

The

Gardener's

JOURNAL

Summer
1996REYNOLDA, A UNIQUE
COUNTRY ESTATE

AT THE TIME of the building of Reynolda in the early 1900s, many prominent families in America were planning and building spacious exurban estates; in fact, hundreds were built throughout the country. Many were similar to Reynolda, if not exactly in size, scope, and style, at least in context. Typically, homes were surrounded by expansive grounds that contained numerous recreational areas and picturesque but functional curiosities and features, such as greenhouses and large scale doll houses.

These new homes did not build upon the crop-supported plantation model of the antebellum South. Instead, they were estates, dependent on income from sources other than crops. Many were supported by the family's income from its industries and enterprises. At Reynolda, income from the family's tobacco company supported planning and construction, but the farms and businesses of Reynolda were expected to become self-supporting. Mrs. Reynolds' interest in the education of the surrounding populace separated the appearance and operation of Reynolda from the majority of these new estates. 🍷

GARDEN HISTORY *and the*
RENOVATION *of the* FORMAL GARDENS

THE RENOVATION OF the formal gardens now in progress is based on an understanding of the garden's history as outlined in the Cultural Landscape Report prepared by Dale Jaeger, principal of The Jaeger Company. Using original plans and photographs, she documented periods in the evolution of the property. The Report provides a foundation for building on the history of the gardens, helping the staff horticulturists and educators and the consulting engineers, architects, and construction personnel to create once again a beautiful, comfortable, and educational landscape for the community.

FIRST DRAWINGS IN 1912

INSTALLATION OF THE garden was not completed as a single project, nor was it entirely the work of one firm. Plans for the whole garden, including architectural and planting details, began in March 1912 with a pergola plan by Lewis Miller of Buckenham and Miller, the engineering firm that drew up the landscape plan for the entire estate property. Miller's last plan for the formal garden, dated September 1913, foresees a garden intricately planted with a wide variety of perennials and flowering shrubs, but the plantings specified by Miller were not installed. In its details, Miller's plan is different from later plans drawn by Thomas Sears, but Miller's overall design, based on a rectangle with central axis and small, rectilinear divisions, was adopted by Sears as the outline for his own design.

SEARS PLANS BEGIN IN 1916

THOMAS SEARS CREATED the planting plan that is currently under renovation and restoration. Educated in landscape design at Harvard, Thomas Sears looked ahead to new developments in horticulture, rather than back to the garden ideals of the previous century. He placed new cultivars and plants newly introduced from diverse parts of the world alongside common Southern native plants. He strengthened the artistic presence of the garden with dramatic sculptured forms of evergreen and deciduous trees and shrubs. Productive vegetable gardens and structures covered with evergreen and flowering vines added familiarity, softness, and comfort to the experience of being in the garden.

CONTINUED ON PAGE 2

GARDEN HISTORY

CONTINUED FROM PAGE 1

KATHARINE SMITH REYNOLDS, the wife of Richard Joshua Reynolds, was the principal correspondent with landscape architects and engineers engaged in building Reynolda.



THOUGH YET INCOMPLETE, it is a magnificent development and through the splendid spirit shown by Mrs. Reynolds in her interest in the progress of this section, Reynolda is becoming the 'experiment station' to which students of agriculture, domestic science, dairying, livestock raising, etc., look for reliable and authentic information on farm problems.

— *Sentinel*,

Winston-Salem, N.C.

July 7, 1917

All of these elements worked together to make the whole of the garden a sophisticated horticultural statement for its time.

Sears' first drawings for the formal garden began with the "General Plan Around the Greenhouse," including the northern half of the formal garden, dated February 21, 1916. Numerous drawings, plant lists, studies, photographs, and receipts from that date until 1921 indicate that this area was under intense development throughout the period. Some features, such as the line of Japanese weeping cherry trees, do not appear in any of the plans, but were in place early. In an interview about the trees for a *Winston-Salem Journal* article dated March 11, 1951, I.M. Disher, supervisor of the greenhouse, recalls receiving these fifty trees from Andoria Nurseries in Pennsylvania in February, 1918.

CHANGES IN THE GARDEN FOLLOWING THE DEATHS OF MR. AND MRS. REYNOLDS

WITH THE DEATHS of Mr. Reynolds in 1917 and his widow in 1924, Reynolda fell under the authority of a Board of Trustees. Without the guidance of its founder, care of the garden became an issue that was addressed again by Thomas Sears in 1931, when he returned to Winston-Salem to draw up his final plan for the garden.

This time, the purpose of his drawings was to change plant specifications so that the integrity of the design could be maintained, to accommodate, remove, or care for a garden full of rapidly-maturing plants, and to prepare the garden for its next phase. This drawing, dated October 26, 1931, called for the removal of overgrown boxwoods and beds of iris and peonies, then planting narcissus, tulips; and pachysandra in their place, and increasing space allotted for these plants. He specified that flowering shrubs along Reynolda Road should be replaced by wax ligustrum (*Ligustrum lucidum*) to complement the California privet (*Ligustrum ovalifolium*) already in place.

THE LATER PERIOD OF FAMILY OWNERSHIP

IN 1934, MARY Reynolds Babcock and her husband Charles became the owners of Reynolda. Very little specific documentation of the garden remains from this period, but aerial photos and numerous formal photographs and snapshots taken by family members and community citizens show that the upper garden remained intensively cultivated. Large, mature, untrimmed boxwoods gradually covered over the design of the original Sears flower garden in the sunken section. The roses in the gardens near the greenhouse were removed by 1948, but the Japanese weeping cherries have remained a favorite attraction for Winston-Salem families throughout the life of the trees. Care of the gardens was coordinated by Robert Conrad from 1917 until 1957.

1957, REYNOLDA GARDENS IS GIVEN TO WAKE FOREST COLLEGE

IN THE YEARS since Reynolda Gardens was given to Wake Forest College in 1957, numerous adjustments have been made to the physical aspect of the formal gardens, largely to allow for maintenance of this popular site, now visited by well over 100,000 people each year. For example, original grass paths in the sunken gardens were replaced with slate paving in the early 1970s to accommodate increasing numbers of visitors. Ivy plantings increased in size, and boxwoods were maintained in their mature state, all to help keep maintenance costs low. As the cost of maintaining the formal garden increased, volunteer groups were formed to help the staff maintain the extensive flower and vegetable gardens. And, to help continue the mission of the founders to provide horticultural education to the public, volunteers help staff with a wide variety of educational programs for both children and adults.

Today, thanks to funds made available through gifts to Reynolda Gardens during the Wake Forest University Heritage and Promise Campaign, it is possible to restore this important garden by building on research and engineering studies, employing rapidly advancing horticultural techniques and technologies, and using

CONTINUED ON PAGE 12

The HORTICULTURE DETECTIVE

by Camilla Wilcox, curator of education
for Reynolda Gardens

GARDENERS OFTEN MAKE choices for their own gardens based on the availability of plants. While some home gardeners enjoy tracking down, for example, a favorite rose remembered from childhood, most make do with whatever is already in place in a yard, or available at the local nursery, or through a mail-order catalog. In the restoration of a garden designed and installed in an earlier time, however, the process of finding plants becomes more complex. Finding the right plants for a historic garden requires extensive horticulture detective work by the Gardens staff and consulting landscape architects.

While Thomas Sears' plant lists include many plants that are still in common use today, having proved themselves to be of lasting interest to gardeners, many of the plants are known by other names, are unsuited to Piedmont N.C. growing conditions, or are unavailable through ordinary plant supply routes. How, then, to replant this historically significant garden using appropriate plants? A combination of propagation, observation, research, substitution, and requests for help from a variety of sources will be needed before the project is complete.

PROPAGATION

PROPAGATION OF EXISTING plants ensures that crucial varietal forms continue to serve their function. The garden's trees provide its horticultural bones. These trees, the Japanese weeping cherries (*Prunus subhirtella pendula*), the Japanese cedars (*Cryptomeria japonica lobbii*), and the saucer magnolias (*Magnolia soulangeana*) grow in particular forms, grow slowly over a number of years, and are a major, lasting element of the garden's design. As these trees die and are removed, they are replaced with the same varieties of trees so that the garden retains its original skeleton. The staff took cuttings of the trees during the winter and spring. Growers at Hawks Ridge Nursery in

western North Carolina and at the propagation nursery of American Forests in Florida are responsible for rooting the cuttings.

OBSERVATION

CLOSE EXAMINATION OF plants scattered throughout the grounds reveals historical remnants. Some plants have escaped their original location or were perhaps planted in more than one location in the area. Both fall- and spring-blooming *Elaeagnus*, privet, winter honeysuckle, and pearl bush, all featured in the early plans, have spread throughout the wooded areas from their early spots in shrub borders and gardens. A patch of white-flowering periwinkle in the woods correlates well with the white-flowering periwinkle specified for a perennial border.

RESEARCH

RESEARCH IN REFERENCE literature and popular garden books is an important step. Some plants are difficult to find, even though they may be available, in many cases simply because their names have been changed. Thomas Sears was careful to use scientific names on his plant specifications, but taxonomists (the scientists who specialize in scientific naming) have renamed many plants over the past eighty years as new observations on plant growth characteristics have been made, discussions among scientists have taken place, new cultivars introduced, and plants have been discovered throughout the world. So a horticulture detective cannot go directly back to the plans, check the names, and expect to order from them.

In many cases, intermediate names must be identified first. Old reference and gardening books help trace developments in horticulture. It is often easy to find reference to name changes. For example, a 1926 edition of the 1906 *Plant Culture* by George W. Oliver, propagator to the bureau of plant industry, USDA, and Alfred Carl Hottes, professor of horticulture at Ohio State University, focuses on plants newly introduced to the nursery trade following the excitement over plant discovery during the nineteenth century and subsequent interest in hybridization. *Hortus Secund, A Concise Dictionary of*



CONTINUED ON PAGE 4

HORTICULTURE DETECTIVE

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Gardening and General Horticulture compiled by L. H. Bailey and Ethel Zoe Bailey, published in 1949, lists old (for that time) common names and plant histories. A 1948 edition of *Taylor's Encyclopedia of Gardening* also combines historic and cultural information. Even popular current books, such as Alan Lacy's *Gardening with Groundcovers and Vines*, are valuable sources because authors often note intermediate names as a matter of interest for today's gardeners, perhaps to help jog a memory of plants grown by grandparents, perhaps to acknowledge that some nurseries and gardeners have never made name changes dictated by scientists. For a researcher, this information is extremely valuable.

HERITAGE PLANT NURSERIES AND ORGANIZATIONS

TODAY'S INTEREST IN heritage plants means that many old varieties, once nearly lost, are once again available. Commercial enterprises such as Scott Kunst's Old House Gardens, Marshall's Apple Trees owned by Maurice Marshall, and Brent and Becky Heath's Daffodil Mart are valuable resources, both in plant availability and advice. For example, Daffodil Mart lists the 'Golden Spur' daffodil that is used in many places throughout the estate. A daffodil introduced in 1883, it has a place in many historic gardens. Heritage plant organizations such as the Heritage Rose Foundation, the Thomas Jefferson Center for Historic Plants, and others provide valuable information on plant sources.

NATIVE PLANT NURSERIES

MANY AREAS OF the landscaped portion of the estate featured Southeastern native plants. Today's interest in native plants has created a ready market for plants that are responsibly propagated by nurseries throughout the country. The native azalea (see Plan C) has become a popular landscape shrub and is easily available. Seeds of the low-growing Ozark sundrops (*Oenothera macrocarpa*) used in the border surrounding the large fountain can be obtained through seed catalogs and local garden shops.

SUBSTITUTION

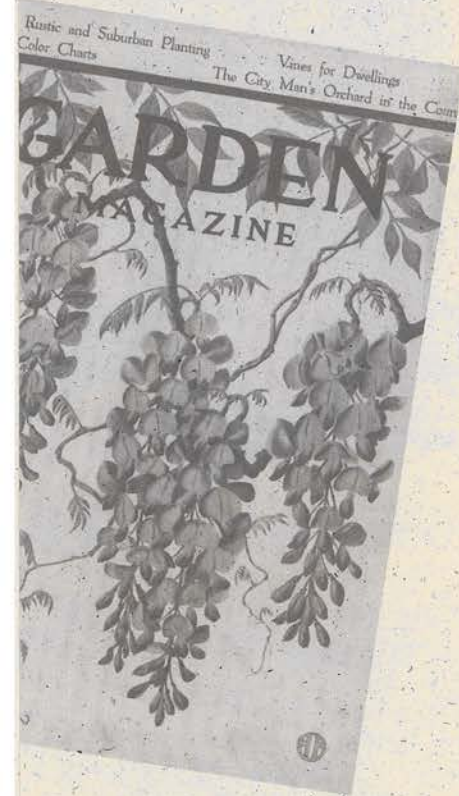
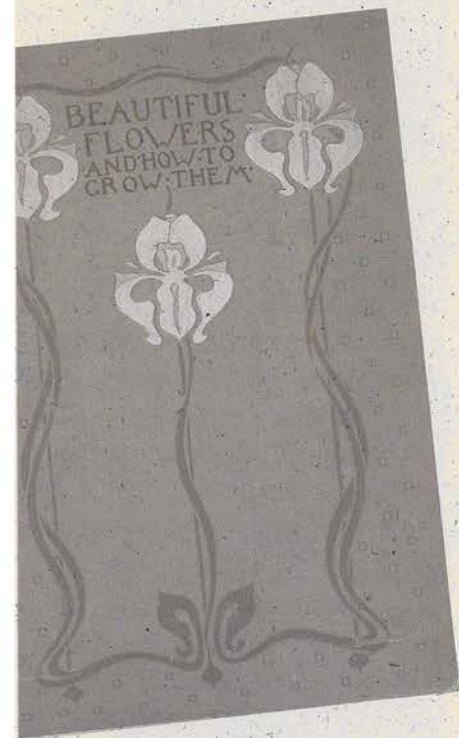
THERE WILL BE some substitution of plants called for in the plans because the varieties have proved to be unsuitable to the local growing conditions. For example, lilacs and delphiniums occupied prominent roles in the garden, but we know that, in the varieties specified, they would live only a short time. The lilacs and delphiniums, or the plants that substitute for them, will be similar in appearance but of constitution to make them adaptable to clay soils and high summer heat and humidity. The availability of such plants is due to an increasing interest in them and demand for them by the gardening public. Research and hybridizing at universities and nurseries have led to the development of plants that can be used in a wide range of environments while retaining the appearance, color, and fragrance of the beloved plants they mimic.

In some cases, numbers of plants can be increased to fill in the spaces left by omitting plants that are destined to fail in our climate. For example, there is a wide variety of fruit trees specified on the plan called "Nicer Fruits and Vegetables" on the upper level of the formal garden, including many varieties, such as the Northern Spy apple, that are suitable for Northern climates. But there are other apples specified, like the Yellow Transparent, that will grow well here and can be used in their place.

OTHER SOURCES

A WIDESPREAD SEARCH WILL be mounted for stragglers. Even when the research is finished and most of the plants found, some plants will still elude the gardeners. Plant lists will be sent to plant historians, members of plant societies, and specialty nurseries, asking for their help in locating the remaining plants. These sources will be extremely valuable over time, as plants are tested in current growing conditions and adjustments in both conditions and plant choices are made.

A project that is expected to take many years to complete, the restoration of the shrub and perennial gardens of Reynolda will be a fine example of the horticulture detective at work. 🍷



THE PLANTING OF sugar maple trees along Reynolda Road is not listed on any of the extant landscape plans, but early photographs document their presence. Interviews with some who remember the early days of Reynolda help determine the dates the trees were planted.



FELIX HUFFMAN'S FATHER WAS a squad leader for the horse-drawn work required for the building of Reynolda's farms and buildings. The Huffman family lived near the estate, at the corner of Stratford Road and Highway 421 (now Reynolda Road). Mr. Huffman recalls that the maple trees were already in place on both sides of Reynolda Road in 1918.

THE SECTION OF Reynolda Road that began at West End Boulevard and ended at the blacksmith shop of Reynolda Village was the first concrete road in North Carolina. Mr. Huffman remembers that the road was too narrow for two vehicles to meet without one pulling off onto the dirt and rock shoulder to let the other pass. 🍁

ROBERT C. (BOB) CONRAD JR.'S father, Rob Conrad (deceased), began work at Reynolda with a job at the greenhouse after high school. In the 1917 newspaper account of the operation of the estate, Rob Conrad was listed as head gardener. In noting that his father probably oversaw the tree planting, Bob Conrad added that his father "wouldn't have planted those trees without Mrs. Reynolds' approval." 🍁

THE CITY'S PLAN FOR TREE CARE

OVER THE YEARS, there have been numerous proposals to widen Reynolda Road and remove the maples. Each has met with public disapproval. Today, the city of Winston-Salem is committed to the preservation of these trees, according to James Mitchell, urban forester for the Roadway Appearance Commission. Mitchell says that most of the 225 trees are in good condition, although several are in declining health. A long-range plan for the care of the trees focuses on careful maintenance and a replacement plan.

BECAUSE THE LIFE span of a sugar maple is very short, approximately 50 to 70 years, many of the trees have already reached the end of their lives and have been replaced. As this process continues, it will result in the creation of an unevenly-aged stand, an improvement over a single-aged stand. Such a stand is resistant to disease, insect, and urban stresses. In addition, as trees are removed, improved varieties take their place. The selection for this year's replacement trees is 'Green Mountain'.

ASCHEDULE OF FERTILIZATION, the use of mulch to reduce damage from compaction and to retain moisture, and pruning as needed helps the new trees get off to a good start and maintains the health of the older trees. Mitchell welcomes comments from the public. He may be reached at 748-3162. 🍁

A LITTLE of REYNOLDA for your GARDEN—PLAN C

A GARDEN AHEAD OF ITS TIME

IN 1916, THOMAS SEARS specified the use of ivy, periwinkle, and pachysandra as underplantings throughout the garden. Later, in 1931, he recommended expanding their use to help reduce maintenance needs and cost, long before the concept of ground cover for the sake of maintenance reduction became a prevalent force in American landscape design.

A MIX OF OLD AND NEW

THE FORMAL GARDEN plantings were a mix of the old and the new, the native flowering plant and the modern hybrid. As an example of then-modern ideas about horticulture, this garden is a living exhibit of our horticultural heritage.

THE OLD — American natives *Oenothera missouriensis*, now named *Oenothera macrocarpa*, is commonly called Ozark sundrops. Native to the south central United States, this low-growing plant's yellow flowers open in the evening.

THE NEW — New hybrids *Hemerocallis florham*, the first daylily clone known to have been hybridized in America, was registered by A. Herrington of New Jersey in 1899. Between 1914 and 1924, Luther Burbank introduced four cultivars. (The cultivar used at Reynolda is not specified on the plan.) As of 1992, there were 20,000 daylilies registered with the International Registration Authority, with an additional 400 to 800 added each year.

GARDEN PLANTING DESIGNS for the ornamental gardens were divided into sections. Plans A and B covered the square gardens near the greenhouse. Plan C covered the plantings bordering the central axis of the sunken garden. Plan D covered the area surrounding these gardens. In later issues of the *Journal*, we will show you how you can have a little of the gardens of plans A, B, and D at your home.

The Cryptomeria Lawn is the central axis of the sunken garden. Its perimeter border contained both woody and herbaceous ornamentals. Pockets of early-blooming tufted pansies and snowdrops were followed by Japanese, Spanish, and German iris, delphinium, and monkshood. Native and Ghent azaleas were underplanted with summer-blooming leadwort and creeping Jenny. Madonna and rubrum lilies, veronica, painted daisies, and sedum gave a succession of bloom throughout the growing season.

Many of the plant varieties of this garden plan are not suited to our zone and growing conditions, and probably did not grow well in this garden. They would not be a suitable choice

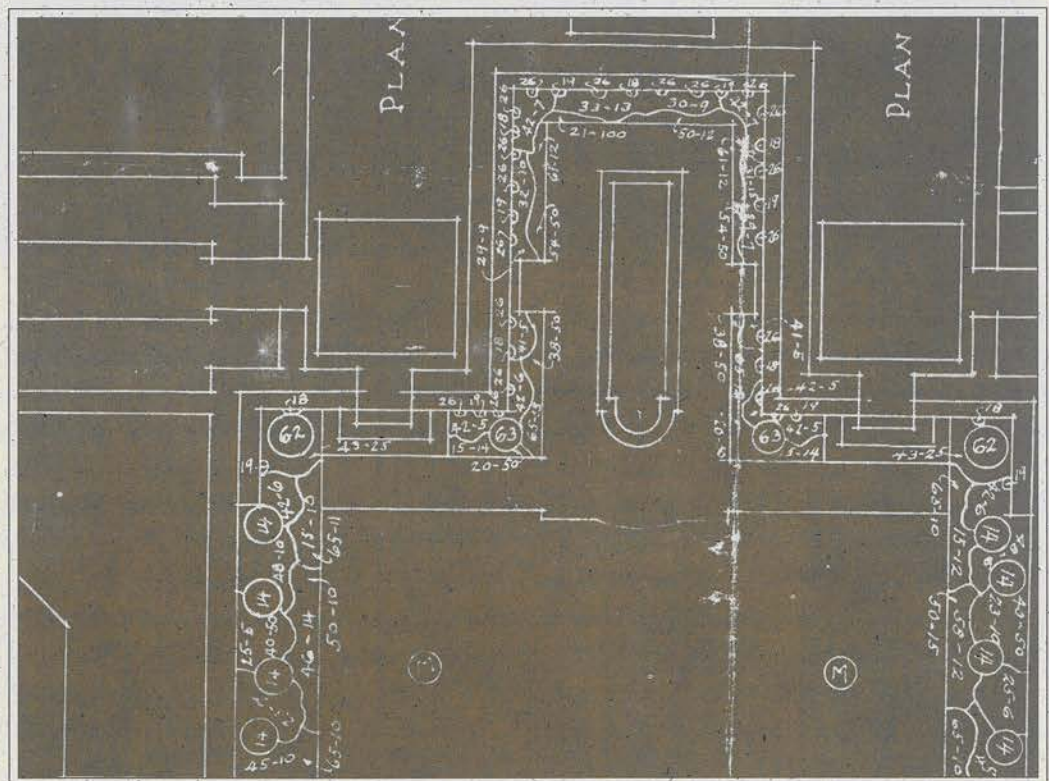
for local gardeners. But other plants on the plan thrive here and are still readily available through ordinary commercial channels. Home gardeners will enjoy growing many of the same plants that are soon to be restored to their original place in the formal gardens.

CLEMATIS MONTANA GRANDIFLORA, a vigorous grower with large white flowers and *CLEMATIS JACKMANII*, with velvety violet flowers, grew on the arbor between the sunken garden and the vegetable garden:

IBERIS SEMPERVIRENS, commonly called candytuft, is a subshrub, an early bloomer for the front of the border.

PHLOX DIVARICATA, the woodland phlox, with delicate sky-blue flower clusters, is lovely in the garden, and the flowers are excellent for cutting. It tends to invade but is rarely offensive, a wonderful addition to any perennial garden.

PYRETHRUM HYBRIDUM, the painted daisy, puts on a colorful show in late summer and early fall. Plan C specified pink, but it is available in many colors and thrives in summer conditions of high heat and drought.



THIS SECTION OF PLAN C SHOWS THE AREA SURROUNDING THE LARGE FOUNTAIN.

🌱 *VINCA MINOR*, the perennial periwinkle, is a rugged creeper. It is evergreen, but often the leaves flatten out, seeming to be completely absent in the winter. The plant reminds us of its presence in the early spring with a burst of blue flowers, continuing to bloom occasionally throughout the summer. It can grow in sun or shade and is propagated easily from cuttings. In Plan C, both the blue- and the white-flowered varieties are specified.

🌱 *LILIUM SPECIOSUM RUBRUM*, the rubrum lily, is a favorite of flower arrangers. It blooms in the spring; if cut back, it may bloom again in the summer.

🌱 *PLUMBAGO LARPENTIAE*, as it is listed in Plan C, the creeping leadwort, is now classified *CERATOSTIGMA PLUMBAGINOIDES*. It can grow in sun

or light shade, but in the sun it develops the characteristic bronze leaf that helps show off the cobalt-blue flowers that begin to appear in midsummer.

🌱 *AQUILEGIA CAERULEA* is called the Rocky Mountain columbine, but it grows well in our area. The plant bears numerous upright deep blue flowers with long spurs.

🌱 The Pinxter-flower or wild azalea, has passed through several scientific names since the plan of 1916, first *AZALEA NUDIFLORA*, then *RHODODENDRON NUDIFLORUM*, and now, according to the *Royal Horticulture Society Dictionary of Gardening* 1992 edition, *RHODODENDRON PERICLYMENOIDES*. But it is still the beautiful native of moist North Carolina woodlands. Its showy pink flowers appear before the leaves in mid-spring. 🌱



A PREVIEW OF PLAN A

ROSA 'CECILE BRUNNER', the sweetheart rose, bears clusters of small, fragrant, double, pink flowers. Like any hybrid rose, it needs more attention than some of the older varieties that are now being rediscovered and are becoming popular, but it may be worth the trouble for historical horticulture buffs. This rose was grown in the two rose gardens near the greenhouse, adjacent to Plan C. 🌱

YESTERDAY'S GARDEN today—GRASS PATHS RESTORED using new TECHNOLOGY

by John Kiger, building superintendent for
Reynolda Gardens

IN THE LATE teens to early twenties, Katharine Reynolds' dream became reality with the creation of Reynolda Gardens; however, over the decades, certain areas of the gardens were altered to meet specific needs. Currently, an area of concern is the walkways in the four Greenhouse Gardens and those that lead to the Shelters. Originally these walkways were grass paths, but with time and increased foot traffic, they became a maintenance problem due to soil compaction. In the early seventies, concrete and slate paths matching the original walks that bordered the Cryptomeria Lawn were installed, solving the problem. Or so it seemed. But the elements, and even more foot traffic, have taken their toll on these paths, and they are in need of repair again.

In our effort to be historically correct, the walkways will be replaced with grass paths, utilizing a new technology in turf management

that prevents soil compaction, helping restore the garden paths to their original appearance while providing a sturdy walkway for garden visitors. This new product, Netlon Advanced Turf System, is comprised of a nylon mesh material intertwined throughout a sand and peat base. The Netlon base will support a mixture of low-growing lawn grasses.

The Netlon system is the result of ten years of research by Dr. James Beard, retired professor of horticulture at Texas A&M. It has been proven to eliminate soil compaction, allow root systems to establish greater anchorage, and to provide optimum drainage. Originally, this technology was designed for use on athletic fields. It has been a great success and is now used in gardens and other tourist attractions throughout Europe and is gaining popularity in the United States.

With the Netlon system available to us, we can proceed with plans to recreate the appearance of this historic garden. 🌱



PLANTS for COLLECTORS — JAPANESE CEDARS for TODAY'S GARDENS

by Preston Stockton, superintendent of Reynolda Gardens

HISTORY AND CULTURE

THE *CRYPTOMERIA* IS NOT a true cedar but a member of the Taxodium family (*Taxodiaceae*) and is closely related to the giant sequoia. In Japan, it is a favorite tree to use for avenues near shrines and temples, and in gardens. In the early 1900s, British plant explorer Earnest Henry Wilson reported seeing a mile-long avenue of *Cryptomeria* ranging in height from 120 to 180 feet in Japan, with trees approximately 650 years old. *Cryptomeria's* fragrant coarse-grained wood is strong and durable and widely used for construction and building purposes, interior trim, furniture, and boxes. It is also repellent to insects.

Cryptomeria is native to lower mountain slopes with high annual rainfall. It is hardy to zone 6, making it a likely candidate for a Southern garden. But, unlike most conifers, it cannot tolerate long periods of drought. *Cryptomeria* does not receive enough moisture in the Southern climate and generally reaches a height of only fifty to eighty feet here. Because it is susceptible to limb dieout and foliage burn when exposed to high winds, it is best grown in sheltered areas. It prefers a rich, deep, acid soil but will grow in a range of soils as long as the soil drains well. *Cryptomeria* grows best in full sun and will stand a light, high shade.

The shape is pyramidal, with a straight, tapered trunk. The cinnamon brown bark shreds in long strips. We often find it used in bird nests in the Gardens. The foliage is dark green, and from a distance it has a very soft texture. Many varieties, including *lobbii*, bronze out in the winter. 🌿

CRYPTOMERIA AT REYNOLDA

ONE OF THE most striking features of Reynolda Gardens is the line of Japanese cedars (*Cryptomeria japonica*) in the sunken garden. A beautiful evergreen conifer, the *Cryptomeria* is native to Japan and was introduced into this country in 1861. Here, it quickly became a standard in American gardens. Although Thomas Sears specified *Magnolia* on his plans, and early photographs show small deciduous trees planted in this area, it is believed that Katharine Reynolds later decided to change the selection of trees and *Cryptomeria* replaced the *Magnolias* in the early 1920s. The variety grown at Reynolda is *lobbii*, which was one of the few varieties grown in this country in the early 1900s.

The original *Cryptomeria* at Reynolda have been in declining health for many years and have been removed as part of the renovation. In order to assure that the size, form, and color of the original trees are maintained, cuttings from the original trees have been sent to Hawks Ridge Nursery in Hickory, N.C. The rooted cuttings will be grown at Reynolda by the staff, and young trees will be ready to plant in four to six years. The Japanese cedars are such a critical part of the design and feel of Reynolda Gardens that we certainly look forward to the return of "old friends."

CRYPTOMERIA FOR YOUR GARDEN

JAPANESE CEDARS ARE among the best evergreen conifers for gardens because of their beauty and tough adaptability. They are being used more and more in Winston-Salem landscapes. Unfortunately, for many years most of the *Cryptomeria* grown in the country were seedling trees, which are often variable in growth and age poorly. This explains a loss of popularity of the Japanese cedar in American gardens. Today, there are over seventy cultivars, ranging from tiny dwarf plants to tall trees. With advanced research and improved propagation techniques, including the use of rooting hormones and mist and bottom heat systems, *Cryptomeria* are easily propagated asexually from cuttings. This allows gardeners the choice of planting named cultivars, chosen for specific characteristics, assuring higher quality and uniformity. The N.C. State Arboretum has a wonderful collection of *Cryptomeria* in the northeast section of the Arboretum. There you see the diversity of this species in regard to form, color, size, and growth rate. There is a cultivar for each and every garden.

There are several cultivars that J.C. Raulston, the director of the N.C. State Arboretum encourages North Carolina gardeners to grow. In his wonderful new book, *The Year in Trees*, co-authored with Kim E. Tripp of the Arnold Arboretum, he suggests two full-size *Cryptomeria* that are especially good for screening, a good alternative to the Leyland cypress so commonly used today.

'Yoshino' will reach fifty feet quite rapidly and retain a uniform pyramidal shape. It is the most reliably hardy and the best choice for zone 6.

'Benjamin Franklin' grows fast, has blue-green foliage and is tolerant of salt spray and wind.

Raulston especially loves 'Elegans' and 'Elegans aurea' for the winter garden. Both are bright green in the summer but transform after cold weather sets in—'Elegans' turns a deep burgundy-plum color while 'Elegans aurea' turns a bright lime-gold. Both differ from the species in having a soft, feathery juvenile foliage and are smaller trees, reaching twenty feet. 🌿

LETTUCE GIVE YOU SOME ADVICE—PLANT a SALAD GARDEN for FALL

by Kim Tilley, assistant superintendent
for Reynolda Gardens

MORE SPACE! It's the cry heard throughout the gardening crowd. Gardeners are always trying to figure out how to have a bigger vegetable garden in the back yard, on the patio, deck, or even join in with the radical new concept of incorporating edible plants into the front lawn. Combining Swiss chard with zinnias, marigolds with peppers, and cosmos with okra is not unheard of. An "edible landscape" does not have to be unattractive any more. Just the idea of doing away with straight rows helps create attractive garden spaces. If the only space you have is a porch, patio, or front lawn, and the desire to consume part of your landscape is uncontrollable, it can be done. Vegetable gardens are back in style. Replacing strictly ornamental gardens with vegetables, herbs, and edible flowers creates a garden full of beauty, flavor, and nutrition.

Nothing is more appealing than the world of salad vegetables, and lettuce is the number one winner. Mixing lettuce with other vegetables and flowers in a garden design is one of the most appealing. Seed catalogs that once listed just a few varieties of lettuce and salad greens now offer a large number of cultivars. The real excitement now lies in the long list of European lettuces. Newly introduced to American gardens, they provide a wide range of form, texture, and color. *The Cook's Garden* catalog has a wonderful selection of these unique lettuces and greens, enough to satisfy any gardener.

There are four basic types of lettuces: loose leaf, Bibb or butterhead, romaine, and 'Iceberg' types. The first three grow well in our area, but 'Iceberg' does not. Here at Reynolda, many varieties of lettuce, salad greens, and edible flowers that make a salad delicious and attractive are planted. Following is a list of some varieties I've tried, liked, and stuck with for many years.

LOOSE LEAF doesn't form heads. Instead, it

forms from a central crown. The broad upright types, such as 'Black Seeded Simpson' form crisp green bushes.

'Red Sails' and 'Ruby' are standards among the red loose leaf kinds. Some newer introductions such as 'Red Rapids' and 'Royal Red' have performed well.

Other loose leaf types that grow more flat and have lobed leaves are the pale green 'Salad Bowl' and the deep burgundy 'Red Salad Bowl'. A mixed planting of these two is a real eye-catcher.

Smaller lettuces have become very popular as the size of the average garden has decreased. Two cultivars are 'Baby Oak', that reaches a diameter of only about six inches at maturity and 'Lollo Rossa' with leaf tips a wonderful rosy pink color. The combination of the frilly red border with the pale green of the inner leaves has earned this one a place in my garden for many years.

BUTTERHEAD TYPES, also called Bibb or Boston lettuces, have tender leaves and develop a loose but freely-formed head. 'Buttercrunch', with deep green leaves, has a crunchy texture, stays small, and is very heat-tolerant. One of the best known is 'Four Season'. It has a fine, soft texture and a striking burgundy color. An improved red butterhead of this type is 'Redcap'. It is more heat-tolerant than 'Four Season' and grows more uniform. It can produce up to two-pound heads, yet stay tender and tasty.

CONTINUED ON PAGE 12



A SALAD OF YOUR OWN

MIXING ANY OF these flowers and other greens with your lettuce will help you make your own signature salad.

EDIBLE FLOWERS

Flower	Taste
Nasturtiums	Peppery
Violets	Sweet
'Gem' marigolds	Tarragon
Pinks	Spicy
Lavender	Pungent
Bee balm	Minty
Pansies	Fresh
Anise hyssop	Licorice
Calendula	Buttery

OTHER SALAD GREENS

Type	Cultivar
Chicories	'Red Givlio'
Mustard	'Red Giant'
	'Mizuna'
Kale	'Curly Blue'
Arugula	
Spinach	
Beet greens	
Swiss chard	
Watercress	
Mesclun mix	

WINTER GARDENS

REYNOLDA PLANTS ITS winter garden between July 1 and August 15. In this garden are raised beets, lettuce, carrots, spinach, turnips, and during this period are also planted string beans for very late fall. Carrots sown now reach table size at just the right time. In the winter, they are kept in the ground simply by spreading leaves thickly over the rows. Beets are dug when the proper size and pitted for winter use. "We have an abundance of fresh vegetables all during the winter, and Reynolda is not dependent upon its hot houses for them," was the statement of the superintendent.

— Sentinel,
Winston-Salem, N.C.
July 7, 1917

RETURNING *the* BOXWOODS to their RIGHTFUL ROLE in *the* BORDER

by Tom Pratt, greenhouse manager for Reynolda Gardens

A LITTLE BOXWOOD HISTORY

FIRST, A LATIN LESSON

Buxus means box.

Sempervirens means evergreen.

Suffruticosa means somewhat
shrubby.

Arborescens means growing in a
tree-like form.

ACCORDING TO THE American Boxwood Society, the boxwood is considered to be the oldest garden ornamental in America. Native to Southern Europe, Northern Africa, and Western Asia, its use in North America dates back to a Long Island plantation in 1692. This evergreen's wood was known for its great strength and elasticity, making it useful for writing tablets, flutes, combs and jewel boxes. The fact that the wood is so strong and the plant has survived and done so well for so long in American gardens is an indication of the hardiness of this shrub. It thrives in almost any well-drained soil. Some shade is ideal, but with sufficient water, it will grow well in full sun.

A RECENT VISITOR TO the formal gardens asked me, "What happened to the boxwoods and where did the crabapples go?"

My response to our out-of-town guest? "History is in the making with the changes in the garden. The gardens are being reworked back to the original 1916 design of Philadelphia landscape architect Thomas Sears. Only some of the boxwoods and none of the crabapples are on that plan."

On February 27, the formal gardens we have known for many years began to change. Under the direction of The Jaeger Company, the Gardens Staff began the transformation process. The crabapples (*Malus zumi*) were the first plants removed, immediately giving the quadrants a nice, open, airy feeling. Once the crabapples were removed, our attention was directed toward the boxwoods.

The boxwoods are significant plantings within the formal garden in both mass and number. Including the two varieties in the collection, American boxwood (*Buxus sempervirens arborescens*) and English boxwood (*Buxus suffruticosa*), the count numbered several hundred plants. The landscape architects decided that, in order to restore the flower garden, the English boxwoods inside each quadrant needed to be removed. These boxwoods do not appear on early plans, but photographs show that they were planted at some later time to line the walkways within each quadrant. Even though they are slow-growing, they had overgrown the space allotted for them long ago. The English boxwoods surrounding the quadrants along the central axis of the garden have been retained, as they were originally to be grown in hedge form. The American boxwoods, the taller-growing of the two varieties, remain in the garden restoration plan as the perimeter hedge plant, surrounding the entire sunken garden.



PRESTON STOCKTON (LEFT) AND KIM TILLEY BEGIN THE BOXWOOD RENOVATION.

BOXWOOD CULTURE AT REYNOLDA GARDENS AND IN YOUR GARDEN

THE TWO VARIETIES of boxwood have similar cultural requirements. Because the boxwood is a broadleaf evergreen, it is prone to winter injury and desiccation. The extent of winter problems is usually determined by how dry the growing season was. Drier conditions limit root growth; fewer roots lead to damage in the winter season. Since boxwoods are shallow-rooted, they benefit from an organic mulch of 2 to 4 inches in depth. Winter snow and ice buildup can also cause limb breakage. The boxwood is a salt-sensitive plant, so the gardener must be careful with winter salting materials. The boxwoods at Reynolda Gardens were given a 5-10-10 fertilizer and lime after they were pruned. Propagation is easy, with cuttings of mature shoots taken in late summer and early fall.

Even though the two varieties are similar in appearance and culture, there are also some differences. The care of each is based on its natural growth habit and the pests and diseases to which each is susceptible.

THE AMERICAN BOXWOOD

OFTEN CALLED THE true tree boxwood, its natural size is twenty-five feet tall and fifteen feet wide. This plant is hardy and strong, but it is not without its share of problems. Beyond winter injuries, there are a few insect pests that attack boxwoods, particularly the American boxwood. Leaf miner is probably its number one pest. At Reynolda Gardens, leaf miner is an issue each season. The key to effective control is timing the emergence of the adult leaf miner before it lays eggs in late April and early May. This year, our spray program started in April. We used Cygon, a systemic insecticide that will control the leaf miner larvae as they feed while still in the leaf. Avid is another product that can be used to combat leaf miner. (Both Cygon and Avid are available at garden centers.) The boxwood mite can also do damage. Again, timing is the key to control. Other pests include psyllids and scale.

ENGLISH BOXWOODS

THE ENGLISH BOXWOODS are less susceptible to insect infestation than American boxwoods, but, because of their slow growth, special care must be taken when pruning them. The ones that will remain in the garden at Reynolda were pruned back in the spring, just before new growth started. In areas where the landscape architects called for perennial bed extensions, the boxwoods needed to be cut back the most. To avoid pruning shock on the plants, they were pruned only on one side and on one half of their tops. Next year, these same plants will be cut back on the remaining sides to get a uniform shape of four feet by four feet. By contrast, the fast-growing American boxwoods were cut back with hedge trimmers to a four foot by four foot hedge.

IF BOXWOODS ARE severely overgrown, home gardeners can renovate their own boxwoods by cutting them back in late winter or early spring. In many cases, both sides can be cut at once, although full recovery may take longer. Apply fertilizer and lime, then give careful attention to watering throughout the summer. Light pruning can be done in the winter. Just break the tips of branches off to retain the natural shape of the plant. As an extra benefit, these boxwood tips can be used in winter holiday decorations.

As more and more visitors come out to the gardens this summer and fall, we know there will be more questions about the changes being made. Staff members will be happy to answer any questions, or you can look for the green and white signs that explain the horticultural techniques used. It is often said that change is good, creating new interests and looks. With each restoration step, we can all look ahead and be excited, thinking of the garden to come. 🌿

AMERICAN BOXWOOD

ENGLISH BOXWOOD

The Gardener's Journal continues a tradition that began in the early twentieth century, presenting up-to-date horticultural information to the public. *The Journal* includes advice for home gardeners on plant culture in the Piedmont region and helps readers understand the choice and care of the plants featured at Reynolda Gardens. Information is presented within horticultural and historical contexts.

The Journal is published twice yearly by Reynolda Gardens of Wake Forest University. A calendar of events is published separately in January and September. Communications about Gardens development should be addressed to Preston Stockton. Correspondence concerning *The Gardener's Journal* should be addressed to Camilla Wilcox, editor. Early photographs courtesy Reynolda House archives.



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REYNOLDA GARDENS

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Winston-Salem, NC 27106

LETTUCE GIVE YOU SOME ADVICE

CONTINUED FROM PAGE 9

RED ROMAINE have made a big impact on the lettuce scene the last few years. The first cultivar I tried was 'Rouge D'Hiver' or 'Red Winter'. 'Rosalita' is another that is somewhat open-hearted with red-tinged leaves. A green romaine you might want to try is 'Little Gem'. It rarely reaches more than eight inches high and four to six inches wide. It's a small-space gardener's dream.

Fall gardening can be just as rewarding as any other gardening season. Squeezing in a fall crop between the July and August heat and the first hard freeze can be tricky. Timing is everything, so plan ahead. "Fall gardening" is a misleading term; more accurately, "fall picking" is what you'll be doing, since all planting is done during the summer. Garden centers sell fall vegetable plants like broccoli, cauliflower, and cabbage mid-August through September. Planting early gives these plants plenty of time to produce. Seeds of lettuce and other salad greens should be sown at intervals August first through September first to extend harvesting times.

It will be hot during these months, so remember to keep plants and seeds moist and cool. Using existing plants of tomatoes, pole beans, okra, and peppers to create shade on fall crops works well to keep plants happy. Planting

late crops of flowers four to six weeks before fall vegetables and greens also creates shade and gives color to your garden until the first hard frost. Some choices of mine are tall zinnias, cosmos, marigolds, and climbing nasturtiums.

Remember, timing is everything to a fall garden, so do some planning. Have fun with your edible landscape. Play with different colors and textures, and I think you'll be pleased. 🍃

GARDEN HISTORY

CONTINUED FROM PAGE 2

new construction methods and materials that recreate the appearance of the architectural features of the early garden, preparing them to withstand the elements better in the future. And it will be possible to ensure that the garden continues to be a vital horticultural education laboratory for the community and region.

AN AWARD-WINNING PROJECT

THE JAEGER COMPANY has received an Award of Merit from the American Society of Landscape Architects, Georgia Chapter, for the development of the Master Plan for Reynolda Gardens. The firm is continuing to assist in the project through the development of construction documents. 🍃

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