

Frau Karl Druschki, 1901, is the best known white hybrid perpetual rose.

The Subject is Roses

by Diane Wise, RGWFU head horticulturist

f you love roses, Reynolda Gardens is the place to be. With 800 roses in the All-America Selections Garden and 300 in the restored Greenhouse Gardens, there is a rose to please everyone here. As for me, I have to admit that I haven't always been a huge fan of roses. Typically, I've found them to be a whole lot of work, i.e., deadheading, spraying, pruning, etc., for a limited return. I used to agree with Theophrastus, a Greek philosopher and botanist who lived in the third century BC, when he recommended that rose bushes be pruned by setting them on fire. Seems a little drastic doesn't it? There are some things about roses that I do like. I like the Kentucky Derby, known as The Run for the Roses, and the accompanying mint juleps! And I do love Creed's Fleur de Thé Rose Bulgare, an incredibly true rose perfume that I've worn for years and years. That has been pretty much the

Designing Reynolda

by Camilla Wilcox, RGWFU curator of education

his article begins a series that represents a quest to discover the origins of the designed landscape of Reynolda. Although Reynolda is considered a product of the Country House Movement, with certain characteristics in common with other estates of the period, it also had unique qualities that resulted from local conditions and the choices made by those involved in its construction. For a place that turned out to have the seamless appearance of a cherished and carefully cultivated family estate, its inception, although quick, was far from smooth. There were controversies and differences of opinion among the experts called in to help. And then there were the strong opinions and ideas of the owners, who changed their minds and their designers several times. Although Thomas Sears is credited with the final design and the landscape details that define the appearance of the landscape today, there were at least five other engineers/ designers/landscape architects involved, each with his own story, and each deserves to have his contribution highlighted and recognized.

It's been an interesting project, and it isn't over yet. Information is still turning up and has yet to be examined. Thus far, I have found information as far away as London, England; Ellis Island, N.Y.; Somerville, N.J.; and Augusta, Ga.; and as close as the Reynolda House Museum of American Art Archives and the Forsyth County Public Library. I have had help from many people. Most, but not all, are listed at the end of the article.

I'm going to begin, not exactly at the beginning, but with a major player, one who exerted great influence not only on the appearance and function of the estate but also



The Subject is Roses

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extent of my love affair with the rose, the world's most popular flower. But that has all changed, and the roses in the restored garden are responsible. In this article, I'll tell you why. But first let me give you a little background on roses.

Characteristics of the Rose

The rose is a perennial shrub or vine of the genus *Rosa*, within the family Rosaceae. The Rosaceae family is huge, and other members are spirea, hawthorn, mountain ash, flowering cherry, and many important fruits such as apple, peach, blackberry, and raspberry. Most have a very simple flower, with five sets of parts and a fleshy fruit. For our purposes, I'm just going to discuss the genus *Rosa*, which contains about 100 species. These are the plants most of us are referring to when we talk about roses. Roses vary from two feet in height to over eight feet. The leaves are alternate, with five to nine leaflets, although there may be as few as three leaflets or as many as thirteen. The leaflets usually have a serrated margin and are two to five inches in length.

Thorns or prickles are a hallmark of the family Rosaceae. The rose stem usually has prickles, which vary in size from very large and wicked, to almost vestigial. Notice that I said prickles rather than thorns. Roses have prickles, which are defined as an outgrowth of the epidermis, the outer layer of tissue of the stem. True thorns are modified stems, which always originate at a node and which have nodes and internodes along the length of the thorn itself—think citrus or pyracantha. Rose prickles are typically sickle-shaped hooks, allowing the rose to hang onto other vegetation when growing over it. Roses that are native to coastal sand dunes have densely packed, straight spines rather than prickles, probably an adaptation that allows them to trap wind-blown sand, thus protecting their roots by reducing erosion. Pretty neat, huh? Prickles and spines also protect the plant from damage from browsing animals. Many of the newer hybrid roses don't have any prickles at all.

The fruit of the rose is a berry-like structure called a rose hip. Rose species that produce open-faced flowers are easier for bees and other insects to pollinate and produce more hips than roses that are tightly petalled. The hips serve as an important food source for birds, particularly thrushes and cedar waxwings. The vast majority of roses are deciduous; that is, they lose their leaves in the winter, and need a temperate climate.

Rose History

Roses have a very long and interesting history. According to fossil evidence, they have been around for about thirty-five million years. They are native to the Northern Hemisphere, including Asia, Europe, North America, and northwest Africa. Garden cultivation of roses began about five thousand years ago, probably in China. During the Roman Empire, Roman nobility established large public rose gardens, and the cultivation of roses expanded to the Middle East. They were in such high demand during the seventeenth century that the plant was used as legal tender. The Empress Josephine, Napoleon Bonaparte's wife, established an extensive collection of roses at Chateau de Malmaison, an estate outside of Paris, between 1796 and 1814. This garden became the setting for Pierre Joseph Redouté's famous work as a botanical illustrator. Roses have been symbols of love; femininity; beauty; and war, as in the War of the Roses, a fight to control England in the fifteenth century. The colors of rose petals are also symbolic: white is purity; red is passion and true love; and pink is romance. They were used in medicine, like the R. gallica or Apothecary's Rose; cooking; and, primarily, to make perfume. The rose motif was widely used in the stained glass windows of churches, such as Notre Dame in Paris; on china; and on fabrics. The rose also figures in favorite childhood stories like Beauty and the Beast, Sleeping Beauty, and Alice in Wonderland. Today the most valuable product of the rose is attar of roses, a highly fragrant essential oil. About seventy percent of the oil comes from R. damascena grown in Rose Valley near Kazanluk in Bulgaria. It takes approximately 250 pounds of roses to distill one ounce of attar of roses, which in today's market, sells for about ten thousand dollars.

Classification

According to the American Rose Society, in cooperation with the World Federation of Roses, roses can be classified in three main groupings: Species Roses, Old Garden Roses, and Modern Roses.

Species Roses

These are the origin of every other rose class and are often referred to as wild roses. You've seen them growing in the woods or in fields; they may be thorny shrubs or climbers. Species roses usually have a very simple, fragrant, flat flower followed by hips that last well into the winter. Most often they bloom just once a year, in the late spring or early summer. They can be found throughout the Northern Hemisphere. Common species roses include *Rosa canina*, dog rose; *R. carolina*, pasture rose; and *R. laevigata*,



Cherokee rose. The Cherokee rose is often seen in the South and is the state flower of Georgia. It is native to China, but botanists believe it may also be native to the United States, since it was discovered in 1803 by André Michaux, growing wild in the lands inhabited by the Cherokee Indians.

Old Garden Roses (OGR)

They are defined as roses that were recognized prior to 1867, the year of the introduction of the first hybrid tea, La France. In general, the vast majority of OGR bloom once a year on old wood, which is defined as two year old canes, in early summer. There are, however, some OGR that bloom repeatedly on new wood, from early summer into autumn. Within this classification, OGR are broken down into further groups.

Modern Roses (MR)

We don't have any species or Old Garden Roses in Reynolda Gardens, but we have plenty of Modern Roses. Modern Roses are roses that have been identified since 1867. The MR is the result of cross breeding, often using Old Garden Roses. There are thousands upon thousands of Modern Roses, of every size; shape; and color, except for true blue and black. You can find about anything you want in MR. The one thing they usually lack, which, to me, is the most important attribute of all, is fragrance. Most Modern Roses just don't smell like a rose. Of all the types of roses in our All-America Selections Garden, I can count less than a dozen that are fragrant. Let's see... Confidence, Sweet Surrender, Heirloom, Secret, Perfume Delight, Cynthia, Givenchy, and Sheer Bliss. I'm sure I've missed a few, but you get the drift. You see fragrance is a really funny thing.

The Science of Fragrance

"They do not smell like they used to," is one of the most common remarks we hear when the subject is roses. Why? For one thing, fragrance varies with the weather, the time of day, the age of the flower, and one's nose. But the main reason is that fragrance is a recessive trait, which makes breeding for it very difficult. Crossing two fragrant parents is just as likely to result in an unscented rose as it is a scented one, while an unscented rose may produce fragrance in its offspring. In addition, breeders are usually looking for other things in roses than fragrance, such as form, color, large flowers, and disease resistance. Also, the search for roses that can be cut, shipped, and delivered three days later without falling apart has taken a huge toll on scent. Tough, long-lasting petals that hold up in transit usually do not have the scent of those that are more deli-

cate. So while your florist may deliver perfectly formed roses, there is no need to bury your nose in them. However, there are a number of early Modern Roses that are incredibly sweet smelling and whose progeny do retain their ancestors' fragrance. The family tree of fragrant, large-flowered roses often shows the same names—Ophelia, Signora, and Lady Mary Fitzwilliam. Wilhelm Kordes, a renowned German hybridizer, believed that Ophelia and Lady Mary were the most potent donors of perfume to their offspring. And from what I've smelled, I think he was probably right.

The Roses in the Restored Rose Garden

It's these early Modern Roses, growing in Reynolda's restored garden, that have turned me around on roses. I never mind spending a day deadheading them. As designed by Thomas Sears in 1917, the rose quadrants contained forty-nine varieties of teas, hybrid teas, hybrid perpetuals, polyanthas, and Bourbons. Many of those roses were no longer available in the late 1990s when Reynolda Gardens was restored to Mr. Sears' landscape plan. We were only able to locate twenty-six of those roses—five teas, eleven hybrid teas, five hybrid perpetuals, four polyanthas, and one Bourbon, dating from 1869 to 1914. Those are the roses that are in the garden today. As you walk out of the Palm House, the rose quadrants are on your left, the East Rose Garden, and on your right, the West Rose Garden. In midsummer at about 10:00 a.m. on a sunny day, the fragrance is positively heady. You must come see them and, most importantly, smell them. All are labeled. I've highlighted some of my favorites below.

East Rose Garden

Grüss en Teplitz

Ah, the Gruesome Triplets, as they're commonly called. I think this is my favorite rose because it's red, which is my favorite color, and because it smells so divine. Grüss en Teplitz is a Bourbon (B) rose with three-inch, double blooms of a medium red. Bourbon roses typically have weak stems, so the flowers nod, as these do. It has a strong, spicy fragrance and blooms repeatedly, and has some prickles. The foliage, when young, is tinted bronze and is particularly attractive. It is a result, stick with me here, between a cross of Sir Joseph Paxton (B) and Fellenberg (a China, or C) which was then crossed with Papa Gontier (Tea, or T) and Gloire des Rosomanes (C). It was introduced by Rudolf Geschwin in Karpfen, Hungary, in 1897. Zone 6b



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Mrs. Aaron Ward

A vigorous hybrid tea (HT) with medium, double, high-centered flowers of a yellow blend, tinted salmon pink, in a rosette form. One of my favorites, because it is beautiful in bud and flower, and the bush has a compact form. It has a moderate tea fragrance and blooms repeatedly, but it has lots and lots of prickles. The parentage is unknown. It



was introduced by Joseph Pernet-Ducher in Lyon, France, in 1907. Zone 6b. Note: the color of this rose is highly variable. It is a washed salmon color here.

Mrs. Arthur Robert Waddell

I absolutely love this rose, which is another HT. First, it smells of either apricots or peaches, I can't quite decide. Next, the flowers are gorgeous and of medium pink with a reddish reverse, and they nod really nicely. It blooms heavily, in all kinds of weather, and repeatedly, which makes up for the many large and evil prickles. The parentage is unknown. Again, it was introduced by Joseph Pernet-Ducher, who must have been one heck of a hybridizer, in Lyon in 1907. Zone 6b

Paul Neyron

This rose is magnificent! It is a hybrid perpetual (HP) with six-inch, double, many-petalled (fifty plus), cupped, somewhat flat flowers of medium pink with a lilac flush, lighter on the reverse. It has a very strong, sweet fragrance and blooms repeatedly, plus it doesn't have any prickles! It is a cross between Victor Verdier (HP) and Anna de Diesbach (HP). It was introduced by Antoine Levet, père in Lyon, France, in 1869. Zone 4b

West Rose Garden

Lady Alice Stanley

I think this rose is lovely because the flower is so full, with about seventy-five plus petals (roses usually have an average of thirty.) It is a HT with large, double, cupped flowers of a light pink blend with a coral reverse. It has a nice tea

fragrance and blooms repeatedly and has some prickles. Its parentage is unknown. It was introduced by Samuel McGredy II in Portadown, Ireland, in 1909. Zone 6b

Lady Ursula

This HT is tall with large, nodding, double, many-petalled (fifty plus) flowers of light pink. The flowers have a pronounced high center and a nice tea fragrance.



It blooms heavily and repeatedly and has many prickles. The parentage is unknown, but it is believed to be a seedling of Madame Melanie Soupert (HT) X unknown. It was introduced in 1908 by Alexander Dickson in Newtownards, N. Ireland. Zone 6b

Mrs. John Laing

This is a hard rose to beat when it comes to fragrance. Very vigorous and tolerant of poor soil, this HP has large, double, cupped, many-petalled (forty-five plus) cool pink flowers, with a touch of lilac. It blooms very heavily, repeatedly, and has a very strong, sweet fragrance, and has no prickles. Its parentage is unknown but believed to be a cross of Francois Michelon (HP) and an unknown seedling. This rose was introduced in 1887 by Henry Bennett in Shepperton, United Kingdom. Zone 4b

Ophelia

This is the rose that produces such reliably fragrant offspring, and I love it. It's another HT and is very easy to grow. It has four-inch, double blooms of salmon pink with a yellow center. Ophelia has a really nice tea fragrance and blooms repeatedly, plus the prickles aren't too bad. The parentage is unknown, but it is believed to be a cross of Antoine Rivoire (HT) and the pollen of either Madame Caroline Testout (HT) or Pharisäer (HT) or Prince de Bulgarie (HT). It was introduced by William Paul & Son in Waltham Cross, United Kingdom, in 1912. Zone 4a. Note: Ophelia was ignored in the trade for several years, but it became very popular in the 1920s, when it became known as the Queen of Roses. It has produced no less than thirty-six sports, including Madame Butterfly and Lady Sylvia, and is also used very often by hybridizers, who have produced Columbia, Penelope, Talisman, and Mrs. Pierre S. DuPont, among others. *



Designing Reynolda

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on the landscape of the city of Winston-Salem. By the time Horatio Buckenham came to Reynolda, others had, quite literally, paved the way; he did not find the wornout farms; gullies; and crude roads that they had seen. Thanks to them, Reynolda was already well on its way to becoming a fully functioning country estate. His job was to add the finishing, decorative touches that would make it a home, just as he had already done for Mr. Reynolds' fellow tobacco manufacturing magnate, James B. Duke. **



Proposed plan for the estate, 1911.



WALLS AND FOUNTAINS ARE ALMOST IDENTICAL TO FEATURES AT DUKE FARMS

Horatio Buckenham in Winston-Salem

by Camilla Wilcox, RGWFU curator of education

On February 18, 1905, the *St. Louis*, on its regular Southampton to New York run, docked at Ellis Island. Immigration officials there registered the arrival of Horatio Buckenham, age fifty; unmarried; ethnicity, American*. He had been hired by James B. Duke to direct the second phase of development for his two thousand-acre estate, Duke Farms, in Somerville, N. J., about forty miles southwest of New York City, on the Raritan River. Within a very short time, he was on his way to accomplishing Mr. Duke's goals and beginning to spread his wings in America. A little less than four years later, when the *Winston-Salem Journal* announced that he had been chosen to oversee the development of the landscape of the new Methodist Children's Home, formerly the Davis Military Academy, in Winston, his feats had become widely recognized.

Mr. Buckenham is probably the most noted landscape gardener in the world. He it is (sic) who has made a veritable fairyland out of (J. B.) Duke's \$16,000,000 estate in New Jersey. Mr. Buckenham has been called to many parts of the world to superintend this kind of work and it can be safely stated that the committees who selected him have assured the children's home of having the best buildings and grounds that genius can accomplish.

September 21, 1909

He would be instrumental in the conversion of a school with only a few buildings to a comfortable, elegant campus with the appearance of a great, rural English estate. By the fall of 1910, he would place his mark on Reynolda as well.

And yet, Mr. Buckenham himself remains something of a mystery. Although his birth, marriages, and immigration status can be found in various records, at this point there is no documentation of the education, work experience, and travel noted so glowingly above. Given the description in the local newspaper, as well as descriptions of his abilities

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*This designation is confusing because it is unlikely that Mr. Buckenham was an American citizen at this time. Like all travelers entering the United States aboard ships between 1892 and 1924, he was registered at Ellis Island upon entering the country. His name appears in ships' manifests several times over the next ten years. Although his ethnicity was listed as American, no last place of residence or destination was given. The next time he came through Ellis Island, in 1907, he was listed as a U. S. Citizen.



Horatio Buckenham in Winston-Salem

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LANDSCAPE AROUND THE DAM UNDER CONSTRUCTION.

listed in advertisements that appeared in *Country Life in America* in 1912, it would seem that there would be multiple estates, parks, and cemeteries to his credit, and their existence would be widely known. But paper records of his work—plans, letters, invoices, and proposals—have been difficult to find; without them, it has proven impossible to find a range of sites to examine. But we do have a physical record to examine, much of it here in Winston-Salem—not only the landscapes of Reynolda and the Children's Home but also Hanes Park and the West Highlands neighborhood. All bear, at least in part, his touch.* Even lacking other information, there is still much that can be learned by observing these places, as well as Duke Farms.

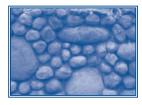
Mr. Buckenham at Duke Farms and Reynolda

The similarities between Duke Farms and Reynolda are striking in many ways, some very subtle, others somewhat remarkable. As noted elsewhere, Mr. Reynolds had already engaged engineers to help him draw his new properties together into a cohesive whole by the time Mr. Buckenham arrived. It was beginning to take on the open, pastoral look that would later be refined by Thomas Sears, who was associated with the Frederick Law Olmsted firm in the years shortly after his graduation from Harvard, with a degree in landscape architecture. Most notably, the construction of the Golf Links was underway, converting and expanding former meadow into a picturesque pasture. Likewise, Mr. Buckenham did not find a blank slate at Somerville. In fact, he may have felt at home on first sight of Duke Farms.

*More on this in part two of the series.

James Greenleaf, a former associate in the Olmsted firm, had been hired in the late 1800s to create the sweeping vistas and controlled woodlands that are so similar to those of the great parks, or estates, in England, where Mr. Buckenham was born and, presumably, trained in landscape engineering. At Duke Farms he would have seen open areas surrounded by woodlands; winding roads; decorative copses; specimen trees; and lawns already in use or under construction. Lord and Burnham greenhouses, similar to those that would later be built at Reynolda, were already in place. Local stone had been used to build some landscape features.

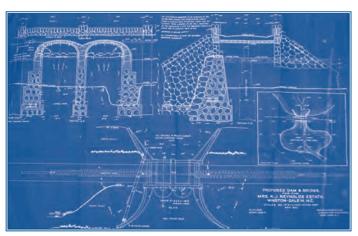
And here we find the most unsettling similarity of all, to my mind, between the two estates. The description below was written for Reynolda, but it could easily have been written for Duke Farms.



Rocks! Rocks! Rocks! They were everywhere in evidence; in fact, a great ledge of rock crossed the tract...thousands upon thousands of loads of rock have been gathered from the fields and assembled with the building material. This last item proved a splendid economy by utilizing the field rocks in the construction of the foundations for the buildings as a substitute for commercial stone—and at the same time, the fields were left in better condition for cultivation.

Twin City Sentinel, July 7, 1917

The same band of magma that produced the abundance of surface stone found here also runs up the Eastern seaboard, through Somerset County, N. J., where Duke Farms is located. It is not abundant everywhere, however, and it is rarely used for building material. At Duke Farms, railroad tracks were installed to move the rock about the property so that it could be assembled into a multitude of intricate grottos, waterfalls, lake fountains, and bridge facings.



DESIGN FOR DAM AND BRIDGE, 1910.



In the designs of the dam and entrance gates, on which Mr. Buckenham's name appears at Reynolda, these rocks were liberally used. The rock fountains on the public road, almost exact replicas of structures at Duke Farms, were built very early, as were the rock foundations for the greenhouse. In 1910 the Buckenham and Miller firm drew up plans for a dam and, in 1911, created a proposal for the estate, as well as designs for gates. And that's where the story seems to end for Mr. Buckenham at Reynolda.

Now it's time to introduce our next player, Mr. Buckenham's business partner, Louis L. Miller, who will be highlighted in the fall edition of the *Gardener's Journal*. As a preview, you can read "A Description of the Miller Garden, 1913" in the summer 2005 issue, which can be accessed through the Gardens website.

I found Mr. Miller's name on the 1910 census of Somerset County, along with Horatio Buckenham; his wife, Mary; and their daughter, Maxine. On the line below Maxine's name, the last line on that page, we see "Louis L. Miller, boarder." Both men were employed at a "private

family park." The census taker wrote out Mr. Buckenham's occupation as Landscape Gardener but added flair to Mr. Miller's. I've copied it here.



Thanks to the other members of the Reynolda History Committee: Phil Archer, Todd Crumley, and Sherry Hollingsworth; Heather Fearnbach, Fearnbach History Services; Winston-Salem/Forsyth County staff: Michelle McCullough in Cultural and Environmental Resources, Linda Harrison in Recreation and Parks, and Charles Hendrick in Engineering; and to the staff of Duke Farms, who generously hosted my visit in the summer of 2009, for their assistance.

Personal Connections

One of the mysteries associated with Mr. Buckenham is the connection with the Reynolds family. Although Mr. Reynolds and Mr. Duke knew each other well, there is no firm documentation that Mr. or Mrs. Reynolds visited Duke Farms. It would appear that the connection was actually P. H. Hanes, founder of P. H. Hanes Knitting Company, and former co-owner of P. H. Hanes Tobacco Company. A graduate of the Davis Military Academy, which property would be converted to the Children's Home, he was a member of the selection committee and also on the board of American Tobacco, the entity owned by J. B. Duke. Not only would he be involved in the hiring of Mr. Buckenham to design the landscape at the Children's Home but he would also recommend to the city that his business partner, Louis Miller, be employed to design a park, now known as Hanes Park, on land he donated nearby in 1919.

J. B. Duke and R. J. Reynolds

At the turn of the twentieth century, J. B. Duke and R. J. Reynolds were both competitors and colleagues in the tobacco manufacturing business. Both had experienced life on a tobacco farm in their early years, Mr. Duke near Durham, N.C., and Mr. Reynolds in Critz, Va. Both were enjoying the riches that came with their success in a way that reflected their rural background; they were both acquiring farmland for "gentlemen's farms," unlike those of their youth. In late middle age, each was beginning a new phase of life. After a divorce, Mr. Duke had married and become the father of a baby girl. Mr. Reynolds had married for the first time and would soon be the father of four young children. Their attention turned, in the case of Mr. Duke, to embellishing his estate or, in the case of Mr. Reynolds, to creating an estate, with amenities and decorations suitable for their change in status and providing interest for all members of the family.

Duke Farms Today

Unlike Reynolda, Duke Farms grew larger in the years after Mr. Duke's death. His daughter, Doris Duke, added farmland to bring the total acreage to about 2,700 acres. Now under the aegis of the Doris Duke Charitable Foundation, its mission is centered on environmental stewardship. Partnering with schools and environmental organizations, its staff is in the process of restoring the natural environment and educating the public. In another striking similarity with Reynolda, the golf links and former open fields have been converted to managed meadows, but on a much larger scale. Another, more subtle, similarity is in the appearance of rolling hills, like those of the North Carolina Piedmont, in the flat landscape of New Jersey. According to staff members at Duke Farms, this topography was created, although it is not known by whom. In their work, they often come upon the drains that were installed to maintain them. Records, which have been unavailable for research, have recently been transferred from Duke Farms to the Duke University Library, with the expectation that they will be available in two years. Please see the Duke Farms website www.dukefarms.org for more information, including photographs of the historic estate.



Sweet Bay: A Winter Survivor

by Preston Stockton, RGWFU manager

think that one of the best parts of winter, besides drinking red wine, is cooking large pots of spaghetti sauce. I love pasta. I usually throw a little bit of everything into my sauce. I use these great Greek spices from Old Town Greek Restaurant in Charleston, S.C., as well as just about anything else in my cabinet. But one thing I have never really cared for is bay leaves. I think it must be a mental block from my childhood. You know, the Old Wives' Tale that if you got the bay leaf in your meal, you were going to be an old maid! But this summer one of our volunteers brought me a plastic container with bay leaves that she had dried from the sweet bay plant in the herb garden at Reynolda. When I opened the container, the scent that emanated was wonderful, so sweet and strong. What a difference from the old dusty container of bay leaves sitting on the shelf in my kitchen. This winter I have used the whole container and have become a true convert.

The sweet bay tree in Reynolda has an interesting history. Sweet bay, Laurus nobilis is supposedly hardy in Zones 8 to 11. I have also read that it will sometimes burn in the winter in Zone 9. In the past, because we are in Zone 7, we would plant it in the garden in the spring and dig it up and bring it into the greenhouse every winter. It finally got to a size that we decided to root cuttings to start a new plant and leave the original plant in the ground. To protect it and give it a chance to survive the winter, we made a cage around it with stakes and plastic and stuffed the space with pine needles. The tips that were sticking out had a little winter burn, but it made it through with flying colors. The next three winters we did the same, and, again, it survived very nicely. Since then, we no longer give it any additional winter protection. It has been growing in the herb garden for at least ten years.

Today the sweet bay at Reynolda Gardens is seven plus feet tall and growing well. If I had known that it would be so happy where it was planted, I would not have planted it so close to the walk in the herb garden. Michelle Hawks, our herb guru extraordinaire, threatens every year to dig it up and move it! I do not know if getting it well established has been our key to success or the fact that this particular strain just happens to be especially hardy. For many years, I thought the relatively moderate winters were the reason this plant survived, but

the temperatures in the teens last winter have not bothered it in the least. Whatever the reason it continues to thrive, we are very happy to have it in the herb garden.

Culture

The sweet bay is a handsome, evergreen tree. It is native to the southern Mediterranean region, where it often reaches forty feet tall. It is fairly slow growing and takes shearing well, which makes it a great potted plant. It is not picky about growing conditions, but it must have well-drained soil. It can grow in full sun but prefers some afternoon shade in the heat of the summer if grown in dry areas. It is generally pest-free except for an occasional problem with brown scale.

In spring sweet bay will have small, pale yellow, star-shaped flowers. The plant is dioecious, meaning that male and female flowers are on separate plants. A female plant must have a male close by in order to set fruit, small black berries produced in the fall. Plants are propagated by seed, cuttings, or root cuttings. We have found that cuttings take quite a long time to root. We have never tried starting them from seed. This is one plant that is best to buy and leave the propagation to the pros.

History

Sweet bay, also known as bay laurel, is the laurel of Greek and Roman mythology. The Romans used the branches in wreaths as a symbol of victory or accomplishment. These crowns were used for priests, poets, and heroes. The winners of the Pythian and Olympic games were given laurel crowns. It was also the symbol of victory; military



THE SWEET BAY IS PRUNED IN A CONICAL SHAPE.



leaders would send a bay branch to the Emperor to signal that they had won a battle. They also thought that sleeping on a bed of laurel leaves would make a man a poet. This is the origin of the terms "poet laureate" and "resting on one's laurel." The Romans presented scholars with bay branches with berries upon completion of their studies. The term baccalaureate comes from the Latin words bacca, meaning berry, and laureus, meaning laurel.

The sweet bay must have been a very busy plant! It was thought that it gave the power to see into the future, as well as to protect from and prevent misfortune, such as warding off witches, the devil, and lightning. Its oil has been used for arthritis, sore muscles, stomach tonics, and flatulence.

Uses

Today, besides its culinary uses, it is still used to scent candles, perfumes, and soaps. The leaves and berries contain the essential oils eugenol, cinol, and geraniol, which give the leaves a spicy aroma when crushed.

Bay leaves may be used fresh but have a much better flavor when dried. It is best to collect leaves in early to midsummer, when they have their maximum oil content, and to use older leaves. Individual leaves may be removed for drying, but it is much easier to remove a stem several inches in length and then remove the leaves. The leaves then can be spread out to dry in a cool, dry area. When the leaves are dried, store them in an airtight container. As with most herbs, the oils dissipate after a year, so leaves should be discarded and replaced. But if you grow your own bay, you should have a ready supply. Sweet bay plants can be a little hard to find locally, but most nurseries that specialize in herbs will have them.

Bay leaves are used widely in French, Italian, Spanish, and Creole cooking for stews, sauces, soups, marinades, and pickling. It is best to remove the leaves before serving, for reasons other than the one in the Old Wives' Tale. The leaf has a jagged edge and can cut your mouth. The French also use bay leaves, thyme, and parsley tied into small bundles, called bouquet garni, which are removed before serving. **

Family Photos and Garden History

istorians love family photographs not only for the subjects themselves but for what's behind them. For a researcher, a seemingly insignificant background can prove to be a treasure trove of information. This is one story of how a charming family picture became part of the historical record of the garden.

The reconstruction of the small, painted benches in the garden was one of the important projects undertaken during the garden restoration in the late 1990s. Although several of the old benches remained, they could not be saved or repaired. New benches were constructed, using one of the original benches as a template. We knew that there had been a long bench with an arched back, but we did not have a photograph that showed it clearly, and we decided not to try to create a new design.

We also knew that the original benches had very short legs, which we had always attributed to years of rotting due to contact with wet ground. We thought someone had just cut them off periodically instead of repairing them. Then last year I met a granddaughter of long-time greenhouse manager Irvin Disher, and she mentioned that her grandfather felt that garden benches should be low. He adjusted the height by cutting off the legs.

Digging through a box of family pictures last winter, I came across this picture of my husband, Sidney C. Teague II, at age two, with his mother, Margie Sides Teague, taken by Sidney C. Teague, Sr. on Easter Sunday 1952. We now have documentation of our missing bench. Notice the bricks neatly placed under the short legs of the bench.



Reynolda Gardens has been a popular destination for family photos since the 1910s. If you would like to help document the history of Reynolda Gardens through family photographs, please call the Education Office at 336-758-3485 or e-mail gardens@wfu.edu.

Camilla Wilcox



Planning an Herb Garden

by Michelle Hawks, RGWFU horticulturist

his is a very exciting time for me. I have just bought a new house, and the one thing on my mind is not where to place my furniture, but where am I going to put my herbs? Working out the design of a new herb garden is an exciting project. But before you—or I—begin, there are several questions to answer to ensure that the end result is a success.

- Space is the first consideration. How much room are you prepared to devote to herbs? Do you have a large enough area to make an herb garden either separate from, or in a section of, your present garden? Perhaps you would like to turn most of your entire existing garden to herbs, or would a bed or border of herbs be more appropriate? If your main aim is to produce a good supply of culinary herbs, a small, formal patch may be sufficient.
- Plan how the design is going to fit in with your surroundings. Think about your house and current garden, the overall style. Which style fits best—formal, informal, old-fashioned, or some other?
- Consider if you have enough sunshine at the place you have to garden. At least six hours of sunlight is best for herbs.
- Think about soil drainage. Drainage is probably the most important single factor in successful herb growing. None of the herbs will grow in wet soils. If the garden area is poorly drained, you may have to modify the soil by adding a layer of crushed stone or sand for any chance of success.
- Consider how much time and energy you have for upkeep. Most herbs are very low-maintenance, but they still require some care. Will you have time to keep your herb garden looking its best?
- Consider which category of herbs is your chief interest—culinary, medicinal, or scented and aromatic. Your preference here may determine the size and layout.

When planning an herb garden today, there is a wide choice of styles and influences to choose from. As herbs cover such a wide range of plant types, they are often grown throughout the garden in ornamental beds and borders or among vegetable plots. But a designated herb garden, with a range of medicinal, culinary, and aromatic plants and its own boundaries, always makes a rewarding feature.

Theme Gardens

While you may choose to have a small, all purpose herb garden or a few specialized mini gardens, a neat way to add some design elements to your garden is to choose a theme. Theme gardens are a wonderful way for the novice as well as the experienced gardener to add some panache to the garden and also to focus and streamline the sometimes overwhelming choices that a gardener must make. Ideas for garden themes are endless, but a few are listed here.



LOW-GROWING THYME FORMS A MAT UNDERNEATH THE SWEET BAY TREE.

Cook's Garden

You might want to choose to create an herb garden design based on a country kitchen theme to later utilize the herbs in your culinary pursuits. This not only adds visual appeal to your backyard, patio, or chosen garden site but is also a practical way to have fresh herbs nearby anytime you cook, ready to add flavor to your recipes. The herbs most used in cooking, like basil, thyme, dill, and fennel, tend to be the ones that have the most aromatic smells.





MINT CAN BE GROWN IN CONTAINERS, SUCH AS THIS SECTION OF TERRA-COTTA PIPE, TO KEEP IT FROM SPREADING TOO VIGOROUSLY. ALTHOUGH IT IS OFTEN THOUGHT TO BE A SHADE PLANT, MINT GROWS WELL IN FULL SUN, TOO. LEMON MINT ADDS A UNIQUE FRAGRANCE TO A HERB COLLECTION.

Aromatherapy

If you dream of walking by your own garden and breathing in the earthy scents, creating an aromatherapy herb garden might appeal to you. Plants such as lemon verbena, jasmine, and lavender can offer up a pleasing bouquet of fragrance.

Garden for Birds and Butterflies

Herb gardening for birds and butterflies is a double delight. There is nothing more relaxing than walking in the herb garden here at Reynolda Gardens and watching the goldfinches sit on the oregano, basil, and dill, which are some of our favorite culinary herbs. What could be more delightful than sitting on a sun-warmed bench and watching two swallowtails flutter in a ritual dance, darting from lavender to lavender?

Tea Garden

If you're a tea lover, wouldn't it be wonderful to have your own tea herb garden? Plants such as chamomile, peppermint, spearmint, calendula, and cinnamon basil are just some of the herbs you could enjoy fresh from your herb garden to make a fine cup of tea.

Meditation Garden

Many desire a quiet place for contemplation, meditation, or spiritual significance in their garden. You don't need a big space to create such a sanctuary. An herbal garden is a great way to produce your desired atmosphere. Any combination of herbs that is pleasing or significant to you may be used. Chives, parsley, thyme, and rosemary, with their different textures and fragrances, make a good combination. Adding appropriate garden art, statues, and benches can unify your theme.

Whichever herb garden design style you finally choose, the result can be an enchanting place you can take pleasure in, not only due to the harvest it produces but also for the rewards it provides in the process of cultivating it. *



HERB PLANTS, WITH DIFFERENT TEXTURES AND FRAGRANCES, ARE IDEAL FOR A MEDITATION GARDEN.





Choosing the Right Gardening Tools and Equipment

by John Kiger, RGWFU assistant manager

t's a new gardening year, but let me back up to spring of 2009, when the staff of Reynolda Gardens instructed a class on home gardening. We focused on several aspects of growing your own vegetable garden at home, such as what to plant; when to plant it; working with the seasons; seed starting; transplanting seedlings; soil conditions and amendments; container gardening; raised beds; and garden tools. While all of this growing information is important, I think having the right tools is extremely important, too, and I would like to elaborate on that in this article.

Although part of my job is to grow a vegetable garden at Reynolda Gardens, I'm also a home gardener. At work and at home I know the importance of having good quality tools. Like most, when I first began gardening at home, I purchased cheap, low quality hand tools. After all, wouldn't a five dollars and ninety-five cents hoe perform just as well as one that cost twenty plus dollars? It wasn't long before I found this mode of thinking to be totally wrong. The blade of this low quality hoe was flimsy at best, with two rivets holding the blade that was inserted into the handle. After a few weeks, and I mean few, the rivets gave way, and the blade fell off. Dismayed, I thought this was an obvious defect in the workmanship. I threw the blade away and used the handle as a tomato stake. I was always taught not to waste resources; everything has a use. I went back to my local hardware store and purchased another hoe exactly like the first one. Guess what? The first one wasn't defective at all. Simply put, it was just cheaply made. It wasn't long before I had another tomato stake. One more trip to my local hardware store. Twenty-five dollars later, I left with another hoe. This one was much heavier. The blade was welded to the shank, instead of rivets. I've been using this one for years.

I hope my point is made. Garden tools are an important part of gardening. Whether you are buying a hoe, hand trowel, shovel, or tiller, always go the extra mile to find equipment that is sturdy and will last. Once you start gardening, it becomes a way of life, and you will want those tools to last.

Tiller

Let's begin with the most expensive item, a tiller. There are many brands of tillers on the market. The size of your garden will determine the size you will need. I've been working in landscape and gardening for many years and have used all types of tillers, large and small, front- and rear-tine units. One of the largest I have used is a Troy-Bilt model Horse. It is a large, heavy machine with an eight to ten horsepower engine. These units sell for nearly two thousand dollars and are quite capable of tilling up the hardest ground. If you are tilling up new ground, you may wish to rent one of these instead of making a large investment.

As I said, I've used all types, and normally I prefer not to endorse any particular model, but this time I'll make an exception. For work and home I use a rear-tine model, the Troy-Bilt Pony. My garden at home is approximately thirty feet by forty feet, and my Pony tiller works just fine. Not too expensive, they range from seven to eight hundred dollars.

A new type of rear-tine tiller on the market is called a counter-rotating-tine. I had the displeasure of using one of these a few years ago. The normal operation of rear-tine tillers has the tines rotating toward the front of the unit, thereby discharging the tilled soil to the rear as a nice, workable, almost fluffy material. Counter-rotating-tine, rear-tine tillers have the tines rotating in the opposite direction. Rotating tines throw the soil to the front of the tiller. The one I used left a trough in the soil, which left me doing more work to build a workable plant bed.

Wheelbarrow

Having a garden means you are going to be moving a lot of material, be it soil, plants, or fertilizers. We have several wheelbarrows at Reynolda, all of which are construction type. They are heavy duty and deep, generally able to carry approximately six cubic feet of material. For home use, going lightweight is the best bet. As with





any product, there are always choices. Find a wheelbar-row—and they are in every hardware store—that has a large capacity, high-impact, plastic tub. They are much easier to handle when loaded and will not rust over time.

Trowels

Eventually you will find yourself down on the ground planting. This is where a good trowel will come in handy. My favorite brand is Corona. They have an excellent line of trowels, from a wide blade to a narrow blade. I personally prefer the wide blade. They are constructed of one-piece, lightweight material, with a rubber-padded grip that is extremely comfortable in the hand. Believe me, when you are digging in hard ground for the first time, you will be happy you paid just a little more.



Garden Hose

Here is an item that you definitely don't want to skimp on. If you go to any hardware store, the selection of hoses seems endless. Which is best, vinyl or rubber? Some boast that they "can't kink." Don't be fooled. We have tried all kinds, and every one of them has gotten a kink at one time or another, shutting down your water supply just as you're wanting to finish. Very frustrating. It does seem that rubber hoses are best and least likely to kink. They are available in twenty-five, seventy-five, or one hundred foot lengths and range in price from twenty-five to forty-five dollars.

Garden Rake

Hardware and home improvement stores carry a wide selection of these. Notice I said a "garden rake." These have heavy, metal tines, which are used to pull large amounts of soil into hills for planting or simply smoothing an area. This is not the same tool used to rake leaves in the fall.

Shovel

Choosing a shovel boils down to a round point or square. Round point shovels are easier to get into the soil, which makes extracting plants, when the season is over, much easier. A square shovel is good for shallow digging, such as removing sod from a future garden spot. Whichever you choose, make sure the handle is made of fiberglass. The feel on your hands is much nicer than wood, and, of course, no splinters!

Ergonomic Tools

Over the last year, many of you have inquired about the health of Millie, the Gardens' cat. As most of you know, Millie was diagnosed with cancer in the summer of 2008. It is untreatable due to her advanced age, believed to be sixteen or seventeen, and the tumor's location adjacent to her heart. While her last visit to her veterinarian showed that the tumor has grown significantly, it has not spread through her body. She visits Dr. Robbins every six months for blood tests and x-rays, and he assures us that she is not in pain. Her daily activities certainly support that. You can see her on her regular rounds—supervising planting, overseeing the greenhouse, and greeting our many visitors. Rest assured that we are monitoring her closely for any signs of discomfort, and, when it becomes necessary, will

humanely end her suffering, here at the place that she calls home. We will keep you apprised of her condition. Meanwhile, please come visit her. She will appreciate it, and so will we.





Phantastic Phalaenopsis— Moth Orchids Enter the Mainstream

by David Bare, RGWFU greenhouse manager

omewhere along the line, the phalaenopsis orchid went from exotic rain forest denizen to commodity at the big box store. I remember a time in recent history when a gardener had to seek out a specialty nursery or an orchid show to find these flowers, but now they are as common as the pot they are planted in. You can pick up a few at the Home Depot along with some screws

and light bulbs. Or you can grab one with some ground beef at the grocery store. Perhaps you'd rather buy one at the discount store. They are available at Target and Costco, even though neither store has windows to admit light.

What caused this sudden shift from exotic to ordinary? A lot of it had to do with changes in the industry. Micropropagation of phalaenopsis orchids in Taiwan has been reduced to a period of eighteen months from inception to flowering plant, putting

production times in the same range as the seed to flower ratio of some common perennial plants. Taiwan seems to be the industry leader, with firms like Sogo and Tai-Ling producing immense amounts of material. Sogo produces ten million plantlets annually, and Tai-Ling is putting out five million plants annually, according to a recent article in the American Orchid Society Bulletin. A 2003 study placed phalaenopsis just behind poinsettias in terms of numbers of plants sold, and poinsettias are the most popular potted plant. Unlike other house-plants, phalaenopsis sales were also increasing.

This has perhaps been bad news for small nurseries, but it has offered the consumer access to quality plants at reasonable prices. It has also put phalaenopsis in the position of African violets and begonias—common houseplants with specific needs for successful culture.

The genus *Phalaenopsis* was named in 1825, with *P. amabilis* serving as the prototype. The name is derived from phalaina, which is Greek for moth, and opsis, meaning appearance. It also gives rise to the common name, moth orchid. Most of the known phalaenopsis species were introduced in the mid to late 1800's, but some went undiscovered. The mahogany flowers of *P. venosa* were not discovered until around 1980, when the plant turned up in Malaysia. There are about fifty species of phalaenopsis known in the wild, ranging from Asia to New Guinea and Australia. The Philippines have served as a source point for several important species, including *P. stuartiana*, *P. schilleriana*, and *P. amabilis*. These added large flowers in pink and white, along with long flower spikes, to the breeders palette. Others, such

as the small-flowered *P*.

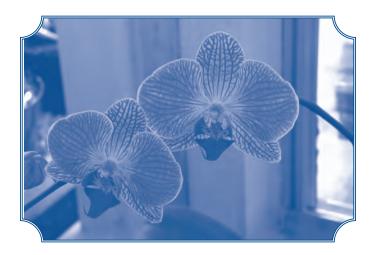
equestris, contributed to trends toward miniature plants and flowers that fit conveniently on the windowsill. *P. fasciata* would contribute deep yellow colors, and *P. violacea* added scent to the mix. The plants we encounter on the market now are far from the species plants that grace the forests of the Philippines.

Unlike cattleyas, phalaenopsis lack pseudobulbs, the structure that helps these

plants survive seasonal bouts of dry weather. Orchids can be divided into monopodial and sympodial species. Monopodial orchids lack pseudobulbs. Though the most common reproduction method for phalaenopsis in the wild is seed, plants occasionally produce a plantlet on the end of a flowering spike. This tiny plant is an exact reproduction of its parent, a clone, and is referred to as a keiki. This is the Hawaiian word for baby. A keiki will gradually form roots of its own and can be separated from the mother plant once it has developed and the plantlet has grown a few sets of leaves.







Culture

The phalaenopsis is adapted to living in a warm climate, with a constant supply of water and excellent air circulation. In cultivation, they like to be kept slightly moist and experience the same temperatures that make for a cozy house. Watering once a week is sufficient in most situations. Light should be bright but indirect; an east window or set slightly back from a west window is ideal. But phalaenopsis are tolerant of a range of light intensities.

Another change that has come to phalaenopsis is the way they are potted. Though it used to be that phalaenopsis were commonly planted in a bark mix, now they can be purchased in everything from pure, longfibered sphagnum to Pro-Mix (a commercial potting mix with a high percentage of peat moss). The grower needs to decide which mix works the best for their watering habits. I tend to pot phalaenopsis in a welldraining mix, usually medium grade fir bark that has some sphagnum or half-rotted leaf mould to retain moisture. It does not hurt to add sponge rock, charcoal, or Perlite (a porous, volcanic rock) to the mix. I like to add some PermaTill (a bagged, commercial, expanded slate product that is sold to improve drainage in garden soil) to give the pot weight. Gravel or pot shards could be substituted for this. It is time to repot if you stick your finger in the mix, and it feels humus-like and wet. Another way to know is to run water through the pot and see if dirt comes out the drainage holes. Wait to repot until you see new roots beginning to emerge from the crown.

A common issue I hear from folks attempting to grow phalaenopsis is that they have difficulty reblooming the plant. Often a ten to fifteen degree night and day temperature fluctuation will inspire the plants to set spike. In industrial-style Taiwanese nurseries, plants are moved to a cool greenhouse when they are mature enough to set spike. I find that the temperatures in most of our homes are fairly static between heating and air conditioning, and the best solution is to move the plants outside for the spring and summer. Plants will require more shade outside, so find a tree to hang them in or some other method to securely locate them. You may have to make arrangements to foil curious squirrels. Plants will need to be watered more often due to the increased air circulation outdoors. Leave the plants outdoors until the beginning of the autumn, making sure that you bring them in before they experience temperatures below fifty degrees. They should initiate spikes within a month or two of bringing them in. There are many reasons that people fall for phalaenopsis, but one of their finest traits is the length of flowering. It is not uncommon to have flowers last for four months at a time.

At Reynolda phalaenopsis begin blooming in January and peak just before the beginning of spring. They are always a feature at our spring orchid auction, which usually occurs right before Easter, and are available through our garden shop in all but the hottest months of the year. **





PUBLISHED TWICE YEARLY BY REYNOLDA GARDENS OF WAKE FOREST UNIVERSITY

Communications about Gardens development should be addressed to Preston Stockton, manager.

Correspondence concerning *The Gardener's Journal* should be addressed to Camilla Wilcox, editor.

A calendar of events is published separately in January and September.

Historical photographs courtesy of Reynolda House Museum of American Art archives.

For a list of sources for plants mentioned in The Gardener's Journal, please send a SASE to Reynolda Gardens, 100 Reynolda Village, Winston-Salem, NC 27106.

Website: www.reynoldagardens.org



Printed on paper made of 50% sugar cane pulp and 50% recycled fiber, including 30% post-consumer fiber. No new trees used and elemental-chlorine free.

Cultural Landscape Report for the Historic Reynolda District

n the fall of 2009, Reynolda Gardens of Wake Forest University, Reynolda House Museum of American Art, Reynolda Village, and Wake Forest University employed The Jaeger Company, a landscape architecture firm specializing in historic preservation, to develop a Cultural Landscape Report for the Revnolda Historic District. The CLR will follow the National Park Service Cultural Resource Management Guidelines and will comply with the Secretary of the Interior's Standards and Guidelines. The Jaeger Company has stated that the goal is "to rediscover, reaffirm, and preserve the character defining aspects of the Reynolda Historic District while providing for the interpretation and contemporary use of this shared historic landscape."

The Reynolda Historic District CLR is scheduled to be completed this summer. The Jaeger Company completed a CLR for the formal gardens in 1995.

Components of the CLR:

Site History Narrative history describing historic content, design intent, design principles, key developments, physical relationships, patterns, features, and important individuals or events; includes a historical base map and landscape evolution plan.

Existing Condition Definition of site boundaries, an accurate site map, a brief description of current resources, primary features, access, and site use.

Analysis and Evaluation Inventory and documentation of significant characteristics and features, a condition assessment of those features, and related site information.

Treatment Recommendations for treatment of the landscape based on the site history, existing conditions, and analysis; applicable standards; and the proposed use as defined in planning documents. Recommendations are presented in a treatment plan and/or narrative guidelines.

Preston Stockton





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