maker served an apprenticeship to concrete, learning what it would and would not do.

The choice of paths is tantalizing. From every direction something beckons: an inviting seat; a pair of black cast-iron doves with a bird's-eye view from a ledge; the

splash of water falling over the cliff into a pool below; a vista; a gray-leaved, yellow-daisied gazania admiring its own reflection; wind-tossed arching clumps of a tawny-bladed, grasslike sedge; or an elusive fragrance finally traced to the small brown flowers of *Boronia megastigma*.

From the start the garden was envisaged

### *The development of the garden has involved not only an experiment with concrete, but also exploration of color, space and human needs.*

as a place for growing plants. They creep along cracks, cling to rocks, climb fences, tumble down the cliff (which presents a solid face but is actually a series of concrete planters) and nudge each other out of every corner. Plants as exotic as orchids and as everyday as forget-me-nots and yellow alyssum can be found. It is not a random collection—each is chosen and placed to achieve a desired effect. In the white garden calla-lily flowers (*Zantedeschia aethiopica*) appear incandescent against dark-leaved shrubs. Candytuft (*Iberis sempervirens*) is used a lot, valued for its white flowers and dark foliage. White-sepalled, brown-stamened *Clematis* 'Henryi' and white wisteria intertwine and flower together on a gray driftwood post.

Elsewhere color is strewn with a lavish hand: color used to make a given area advance or recede, color subtle or vibrant, colors matching or contrasting. "And colors clashing," I teased, coming upon salmon 'Margo Koster' rose with pink verbena, and was reproved . . . "If you say colors clash, you don't understand color; there should be excitement as well as serenity." This is a garden to make you rethink many preconceived ideas.

Artful positioning enables plants to give of their best. Society-garlic (*Tulbaghia violacea*) is a bulbous plant with clusters of pretty mauve, starry-rimmed tubular flowers of rather skimpy proportions relative to leaves and stalks, and of a color easily overwhelmed, but when it is set against the stolid mien and near-black leaves of *Aeonium* 'Zwartkop', both benefit from the association. Bright-pink verbena flows over one side of a flight of steps, while peeking out from corners on the other side

are Pacific Giant primroses of matching pink.

The benign climate makes possible some combinations that might not work in more rigorous climes. Large-leaved rhododendrons usually need a protected site in moist, rich soil, while tamarisks are associated with sun, wind and sand. Here they bloom in juxtaposition, the great trusses of *Rhododendron* 'Ville de Sauvage' echoed in color, while contrasting strikingly in substance, with pink clouds of *Tamarix parviflora*. Success with other unexpected combinations results from provision of mini-habitats. Thrift (*Armeria maritima*), a cliff-clinging cushion from salt-sprayed shores, is tucked into a boulder cranny. At the base of this miniature concrete cliff the varnished yellow marsh marigold (*Caltha palustris*) of bogs and moist meadows has been made to feel at home in a shallow, muddy basin.

The development of the garden has involved not only an experiment with concrete, but explorations of color, space and human needs. Not the least among the latter is the need to be occupied; this is not a low-maintenance garden. Analyzing the garden's appeal, Harland mentions three basic components: "The shelter is a place of refuge, a hidden place; the lookout is a place with a view, a vantage point; the trail is like a road or a path that can go home or to a place of adventure." And so the paths lure you on, pausing to watch the wind rippling the water of a pool, the fronds of a tree-fern moving languidly against a blue sky. Round a bend, down a few steps, and you stand on a plateau exposed to the elements, seeing but unseen from the city spread out below, an exhilarating "king of the castle" feeling. Move on and into the sequestered peacefulness of a paved room.

Gardens can be appealing in many different ways. No two are quite alike, but there is sometimes the feeling that it has all been done before. Inspired contributions to the art of garden making are as rare as great paintings. This many-faceted garden, inspired by nature, sculpted in concrete, is captivating and thought provoking. It is good to know that its maker, with a facility acquired through long apprenticeship, is now designing other gardens. ☼

Pamela Harper is a frequent contributor to *American Horticulturist*. She is the owner of Harper's Horticultural Slide Library, Seaford, Virginia.

# SOURCES

## TRILLIUMS

The following three nurseries offer a good selection of *Trillium* species:

Carroll Gardens, PO Box 310, 444 East Main Street, Westminster, MD 21157, catalogue free.

Siskiyou Rare Plant Nursery, 2825 Cummings Road, Medford, OR 97501, catalogue \$1.00.

Woodlanders, Inc., 1128 Colleton Avenue, Aiken, SC 29801, catalogue \$2.00.

## POPPIES

Seed for California poppies, *Eschscholzia californica*, is available from the following companies:

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

J. L. Hudson, PO Box 1058, Redwood City, CA 94064, catalogue \$1.00.

Las Pilitas Nursery, Star Route Box 23X, Santa Margarita, CA 93453, catalogue \$1.00.

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

Plants of the Southwest, 1570 Pacheco Street, Santa Fe, NM 87501, catalogue free.

Clyde Robin Seed Company, Inc., PO Box 2855, Castro Valley, CA 94546, catalogue \$2.00.

Clyde Robin Seed Company, Las Pilitas Nursery and Plants of the Southwest also offer seed for several other California natives mentioned in the article.

## LONG FLOWERING PERENNIALS

The following perennial growers offer several of Fred McGourty's "Long Flowering Perennials." *Coreopsis*, most of the chrysanthemums, *Hemerocallis*, 'Connecticut Yankee' and 'Blue Fountains' delphiniums, *Stokesia*, *Phlox* 'Sir John Falstaff', *Cimicifuga racemosa* and *Sedum* 'Autumn Joy' will be easy to find. Several of the other plants are available from only one or two sources. They are: *Dicentra eximia*, the white flowered cultivar is available from Busse; *Dicentra formosa* from Lamb Nurseries; *Chrysogonum virginianum* from Busse, Siskiyou Rare Plant Nursery and Woodlanders; *Chrysanthemum nipponicum* from Holbrook Farm and Nursery



*Trillium grandiflorum*.

Barbara W. Ellis

and Wayside Gardens, and *Cimicifuga simplex* from Carroll Gardens and Andre Viette.

Bluestone Perennials, 7211 Middle Ridge Road, Madison, OH 44057, catalogue free.

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

Carroll Gardens, PO Box 310, 444 East Main Street, Westminster, MD 21157, catalogue free.

Garden Place, 6780 Heisley Road, Mentor, OH 44060, catalogue free.

Holbrook Farm and Nursery, Route 2, Box 223 B, Fletcher, NC 28732, catalogue free.

Lamb Nurseries, E. 101 Sharp Avenue, Spokane, WA 99202, catalogue \$1.00.

Milaeger's Gardens, 4838 Douglas Avenue, Racine, WI 53402, catalogue \$1.00.

Siskiyou Rare Plant Nursery, 2825 Cummings Road, Medford, OR 97501, catalogue \$1.00.

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

The Wayside Gardens Company, Hodges, SC 29695, catalogue \$1.00.

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

Woodlanders, Inc., 1128 Colleton Avenue, Aiken, SC 29801, catalogue \$2.00.



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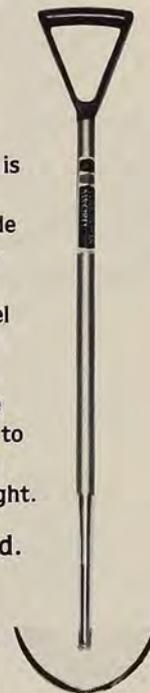
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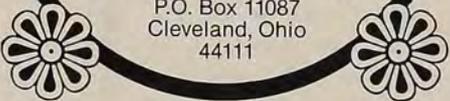
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**CALIFORNIA POPPIES CONT'D from page 27**

flatlands into an ocean of blue. Hillsides were deep burgundy with owl's clover while the goldfields and coreopsis added their brilliant yellow to the landscape. The yucca plants were at their best. Seldom had they been so plentiful and their blooms so large and beautiful.

Luckily, *E. californica* is easy to grow in most gardens. Choose a location with full sun and sandy soil, and sow seed in

the early spring or the fall. *Eschscholtzia* is difficult to transplant and is best sown directly where the plants are to grow. Thin the seedlings to six or eight inches, be sure they receive adequate water, and remove spent flowers to encourage a longer blooming season. California poppies make excellent cut flowers, and they will reseed.

Early morning viewing is best when the sun is bright and there is little wind. The



Dona Stine



Nearly 300 different wildflowers bloom in the California poppy valleys, but poppies are king and merit their own Reserve, now at 1,600 acres. Local groups, however, are working to increase its size to 6,000 acres.

Bill Ross

poppy closes on cloudy or windy days and in the late afternoon, which explains the name *dermidera* or the "drowsy one" given the poppy by the early Spanish settlers. The Indians knew these plants could make people drowsy too, and to some extent they were used by the physicians of the day. Indians would cure tooth-ache by placing a small piece of the root in a tooth cavity.

Growing national interest in the poppy fields has brought spring visitors from all parts of the country. At nearby Lancaster, the hub of the Antelope Valley, the Chamber of Commerce and the local Woman's Club stand ready to aid visitors in their quest for the best fields.

On Lancaster Road, 16 miles west of the city, is the Fairmont Inn, a more modern-day version of the old Fairmont Inn that was once a stage coach stop run by Judge Libby, the local Justice of the Peace. The present day Fairmont Inn, which is the sight of the Woman's Club Wildflower Preservation Committee headquarters, also serves the travelers and can rightfully lay claim to some of the best homecooked food in the valley. Visitors can see the club's display of the wildflowers and get needed information and maps locating the fields in peak bloom. The *Antelope Valley Wildflower Guide*, published by the group in 1978 and a great help to newcomers, is available there.

In the Fairmont area side roads are graded in the spring to provide access around the rolling hills. To really enjoy the view visitors can leave their cars on the roadsides and walk among the flowers. State law prohibits picking, cutting, digging or mutilating the plants. Many bring lunches and picnic near the poppies, but the real feast is a visual one. The service road along the aqueduct is an ideal bike trail.

In other areas of the valley the poppy grows in a variety of colors and sizes. North of Willow Springs, near Backus Road, on hillsides dotted with abandoned gold mines, the poppies are small, single flowers and more yellow than orange in color. There they bloom amid the goldfields and creamcups. Creamcups (*Platystemon californicus*), a member of the poppy family, also vary in color from one location to another as the soil conditions change.

The east side of the Antelope Valley has some very different flowers from those on the west side. Even the owl's clover strives to be different. It has eyes of yellow on the east side but on the west its eyes are white.

There are nearly 300 different flowers

in the area, so it is impossible to see all of them in a short visit. Most visitors seek out the poppies and miss the equally spectacular sight of acres and acres of coreopsis growing on the east side of the valley. Nor do they always see the blooms of the desert evening primroses (*Oenothera deltooides*), the majestic Joshua trees (*Yucca brevifolia*), desert dandelions (*Malacothrix californica*) or the beautiful desert candle (*Streptanthus inflatus*, sometimes called *Caulanthus inflatus*). Yucca plants put on quite a show too, as they march in formation up hillsides like platoons of soldiers. Their beautiful creamy-white flowers extend about halfway down the 12-foot stalk. Once they have bloomed the entire plant dies. Only a bare stalk remains as evidence of its existence, which explains one of its common names, Spanish-bayonet.

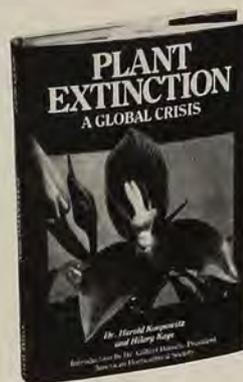
It is not always possible to predict the peak blooming period in the valley. Visitors would be well advised to call the Lancaster Chamber of Commerce ((805) 948-4518) in late March or early April for a bloom report. Of course an unexpected cold or hot spell can change predictions, but late April and early May is usually the prime time.

At present the Poppy Reserve is over 1,600 acres, but local groups are working to increase it to 6,000 acres. The State Wildflower Reserve in the Fairmont Area (between 130th and 160th Street West) was made possible through the efforts of the people of California. Almost \$20,000 was raised by California school children in their "Pennies for Poppies" drive. In all, \$300,000 was raised through private donations by the State Parks Foundation. The Jane S. Pinheiro Interpretive Center opened in the spring of 1982. Mrs. Pinheiro was a noted artist and botanist who lived in the area and devoted her life to the preservation of the wildflowers. The Interpretive Center will house a collection of her paintings of plants indigenous to the area and will serve to educate future generations about the desert environment.

A trip to the poppy fields of the Antelope Valley is truly a visit worth making. The beauty of the high desert and the friendliness of its people place it high on the list of places to which one must return. ●

Dona L. Stine is a life-long gardener who has lived in California for 28 years. Seven years ago she moved to the desert, which provides her with an endless supply of subjects for her ink drawings and paintings.

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# PRONUNCIATION GUIDE

## Guide to Botanical Names in this Issue

The accent, or emphasis, falls on the syllable that appears in capital letters. The vowels that you see standing alone are pronounced as follows:

i—short sound; sounds like i in “hit”

o—long sound; sounds like o in “snow”

a—long sound; sounds like a in “hay”.

*Achillea* a-KILL-ee-ah

*Achyranthes* ack-kyr-RAN-theez

*Aeonium* ee-O-nee-um

*Aloe striata* AL-oh-ee stree-A-ta

*Alternanthera* al-ter-nan-THER-ah

*Amaranthus albus*

am-ah-RAN-thuss AL-bus

*A. caudatus* a. caw-DAY-tuss

*A. cruentus* a. crew-EN-tuss

*A. edulis* a. ED-yew-liss

*A. gangeticus viridis*

a. gan-JET-i-kuss VEER-i-dis

*A. hybridus* var. *erythrostachys*

a. HY-brid-us air-ee-throw-STACK-iss

*A. hypochondriacus*

a. hy-po-con-dree-A-kuss

*A. retroflexus* a. ret-ro-FLECKS-uss

*A. tricolor* a. TRY-col-or

*Amaryllis atamasco*

am-ah-RILL-iss at-am-ASS-ko

*Arabis alpina*

AIR-ah bis al-PINE-ah

*A. alpinus* a. al-PINE-us

*Armeria maritima*

arm-MEER-ee-ah ma-RIT-i-ma

*Asparagus asparagoides*

as-PAIR-ah-guss as-pair-ah-go-EYE-deez

*A. plumosa* a. plu-MO-sa

*A. plumosus* a. plu-MO-suss

*A. setaceus* a. set-ah-SEE-uss

*A. tenuissimus* a. ten-you-ISS-i-muss

*Aspidistra elatior*

ass-pi-DIS-tra ee-LAY-tee-or

*Baeria chrysostoma*

BEER-ee-ah kri-so-STO-ma

*Boronia megastigma*

bor-OWN-ee-ah meg-ah-STIG-ma

*Caltha palustris*

CAL-tha pah-LUSS-tris

*Catharanthus roseus*

cath-ah-RAN-thuss ROWS-ee-us

*Caulanthus inflatus*

caw-LAN-thuss in-FLAY-tuss

*Celosia argentea*

see-LOWS-ee-ah ar-JEN-te-ah

*C. cristata* c. kris-TAY-ta

*C. plumosa* c. plu-MO-sa

*Cerastium tomentosum*

ser-ASS-tee-um toe-men-TOE-sum

*Chamaemelum nobile*

ka-me-MELL-um no-BILL-ee

*Chrysanthemum nipponicum*

kris-AN-thee-mum ni-PON-i-kum

*C. parthenium* c. par-THEN-ee-um

*C. X superbum* c. sue-PER-bum

*Chrysogonum virginianum*

chris-OG-o-num vir-gin-ee-A-num

*Cimicifuga racemosa*

sim-i-SIFF-yew-ga ray-si-MO-sa

*C. simplex* c. SIM-plex

*Clematis virginiana*

CLEM-ah-tiss/clem-AT-iss vir-jin-e-A-na

*C. virginica*

c. vir-GIN-i-ka

*Coreopsis auriculata*

kor-ee-OP-sis aw-rick-you-LAY-ta

*C. grandiflora* c. grand-i-FLOR-ah

*C. lanceolata* c. lance-ee-o-LAY-ta

*C. verticillata* c. ver-tis-ill-A-ta

*Dicentra eximia* dy-SEN-tra ex-EEM-i-ah

*D. formosa* d. for-MOE-sa

*D. spectabilis* d. speck-TAB-i-lis

*Echeveria elegans*

eck-e-VEER-ee-ah EL-e-ganz

*Echinops* ECK-i-nops

*Erodium cicutarium*

air-RO-dee-um si-kew-TARE-ee-um

*Eschscholzia californica*

ess-KOLTZ-ee-ah kal-i-FORN-i-ka

*Franklinia alatamaha*

frank-LIN-ee-ah ah-la-ta-MA-ha

*Froelichia floridana*

fro-LICK-ee-ah flor-i-DAY-na

*F. gracilis* f. GRASS-ill-iss

*Geranium incanum*

jer-A-nee-um in-CAY-num

*Gomphrena globosa*

gom-FREE-na glo-BO-sa

*Helenium* hell-EN-ee-um

*Helianthus cucumerifolius*

he-lee-AN-thus kew-kew-mar-i-FO-lee-uss

*H. debilis* h. de-BILL-iss

*Heliopsis helianthoides*

hell-ee-OP-sis heel-ee-an-tho-EYE-deez

*Hemerocallis*

hem-er-o-KAL-iss/hem-er-OCK-a-liss

*Hesperis matronalis*

HES-per-iss ma-tro-NAL-iss

*Hippaestrum* hip-PEE-strum

*Iberis sempervirens*

EYE-ber-iss sem-per-VEER-enz

*Iresine herbstii*

eye-ri-SY-nee HERBST-ee-eye

*Iris pseudacorus* EYE-ris sue-da-KOR-us

*Lasthenia chrysostoma*

lass-THEEN-ee-ah kry-s-o-STO-ma

*Ligularia tussilaginea*

lig-u-LAIR-ee-ah tuss-i-la-GIN-ee-ah

*Lithodora diffusa*

lith-o-DOOR-ah di-FEWS-ah

*Lobelia erinus*

lo-BEEL-ee-ah/lo-BEEL-ya eh-RY-nus

*Lupinus* lew-PINE-us

*Lychnis flos-cuculi*

LICK-niss FLOSS-kew-KEW-lee

*Malacothrix californica*

mal-ah-KO-thricks kal-i-FORN-i-ka

*Matricaria* mat-ri-KAY-re-ah

*Oenothera deltoidea*

een-o-THEER-ah del-toe-EYE-dez

*Ophiopogon* off-ee-o-PO-gon

*Orthocarpus purpurascens*

orth-o-CAR-puss pur-pur-AS-enz

*Phlox paniculata*

FLOCKS pan-ick-yew-LAY-ta

*Physostegia virginiana*

fy-so-STEEJ-ee-ah ver-jin-ee-A-na

*Pleione* PLEE-o-nee

*Polygonium capitatum*

po-LIG-o-nee-um cap-i-TAY-tum

*Ptilotus manglesii*

till-O-tuss man-GLESS-ee-eye

*Rhododendron* ro-do-DEN-dron

*Rudbeckia fulgida*

rood-BECK-ee-ah FULL-gid-ah

*Sanguisorba canadensis*

sang-gui-SOR-ba can-ah-DEN-sis

*Sedum X rubrotinctum*

SEE-dum rew-bro-TINK-tum

*S. spectabile* s. speck-TAB-i-lee

*Stachys byzantina* STACK-iss bi-zan-TY-na

*Stokesia laevis*

STOKES-ee-ah LEE-vis

*Streptanthus inflatus*

strep-TAN-thuss in-FLAY-tuss

*Tamarix parviflora*

TAM-ar-ricks par-vi-FLOR-ah

*Trillium catesbaei*

TRILL-ee-um CATES-bee-eye

*T. cernuum* t. SIR-new-um

*T. discolor* t. DIS-col-or

*T. erectum* t. ee-RECK-tum

*T. grandiflorum* t. grand-i-FLOOR-um

*T. nivale* t. ni-VAL-ee

*T. petiolatum* t. pet-ee-o-LAY-tum

*T. sessile* t. SESS-il-ee

*T. stylosum* t. sty-LO-sum

*T. undulatum* t. un-dew-LAY-tum

*T. vaseyi* t. VAZ-ee-eye

*Tulbaghia violacea*

tull-BAG-ee-ah vy-o-LACE-ee-ah

*Vinca rosea*

VEENK-ah/VIN-ka ROSE-ee-ah

*Yucca brevifolia*

YUCK-ah brev-i-FOL-ee-ah

*Zantedeschia aethiopica*

zan-ta-DES-kee-ah eeth-ee-OPE-i-cah

the virtues of golden-star, which a recent winter had killed in my garden after three years' prosperity, I took my bride on a trip to Pennsylvania, which of course for many of us is the South. She had been largely unresponsive to my testimonials on behalf of this lovely plant, and then we finally saw it together in a garden there. With delight I exclaimed, "Hey, that's my old friend golden-star!" Mary Ann gave me a surprised look, then said, "Oh, you mean green-and-gold! That's what everyone in the South calls it." Right language, wrong grid. Or grit.

**Some people dislike feverfew, and I confess that once in a while I have tried to evict this daisy from the garden.**

Whatever name you choose to give it, *Chrysogonum virginianum* is a winner. There is a burst of bright-yellow bloom in May, then sporadic flowers through summer. Most plants of *Chrysogonum* in gardens are prostrate growers seldom more than six or eight inches high, and they quickly form mats. An upright, non-spreading form is occasionally encountered, but it is mainly for the collector. In fact, *Chrysogonum* is quite variable. Afternoon shade is beneficial, as is slightly more than the usual amount of compost incorporated in the soil. In the North throw a few pine boughs on for winter protection, and hope. Another long-flowering southerner, *Coreopsis auriculata*, is sometimes confused with *Chrysogonum*, but it has coarse, orange-yellow flowers that don't associate well with much of anything. Even rock gardeners tend to shun it.

**A Few Daisies**

Some people dislike feverfew (*Chrysanthemum parthenium*), and I confess that once in a while I have tried to evict this pungent small-flowered white daisy from the garden. Attempts seem to be as futile as getting rid of johnny-jump-ups or mothers-in-law once they are established. I suppose it can be done, with considerable effort and vigilance, at least as far as the plants are concerned, but one is apt sooner or later to ask why.

Feverfew is a lovely thing once the gardener learns to love it. Notice that I call it a thing. Although this plant is what is euphemistically called a perennial in the

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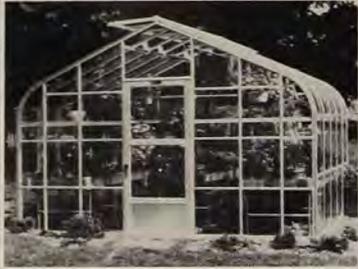
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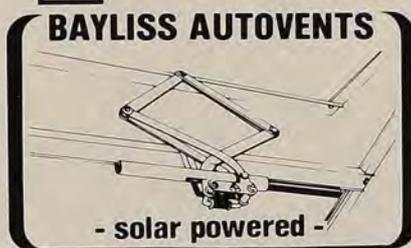
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## PERENNIALS CONT'D

manuals, it marches to its own fast drummer, some individuals and strains being annual, others biennial, and still others refusing to give up the ghost for three or four years. This is the sort of species that irritates budding young taxonomists because it does not fall into the neat little cubbyholes of classification. Once more nature mocks man's categories. Oh, yes, the nurseryman's too, because selections of feverfew in catalogs are still listed as "matricaria," though for many years feverfew has been shown to be distinct from the true genus *Matricaria*.

In this instance it doesn't matter much whether feverfew is a perennial, biennial or annual. The plants breed with the rapidity of slightly oversexed rabbits, and germination is close to 110 per cent. This could be a serious problem for the *laissez-faire* gardener, but a judicious clip of the pruning shears, as flowers fade, nips it. Sometimes busy, or indolent, I will use hedge clippers. In practice, some seeds always fall to the ground and, thus, the survival of the species is ensured—as if there had ever been any question.

Why then bother to grow feverfew? Well, there is always at least a handful of flowers in bloom from June until October, and often a large enough number to be modestly showy. It combines well in the garden with virtually any kind of perennial except overbred florist chrysanthemums, and it plays the role of a straight man admirably. In addition to performing well in the sun, feverfew grows better in the shade than any other daisy with which I am familiar. It is handy filler too. If some part of the garden becomes a disaster ward in mid-season due to sickly scabiosa, dying digitalis or wives forgetting to water, feverfew seedlings can be summoned from the periphery or compost heap on a moment's notice, putting on a show in a few weeks, especially if showered every seven days with a water-soluble commercial fertilizer.

Finally, as a cut flower, feverfew is superb. Blossoms persist for a couple of weeks in the home and are particularly useful for this purpose in autumn when most other garden plants have long since faded. Our old colonial house has small rooms, and these scaled-down daisies in little pitchers are ideal for compact dressers and nearly full bookcases. Feverfew keeps its demeanor among clutter.

Other members of the daisy or composite clan are among the long-flowering perennials. The cultivar of Shasta daisy

(*Chrysanthemum X superbum*) called 'Little Miss Muffet' starts to bloom for us in late June. If we divide plants every year or two, a good practice with most composites, and fertilize them lightly in spring, then again in early summer, there is repeated flowering until the middle of September. Other Shastas vary in response to this treatment, and at least one seed firm offers separate strains of early, midseason and late-blooming sorts. Grown from seed, these are somewhat variable, but it doesn't matter much, for the aim is to have a few of these classic field daisy shapes in the garden for cutting purposes and to complement other, bolder perennials. One of our favorite long-in-bloom combinations for a sunny border is Pacific Giant delphiniums in the background, a yellow-flowered yarrow (*Achillea* 'Coronation Gold') in the foreground on one side, and the tallish, full-bodied Shasta daisy 'Star of Antwerp' on the other.

### Prejudice

I know a few people who would rather eat pickled worms than grow yellow-flowered plants. My own culinary tastes are not as eclectic as theirs, but I do think they are missing out on something in the garden. There are a number of easy-to-grow, long-blooming yellow daisies, and one must exercise a certain restraint lest there be too much of a good thing, but to be without them altogether is to diminish the joy of gardening.

Some year it is my intention to quietly construct a new perennial border in a sunny area and devote it almost entirely to yellow-flowered plants, perhaps with a few orange ones for pepper and some white bloomers to intensify each. I will then invite every color snob I know from three counties to the unveiling, which will be in the guise of a cocktail party. Of course, appropriate tidbits from the garden will be served as appetizers. In the background, on the stereo, there will be the triumphant strains of the last movement of Beethoven's Ninth Symphony.

The backbone of such a border will be a native perennial, the false sunflower *Heliosis helianthoides*, which grows three or four feet tall and has several cultivars very high in butterfat content. One of them, 'Patula', with good-sized, semi-double flowers and exceptional vigor, drips cholesterol from June until autumn frost. Another clump further along in the border will go to the nearly fully double 'Incom-

parabilis', a grand old heliopsis with long bloom, too. Still further along will be a clump of 'Karat', a very large, single-flowered cultivar.

The 'Enchantment' lily, which has mid-summer flowers of pure traffic-cop orange, with a constitution to match, will be liberally interspersed among the heliopsis. Some daylilies (*Hemerocallis*) should be included, perhaps a selection of the new tetraploid sorts with long bloom period. They can be either yellow or orange. I will also plant perennial black-eyed Susans (*Rudbeckia fulgida* 'Goldsturm'), which always seem to be in flower from midsummer to frost. There will be a few heleniums (*Helenium* sp.) to provide a floral boost in copper for five weeks in late summer, followed by chrysanthemums.

Of course, the border will be some distance from the house.

#### Blues and Pink

Delphiniums were mentioned earlier but not given their due, which is considerable. The Pacific Giants, six or seven feet tall when sober, are not good garden plants, although when well grown they are the most spectacular of all perennials. There is no blue that can match the shades of some of their cultivars, particularly 'Summer Skies', a superb azure that combines well in June with the yellow daisies of *Coreopsis grandiflora* or *C. lanceolata*. Deeper, true colors are to be had in 'Blue Bird' (with a white "bee" in the blossom center) and 'Blue Jay' (black "bee"). If plants are cut to the ground promptly after the first wave of flowering in June, then nourished with a 10-10-10 commercial fertilizer, new bloom stalks will appear in a few weeks and, in a cool climate, produce flowers until frost. This is a trick for rebloom to try also on lupines.

The tall delphiniums are exasperating plants though, for they are exceedingly difficult to stake well. In particular, the woman gardener of average height feels as if she is dancing with a basketball player who has been fed growth hormones since youth. It is a struggle. The perfect delphinium stake has yet to be made. Some garden centers sell thin metal rods five feet tall with loops at the top end. These help, but at the summit of the plants there are still several feet of stalk that will bend or break with a good breeze. For this reason many gardeners have settled for lower-growing, less spectacular but still attractive delphiniums such as the Connecticut Yankee

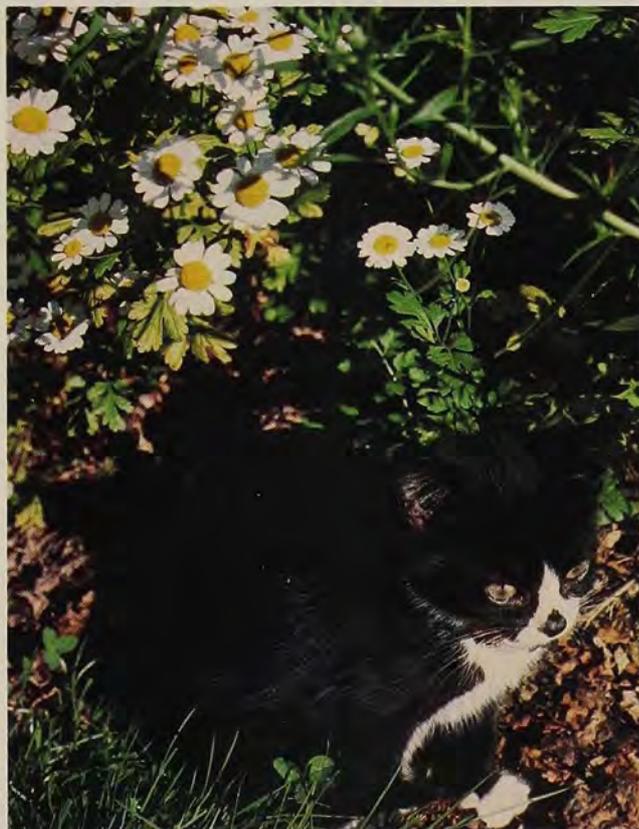
strain and 'Blue Fountains'. Less is sometimes more, even in horticulture.

There are not many good blue-flowered perennials of moderate height, especially ones that bloom a long time, but stokesia (*Stokesia laevis*) comes quickly to mind. Although a few selections of this southern native with frilly white centers have been

named, including dark 'Blue Danube', the plants in gardens are commonly grown from seeds. These germinate readily and produce flowering plants the first year if started indoors under artificial lights in January or February. Flower color varies from light blue to lavender, and the fastidious grower may wish to do his own sorting out, se-



ABOVE: *Coreopsis verticillata* 'Golden Shower'. RIGHT: *Chrysanthemum parthenium* with Shadow, the author's cat.



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## PERENNIALS CONT'D

lecting unusually attractive individual plants and propagating them by division. This is of little concern to me because I have never seen an ugly stokesia. In fact, the only unattractive point about the plant is an occasionally encountered "common" name—Stokes' aster.

In our garden stokesia blooms from July to September. In southern California flowering is intermittent through the year. Plants tend to be short-lived, especially in northern soils where drainage is slow in winter, so some gardeners as a matter of course have a few seedlings coming along in the cold frame. Stokesia looks well in company with just about anything, but with silver-leaved plants it becomes very choice.

Summer phlox (*Phlox paniculata*) has had a bad name for years because of mildew and washed-out purple-pink seedlings in gardens that have been let go. The mildew can be controlled easily with Benlate, a systemic fungicide, and there are now a number of fine selections with no hint of mauve. My favorite is 'Sir John Falstaff', which has large, salmon-pink flowers on four-foot stalks that require no staking. The floral peak is July. After the first wave has passed the terminal trusses are removed, and new flowers are then produced on axillary spurs until late September, just enough of them to provide a pleasant follow-up. Not all summer phloxes, including the striking cherry-red 'Starfire', which is currently popular, have as long a season. I am fond of 'Sir John Falstaff' bounded by two robust but stately growers with protracted bloom, globe thistle (*Echinops 'Taplow Blue'*) and black snakeroot (*Cimicifuga racemosa*), which has tall wands of creamy white flowers.

### Late Starters

In the North gardeners don't think of long bloomers starting in August, but three of them do—cushion chrysanthemums, *Sedum 'Autumn Joy'* and Canadian burnet (*Sanguisorba canadensis*). Of all garden mums I esteem most highly one named 'Baby's Tears', which originated some years ago in Connecticut's Bristol Nurseries. In early August it begins to display little white buttons, which eventually change to lavender, but new flowers continue well into October. Since the color of the fading blossoms can be disconcerting if they are near strong yellows, we plant this cushion mum in front of false-dragonhead (*Physostegia virginiana*), which is a rosy pink with hint of light purple.

It is nice to have a few chrysanthemums like 'Baby's Tears' that are truly good garden plants, and I wish that the growing season in interior New England were long enough to accommodate to its fullest *Chrysanthemum nipponicum*, a shrubby white daisy that adorns coastal gardens with its flowers for months at a time. On Long Island this plant is called the Montauk daisy. It blooms briefly for us in October (some years not at all), then frost mars the beauty, so we have consigned our plants to the compost heap. Oh well, there are plenty of other good plants to grow then, and not all of them are chrysanthemums.

A favorite combination of ours, effective usually from August until November, is *Sedum 'Autumn Joy'* planted in front of Canadian burnet. The latter has bottle-brush spikes of white flowers on strong, five-foot stalks, and from a distance they remind one of autumn-blooming snake-root (*Cimicifuga simplex*), whose flowers are often killed by frost in the colder reaches. The burnet is a better performer in New England, while the snakeroot is superior in the mid-Atlantic states.

*Sedum 'Autumn Joy'*, which grows about two feet tall and has stubby light-green leaves of interest through the growing season, undergoes several flowering stages that are of note. Flower buds form in late July or August and resemble pink broccoli as they open. In September they become darker in color, approaching Indian red, and by October's end they are mahogany. In some years they finish the season with a straw color, unless you cut them first for dried arrangements in the home. Such chameleons are welcome in the garden. Fortunately, this one happens to be a good garden plant, indestructible as one of its parents, the showy stonecrop (*S. spectabile*), but longer-lasting in bloom and without the cotton-candy pink that flaws the species. It is one of the best of the new perennials.

More information on these and a wide range of other candidates for the garden is included in the Brooklyn Botanic Garden's *Perennials and Their Uses*, Handbook 87, available by mail for \$3.05 from BBG, 1000 Washington Ave., Brooklyn, NY 11225. ☉

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Frederick McGourty recently retired as editor of the *Brooklyn Botanic Garden Handbooks*. He and his wife now operate a small perennial nursery in Norfolk, Connecticut.

# SHADE

By itself, shade is not particularly exciting in a garden, but let a little sunlight in, and suddenly there is potential for dramatic contrast and interplay.

It is almost impossible to imagine a successful garden without patterns created by the shadows of trees and plants. From the finely-toothed fronds of lady fern, to the patterns of branches and leaves etched on gray beech trunks, the vast variety and play of textures give a landscape depth and richness, but a richness all too frequently taken for granted. Sometimes it takes a cloudy day, when detail is flattened by gray light, to make us aware of the importance of light and shade.

Among a garden's most versatile design elements, shade can be used to frame and dramatize a sunlit vista or to create the illusion of a secluded enclosure. Many of the effects of shade, no doubt already found in our gardens, can be played upon, exaggerated or even isolated for dramatic results and varying moods.

Though trees such as beech, sugar maple and locust may be planted as "shade trees," it is almost an afterthought that we consider the character of this shade. The shadow of every tree has distinct qualities and becomes a form unto itself. From the wispy shade of willows, almost floating in the wind, to the deep, solidly defined shadow of sugar maples, to locusts, with their high, gnarled branches casting dappled, amorphously shaped shade, each silhouette creates a different mood.

But shadows, like water, are merely reflections. Although we aren't likely to go out and plant trees solely for the effect of their shadows, this aspect of garden design is particularly pleasing and assumes even greater value in winter when our landscapes are stripped of green. The tangled mass of gnarled oak branches, the airy spread of dogwood, the bony nubs of sumac or the slender, black columns reflecting white birch, all become even more powerful designs in an austere landscape.

Along with diversity that continues throughout the seasons, shade can lend form and function to garden areas. It may be pleasant where we are, but it is frequently what lies beyond in a garden that we find more enticing—the sun beyond the



TOP: Dappled shade in a woodland garden. LEFT: The shade of vines and a man-made structure at Biltmore. RIGHT: Shade as a frame for a sunlit vista along a woodland path.

Photography by Margaret Hensel

shade or the shade beyond the sun. In a garden that keeps our interest, there is always another promise to be explored. One particularly effective landscape garden comes to my mind: it is essentially a large lawn with groupings of trees scattered about with a pleasing but simple logic. The shade of a copse of birch, divided by a path mown through deep grass, becomes an effective frame for a vista of sunlit woods. An equally successful area is the shade of two mature beech, a shade so deep and embracing, that even without walls, we enter it like a room. Cool on a summer day, here we can sit, talk, read a book or just listen to the leaves rustle in the breeze.

Though shade can lure us from one area to another, it isn't the sole prerogative of trees to create it. On a hot summer day, an arbor can entice one to cross an expanse of lawn or a sunny garden. Without taking years to grow, architectural features such as arbors and pergolas provide enclosures and textural contrasts of light and shade.

The shade of a pergola of rough cut cedar posts and twining vines can be a rustic reflection, reminiscent of woodland shadows. Or it can be built to reflect fanciful diamond, rectangular and circular shapes. Intricately curving wooden strips can, with some imagination, resemble tree branches. Add to this pergola or arbor the twining

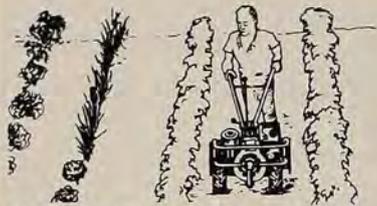
branches of various flowering vines, convoluted limbs of wisteria, a dense canopy of grape or the delicate shade of hybrid clematis, and the shade tonality changes again.

Shadows in the garden are more than convenient spots to avoid when planting delphiniums. Beyond the detail and color of flowers and borders, shadows are an unspoken passage of seasons and days. As the dark reflections of maples stretch to absurd lengths across the lawn, I invariably feel a sense of peace, watching the day draw to a close.

—Margaret Hensel

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

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**P**ut your plants in Nutriponics® planters and your windows will work for you. You can grow African Violets, Geraniums, even Tomatoes or Lettuce and all kinds of plants in our planters.

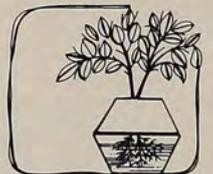
The lower half of the Nutriponics® planter shown above is transparent so you can see the water level. The roots grow down into the liquid and pull up water and nutrients as needed. You need add water only every two to four weeks for slow-growing plants like African Violets.

Nutriponics® is a suitable hobby for both adults and children. All you need is a window, with or without sun. Nutriponic® kits make excellent Christmas gifts.

You will be thrilled at how easy it is to grow your favorite plants using this new technique. We do not grow plants for sale, but we have hundreds of dif-

ferent kinds of plants growing in our research laboratories. Write us for more information or use the coupon below.

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