

The *Camellia*  
REVIEW



**Front Cover: 'Mrs. D.W. Davis Descanso'**  
**Photo Credit: Brad King**

**Inside Cover: 'John Hunt'**  
**Photo Credit: Brad King**



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[socialcamelliasociety.org](http://socialcamelliasociety.org)  
Bradford King, Editor [bdk@usc.edu](mailto:bdk@usc.edu)  
Kristina Hooper, Production Editor [khoop3r@gmail.com](mailto:khoop3r@gmail.com)  
Bobbie Belcher, Corresponding Secretary & Membership  
Southern California Camellia Society

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### An Invitation to Join

Annual membership - \$25 includes subscription to *The Camellia Review*, three issues per year.

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## BOARD OFFICERS

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## DIRECTORS

Anne Dashiell	anne@dashiell.net
Joey Goldfarb	joeyhe@aol.com
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Alexis Slafer	aslafer@ca.rr.com
Susan Stull	s-stull10@earthlink.net
Linda Tunner	
Wayne Walker	waynefredwalker@gmail.com

## Thoughts From The Editor Brad King , Editor



The 2016 Camellia season has begun with promise of winter rains from El Nino which is greatly needed to help break the four years of drought in California.

However, the hot dry summer with record heat in October may mean fewer buds on camellia cultivars and stressed camellias and trees. Water restrictions are in place in most communities which may allow adequate moisture for lawns, annuals and succulents but not for trees. Losing a lawn is frustrating but death of trees is a tragedy.

They are expensive to replace and take years to mature. They provide beauty, shade and are necessary in absorbing carbon dioxide from the air thus helping maintain a healthy atmosphere. Therefore water trees deeply once or twice a week. A

case in point is the median on Santa Anita Avenue in Arcadia which hasn't been watered in months; the grass has turned brown but the trees also look stressed. While I applaud the town fathers for setting an example for the community; I remain skeptical that the Jacaranda and California Live Oaks trees get adequate water. While these type of trees are able to withstand summer drought; they are not equipped to withstand the combination of heat over 90 degrees and little rain especially in the fall. I watched a truck water some of the trees as it slowly moved, never actually stopping, providing less than a 30 second blast of water to the trees. This is not deep watering, so poor growth, reduced spring blooms and a slow death seems likely for some of these mature trees.

In this issue we continue the practice of using at least one article from past Camellia Reviews. It becomes a department article named "From the Camellia Review Archives". Joey Goldfarb has researched old Camellia Reviews recommending a number of articles to be used. We selected "Getting Buds to Open" by Bill Donnon as it reports on transporting camellia buds from Nuccio's to Tokyo, Japan for a camellia display. How it was done may help some of us force buds to open for camellia shows this year.

We are always looking for camellia articles and writers to publish. Deadlines for submitting articles to Editor Brad King ([bdk@usc.edu](mailto:bdk@usc.edu)) are SPRING: February 1, 2016, FALL: September 1, 2016; and WINTER: December 1, 2016. We are looking for photos of camellia leaf damage for the Spring 2016 issue.

## Southern California Sports Article and Photos by Bradford King

The National Football League has no local team in Southern California but we have USC and UCLA college football teams that have energetic fans. Those who follow basketball can debate whether the Lakers or Clippers are the dominant basketball team in Los Angeles. We have no natural lakes, ponds or rinks that form ice but we have a great hockey team in the Anaheim Ducks. In the past baseball was "America's pastime" and the most popular professional sport. While football is currently more popular; we have the Angels in the American league and the Dodgers in the National league followed by many.

In the camellia world we have a number of cultivars that have produced sports that are cherished throughout the camellia world. And just like professional sports, different parts of America have their own camellia sports. The best Southern California camellia sports (mutations) are discussed and illustrated here.



**‘Mrs. D. W. Davis Descanso’**



**‘Tomorrow Park Hill’**

In 1970 Descanso Gardens introduced a sport of ‘Mrs. D. W. Davis’ they named ‘Mrs. D. W. Davis Descanso’. The flower is a large blush pink like its parent but with a striking tight full peony form as opposed to the semidouble bloom of the parent. While we don’t see it often in camellia shows, it is a stunning flower which is why it is this issue’s cover flower.

There are at least seventeen sports of ‘Tomorrow’. Other regions of America may think the sport introduced in their home town is the best. But like local fans in professional sports we know the best of them all is ‘Tomorrow Park Hill’ because the stunning flower is large to very large soft pink tinted deeper pink in the center with wonderful white markings. It is a sport of ‘Tomorrow Variegated’ inheriting its variegation but having distinctly different pink colors. The original mutation was little more than a twig with a flower. Fortunately this was successfully propagated and introduced in 1964 by Ralph Peer. He was an American talent scout, recording engineer, record producer and founder of The Southern Music Company. In the 1950’s he helped found the Los Angeles Camellia Society serving as the first President. He served as American Camellia Society President from 1957 to 1959. He established the Ralph Peer Sasanqua award for the American Camellia Society. Along with Descanso Gardens he imported the first *c. reticulata* from China in 1948. He named this sport for his Estate, “Park Hill”, located in

Laurel Canyon which overlooks Los Angeles. It was used as the cover photo on the last issue of the Camellia Review.

### **‘Elegans’ Sports**

‘Elegans’ (Chandler) was registered in 1831 in England and has produced over a dozen sports. Seven of these mutations were caught here in Southern California and an eighth, ‘Shiro Chan’ was discovered by Touché Domoto in Northern California. ‘Shiro Chan’ sported form ‘C. M. Wilson’ a mutation from ‘Elegans Variegated.’ This Domoto sport has a large to very large anemone formed white flower with occasional pink markings. Nuccio’s Nurseries found a pure white form of this flower and named it ‘Snow Chan.’ William “Bill” Woodruff, the first editor of the Camellia Nomenclature, discovered a sport on his ‘Elegans Variegated.’ He named it ‘Barbara Woodruff’ for his daughter.



**‘Barbara Woodruff’**



**‘Snow Chan’**

Like many of the Elegans sports, the flower has a large to very large anemone flower with this bloom having a light orchid pink outer guard petals usually having creamy white center petaloids and an occasional pink petaloid. ‘C. M. Wilson’ continued to produce other color sports. Hamilton and Clark Nursery in Upland California introduced ‘Hawaii’ in 1961 and ‘Kona’ a sport of ‘Hawaii’ in 1969. ‘Hawaii’ has a medium to large pale pink peony flower with fimbriated petals and ‘Kona’ has green buds that turn white with occasional green tint among the fimbriated petals.



**'Hawaii'**



**'Kona'**

Nuccio's Nursery discovered a sport among their 'Kona' plants. They continued the Hawaiian theme naming it 'Maui' in 1975. The flower is a large white anemone flower with rippled guard petals. This lineage reminds me of the adults discussing the Deans, Wales and Walcotts around the Sunday dinner table when I was a child-very confusing to remember who was related to who especially as none were alive.



**'Elegans Splendor'**



**'Elegans Champagne'**

The best sport from 'C. M. Wilson' is 'Elegans Splendor'. This beautiful light pink large to very large anemone flower edged in white was registered by Paul Gaines Nursery in San Dimas. He originally named it 'C.M. Wilson Splendor' in 1969. Julius Nuccio recommended it be renamed 'Elegans Splendor'. It was propagated and distributed widely by Nuccio's Nurseries. When 'Elegans Splendor' sported



a large to very large white flower with creamy white central petaloids, the Nuccio's named it 'Elegans Champagne'. We can debate which is the better flower, but they are both outstanding.

### More Nuccio's Sports

The Nuccio's are all good sports. But did you know that Joe Nuccio played on the 1931 Alhambra High School football team? He played outside halfback in the old single wing formation. According to one of his classmates, Grady Perigan, Joe regularly scored touchdowns and was the fastest runner in the 100 yard dash on the track team. Joe's son, Jude (Julius) joined the Nursery full time after he graduated high school in 1957 and continues today part time and plays golf several times a week. Tom went to Santa Clara University where he was on the crew joining the nursery in 1972. Jim graduated college in 1972, worked in unrelated ventures until he began working at the Nursery in 1980. He was the one to notice the distinctive zigzag growth on an 'Egao' plant. As a result the Nuccio's named this sport 'Egao Corkscrew'. The flower is also a mutation with its lovely pink bloom with ruffled petals. About half the blooms are semidouble and the other half loose peony formed.



'Corkscrew Egao'



'Bella Rosa Crinkled'

'Nuccio's Bella Rossa Crinkled' is both a flower and foliage sport of 'Nuccio's Bella Rossa'. The flower color and form are like the parent but the red flower is reduced to a medium with very wavy petals. The foliage is a Benten type with the classic green center with an irregular yellowish green edge. The leaves are irregular and crinkled.



'Oo-La-La'



'Ay-Ay-Ay'

When the very showy 'Oo-La-La' sported, an equally showy strawberry pink single to semidouble medium flower with dark red stripes sometimes mottled with white Nuccio's called it 'Ay-Ay-Ay'.

Grady Perigan, a longtime volunteer at The Huntington and camellia hobbyist, caught a sport on 'Egao'. The veined light pink medium semidouble flower with a fine white edge on the petals makes a good show in December and January.



'Grady's Egao'

The flower is smaller than 'Egao', buds up when young and is more compact in its growth than its parent.

### **Rudy Moore's sports**

Rudy Moore was the Camellia curator at the Huntington Gardens for many years. He introduced two sports--'Rudy's Magnoliaeflora' and 'Betty's Beauty'. The former is a sport of 'Magnoliaeflora' which has a medium semidouble blush pink flower. 'Rudy's Magnoliaeflora' has the same size and form of its parent but with a deep pink flower which at times has one or two white stripes. It looks better when the flower is totally pink. 'Betty's Beauty' is a sport of 'Betty Sheffield Supreme' a sport of 'Betty Sheffield'. The 'Betty Sheffield' family of color sports numbers around 30. 'Betty's Beauty' has a medium white flower with each petal edged in a light orchid. It lives up to its name as it is a real beauty.



**'Rudy's Magnoliaeflora'**



**'Betty's Beauty'**

The camellia breeder, Harvey Short from Ramona, California 30 miles inland from San Diego at an elevation of 1500ft introduced more than 30 new camellias from 1950 to 1980. In 1964 he introduced 'Owen Henry' a beautiful sport of 'Sunset Glory'. 'Owen Henry' has a large peony light orchid flower with strawberry undertones. The Huntington Botanical Garden has a magnificent twenty five foot specimen located between two statues on the west side of the North Vista.

### **Monrovia Nurseries**

In 2006 Monrovia Growers established a 60 acre camellia nursery in Visalia California to proactively prevent the spread of harmful pathogens such as sudden Oak Death. They propagate and distribute their camellias through California and other camellia states. They have introduced two sports from their original nursery in Azusa.



**'Owen Henry'**



**'Raspberry Ice'**

'Raspberry Ice' is a sport of 'Cinderella' they registered in 1987. The medium semidouble has a light rose pink flower with wide white edges and streaks of raspberry on the petals. More recently in 2011 they introduced *C. sasanqua* 'Mon Del' a single pink fragrant sport of 'Yuletide' with seven petals marketed under the name 'Pink A Poo' also known by many as 'Pink Yuletide'.

### **'Yours Truly'**

We end this article with one of the traditional phrases used to end a letter or message. The camellia 'Yours Truly' is a sport of 'Lady Vansittart Shell' which is sport of 'Lady Vansittart'. J. S. Tormey of "Temple City Home of Camellias" registered it in 1949. The medium flower is pink striped deep pink with a white border.

Yours Truly,  
Brad



# Camellias from Australia and New Zealand

By Bradford King

Today people travel the world on business and pleasure. We receive news flashes on television of disasters from all over the globe. We also get world news in newspapers, magazines and TV. Many of us get information on the internet and interact with international friends on Facebook. We are well aware that the economy is global and that we impact each other. Camellia people in Australia, New Zealand and The United States enjoy many of the same camellia cultivars. Let's explore some of the most popular varieties that originated in Australia and New Zealand.

## AUSTRALIA

There are a number of the camellia cultivars originating in Australia that are widely grown and appreciated in America. The most popular *C. japonica* from Australia is 'Margaret Davis.' 'Margaret Davis' is the beautiful sport of another well-known Australian cultivar 'Aspasia MacArthur.' 'Margaret Davis' is a creamy white peony form flower with dashes of rose red with petals edged in bright vermillion. It is a medium flower that blooms in midseason on a bushy upright plant. It was introduced in 1961 by Mr. Davis who named it for his wife. Margaret was the founding President of the Garden Clubs of Australia and wrote gardening books until age 90. This camellia has been distributed throughout the camellia world and is a popular and successful show winner here in the USA. For example, the Australian Camellia Research Society Trophy has been awarded to 'Margaret Davis' fifteen times in the last twenty-seven years as the best bloom of Australian origin at the American Camellia Society annual show.



'Margaret Davis'

Two fantastic *C. reticulata* hybrids that came from Australia to America were bred by John Hunt. He named his very large pink semi double to loose peony flower with veined petals 'John Hunt'. It is widely grown in America and is a frequent winner at camellia shows. When gibed this very large bloom becomes even more impressive. 'John Hunt' gets its show winning abilities from its pollen parent 'LASCA Beauty' and its lovely pink color, very large size and loose peony form from both parents. The seed parent 'Arch of Triumph' is a beautiful cultivar introduced by Feathers in 1970 that seems to have retired from entering camellia shows.

The other flower Hunt introduced has a deep pink on the petal edges shading to lighter pink with a white center. This peony flower he named 'Phyllis Hunt'. It grows slowly in an open spreading manner. It has a very beautiful flower with 30 or more petals in tones of pink and white.



'John Hunt'



'Phyllis Hunt'

We are fortunate to have four lovely non-reticulata hybrids bred in Australia that are popular in America. One of the first to make it across the Pacific was 'E.G. Waterhouse'. Professor E. G. Waterhouse bred a number of cultivars. The most well known is this light pink formal double which bears his name. It was one of the very first formal double hybrids. 'E. G. Waterhouse Variegated' is perhaps even more popular as the soft pink with white markings makes a lovely flower.

Another beautiful formal double hybrid we see is 'Adorable'. The bright pink pirtardii seedling bred by Sebire certainly lives up to its name (photo back cover). When visiting Nuccio's Nursery in Altadena, California with my wife, Lynn; the first thing she said when first seeing it in bloom was "What an adorable flower."

The medium full peony light pink flower that shades to a paler pink center of 'Sweet Emily Kate' is popular in a hanging basket due to its pendulous growth habit and lovely fragrance. It was introduced by R. Garnett.



'E.G. Waterhouse'



'E.G. Waterhouse Variegated'

## NEW ZEALAND

It may be difficult for Americans to remember which of the New Zealand Jury's bred and introduced what camellias over the last fifty years. We are most familiar with Les Jury who released many of his camellias internationally. Les was responsible for 'Elegant Beauty', 'Jury's Yellow', 'Debbie', 'Elsie Jury', 'Mona Jury' and his last cultivar the lovely red 'Les Jury' named for himself. We enjoy all of these cultivars in America.



'Elegant Beauty'

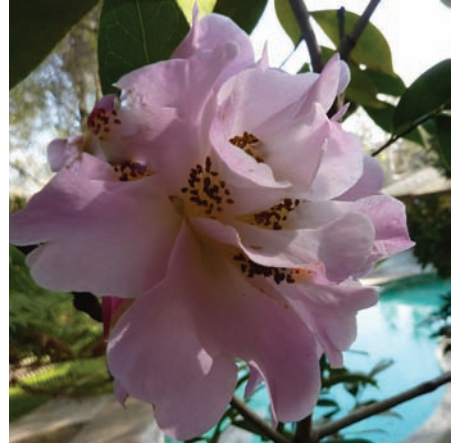


'Jury's Yellow'

Les was breeding for large, self-grooming flowers that grew well while seeking to extend the flower color range in camellias. He introduced 'Anticipation' which was one of the first red non-reticulata hybrids thus extending the color range in hybrid camellias. 'Anticipation' and 'Anticipation Variegated' are widely grown in America.



'Anticipation'



'South Seas'

Les Jury was an early breeder of *C. Williamsaii* hybrid camellias who introduced 'South Seas' another color breakthrough with its white flower toned pink with hues becoming paler and less distinct with age.

Flex Jury was his younger brother who focused on breeding formal double hybrids like 'Dream Boat' and 'Water Lily' both popular in America. Mark Jury concentrated on breeding miniature blooms suited to modern smaller gardens; most have not been imported to America. He is Felix's son and lives with his wife Abbie on the original Jury property, owned by the family since the 1870s. This is where Felix and his wife Mimosa built their house and garden during the 1950s. It is purported to have one of the best private plant collections in New Zealand.

While we do not see any of the wonderful cultivars Mark introduced, thanks to the internet and the New Zealand Camellia Bulletin we can see photos of 'Moon Moth', 'Peach Cascade', 'Apple Blossom Sun', 'Cream Puff', 'Gay Button's', 'Itty Bitty' and 'Jury's Pearl'. We are so closely tied with the internet, yet widely separated in being able to grow each other's new camellia cultivars.





**'Itty Bitty'**

James Finley's fragrant camellia breeding program goal was to develop lovely scented camellias on a good plant that produced beautiful flowers. He took pollen from a large pink loose peony *C. japonica* 'Tiffany' flower and placed it on an emasculated miniature white single flower bud from the sweet scented *C. lutchuensis*. This controlled cross resulted in a seedling that produced a fragrant small semi double white flower with pink flush on the backs of its petals. He named it 'Scentuous'. The fragrance clearly was inherited from the seed parent and the increased size and pink petal flush from the pollen parent. This plant became a camellia bridge in his breeding program to produce larger and more complicated fragrant camellia cultivars.

A bridge camellia must be fertile and have inherited the desired traits. Finley introduced at least thirty fragrant camellias as a result of this breeding program. The most popular fragrant camellia in America is his 'High Fragrance'. The very beautiful medium pale ivory pink peony flower with deeper pink on the petal edges has a very pleasing scent. It is a product of his bridge camellia 'Scentuous'. In this case it was used as the pollen parent.



'High Fragrance'



'Scentuous'

J. Taylor of Alton introduced 'Taylor Maid' and 'Taylor Supreme' which we don't see in America. We grow the beautiful light pink very large semidouble 'Taylor's Perfection'. It is a frequent camellia show winner in the non-reticulata hybrid classes. The large size, light lavender pink flower borne on a vigorous plant make it popular in the garden, show flower and as an espalier.

First there was Colonel Tom Durrant and his wife Bettie Durrant responsible for importing the Yunnan Camellias to New Zealand then his daughter Dr. Jane Crisp also a hybridizer. Mrs. Bettie Durrant is credited with introducing one of the most beautiful hybrid camellias 'Nicky Crisp' in 1979.



'Grace Caple'



'Nicky Crisp'

She named this semidouble fresh looking pink flower with distinct deep petal notches for her grandson. 'Nicky Crisp' is a favorite here as the flower retains

its bright colors producing many identical medium to large flowers. It is generally a mid to late season bloomer which helps extend the camellia season. The slow bushy growth makes it a good candidate in the garden foreground or under windows. The other Durrant hybrid we see in America is 'Grace Caple'. The large semi double to loose peony blush pink flower fades to white. Oz Blumhardt is best known in America for breeding dark red camellias. He bred 'Black Opal', 'Ruby Bells' and 'Night Rider' using pollen from 'Kuro-tsubaki' the black camellia. 'Night Rider' is the one widely grown in America. We appreciate the small very dark semi double flower, maroon spring foliage and even the red roots.



'Night Rider'



Red roots of 'Night Rider'

Richard Clere propagated and registered a sport from 'Aspasia' in 1969 naming it for his wife. 'Jean Clere' is an attractive red flower with a lovely white picoteed border that is appreciated in America along with a number of the other 'Aspasia' mutations.



'Jean Clere'

We are able to visit each other's countries. We can choose to attend local, national and international camellia events. We speak the same language so we can read newspapers, magazines, books and communicate by telephone and the internet. And as camellia growers we can enjoy some of the same beautiful flowers.

## *Camellia granthamiana*

By Bradford King

A single specimen of *C. granthamiana* was first discovered in a wooded ravine of Tai Mo Shan, Hong Kong in 1955 by C.P. Lau. A few more wild populations were subsequently found in China. It is a rare species now protected in China that grows ten to thirty feet tall when mature. Fortunately it has been propagated and widely distributed. In 1958, Sealy named it in honor of Sir Alexander Grantham, governor of Hong Kong when it was discovered. It was placed in Section *Protocamellia* by Professor Chang in 1996 with five other species.

The two species seen in America are *C. granthamiana* and *C. yunnanensis*. The large white flowers are borne at the tip of the plant stems. The flower has 10 to 14 petals. There are 12 to 16 persistent perules. The stamens and styles are free—not fused together at the base. The ovary has five sections. The seed pods are large with a thick wall. It has large leathery serrated oblong pointed foliage with brown scaly flower buds. The flower bud looks like a spent flower. In fact unless the observer looks carefully the bud and seed pod look similar as can be seen in the photo.



*C. granthamiana*

‘Phil Piet’

This species has been used in hybridizing because of its deep green foliage, abundant large flowers, early blooming, setting seeds readily and sun tolerance. It may need greenhouse protection in colder areas. Examples of its hybrids are ‘China Lady’ which has a very large, irregular semi double, rich orchid flower; ‘Moonrise’, which has a very large, semi double, white to blush pink flower with pale yellow at the base of the petals; and ‘Shanghai Lady’ which has a very large, irregular

light orchid flower. One of the most beautiful is 'Phil Piet' introduced by Meyer Piet and Lee Gaeta. They bred this and many other new camellia in Arcadia at the home of Meyer Piet. This hybrid is named for one of their sons. It has a large to very large pink and white flower that blooms early to midseason on a dense vigorous plant.

## What's New at Nuccio's Winter 2015 : 'Lil' Rose'

By Anne Dashiell

The camellia season has begun in earnest. Sun camellias, *Sasanqua*, *Hiemalis* and others are blooming right on schedule. A visitor to Nuccio's Nursery finds 'Apple Blossom', 'Rainbow', 'Hugh Evans', 'Bonanza', 'Yuletide' and other classic sun camellias in full bloom. Many are scented, often with a slightly earthy scent. For those who want a sweeter scent Jim Nuccio recommends the non-reticulata hybrid 'Koto-no-Kaori', a small rose pink single, which has a rather sweeter fragrance than many. 'Egao', a *vernalis* species, which is always an early bloomer, has begun to bloom at least a month earlier than usual. 'Egao' is popular with gardeners as it has the traditional japonica look with glossy green leaves and a medium to large semidouble pink bloom but easily tolerates more sun than the vast majority of japonicas.

Nuccio's have been evaluating *C. sasanqua* 'Lil' Rose' for a number of years deciding to introduce it this season. The medium spreading plant has a semidouble to rose form double small brilliant rose pink flower. The lovely flower and sun tolerant plant make it a good addition to the landscape.



'Lil' Rose'



*C. longipedicellata*

They have also introduced a new camellia species *C. longipedicellata*. It has reddish buds that open to a small white flower tinted pink. It gets its name for the way buds and flower hang down on very long pedicels (flower stems) that when open resemble small parachutes. New growth is an attractive bronze that turn dark green. The foliage is ribbed and the size of a sasanqua. It blooms mid season on a mid size upright plant.

Our unusual weather this year in Southern California has produced some exceptionally early blooms. Several which would normally wait till late December or even January to bloom are already producing beautiful blooms. Beside the normal early bloomers like 'Joe Nuccio' and 'Rudolph' you can see blooms on 'Cabernet', 'Elizabeth Weaver', and 'Buttons 'n Bows'. 'Senritsu-Ko' which usually waits for January is already in bloom. 'Ferris Wheel', Nuccio's new introduction for this year, has joined other early bloomers in producing flowers earlier than usual. It's large, red flecked white flowers can be seen on larger plants. Joe Nuccio speculates, only half in jest, that if this weather pattern keeps up camellia societies may need to move their early shows from January to November/December to accommodate the change in bloom schedule.

## Tea: How to Make Tea

By Bradford King

When a bright verbal ten year old was asked this question, she clearly and confidently told me "My mother boils water in a kettle and puts a tea bag in a mug and pours the hot water over the tea bag. In a few minutes when she likes its color she takes the bag out with a spoon. When Mom lets me have some, I put sugar and cream in the mug so it is sweet and cool to drink. Now when my aunt drinks tea, she puts several spoons of loose tea in a very pretty tea pot with hot water and lets it steep, then carefully pours herself a cup so the leaves stay in the pot. She will only use a china cup with a matching saucer. My mother thinks her sister is rather fussy and full of herself. Dad laughs and says she thinks she is sophisticated. My favorite tea is English Breakfast. What yours?" I said Earl Gray is my favorite but in the summer I prefer ice tea especially half tea and half lemonade. She said "that sounds refreshing...Did you know lots of people put lemon in their tea?" Talking with children is great fun. While everything she said is true, it won't help you prepare tea from your *Camellia sinensis* plants.



Tea plant in bloom



Harvesting Machine

Almost all the tea drunk in America is imported from Asia and South America. Although *Camellia sinensis* can be grown in warmer parts of the United States, currently the US mainland has only a very small number of commercial tea gardens. The largest is the fully mechanized plantation in Charleston, South Carolina, a smaller operation that picks its tea by hand in Burlington, Washington, an even smaller farm in Fairhope, Alabama and the Camellia Forest Nursery. In addition there is a collective of roughly 40 small growers in Volcano, Hawaii. These teas are available through mail order and online purchases.

#### FOUR TYPES OF TEA

The four types of tea are white, green, black and Oolong. All begin with picking fresh new leaves from *C. sinensis* the tea plant. It is how the leaves are processed that produces the type of tea. In other words, it is the tea recipe that makes white, green, black or oolong. Most of the tea sold commercially is a blend of black tea. There are many named blends such as English Breakfast Tea, Irish Breakfast Tea, Darjeeling Tea, and Earl Gray to name a few. The different *C. sinensis* clones or plant strains rarely produce flavors that can be differentiated except by experts with highly developed taste and smell. The major taste and aroma of tea for you and me is a result of the way it was processed.

#### White Tea recipe

1. Tender young growth is picked by hand from *Camellia sinensis*. Young shoots with 2-3 leaves are recommended. The leaves and shoots are allowed to wilt in the shade or indoors for 6-24 hours. The leaves can be spread on a tray and left in a shady spot and out of the sun for a couple days.
2. When dry they may be used or stored in an air tight container. White tea is the

least processed with a delicate taste that may appeal to children and other family members who are not regular tea drinkers but may not satisfy those who like a robust tea.

### Green Tea recipe

This is how they prepare green tea at the Camellia Forest Nursery which produces a delicate flavor and a lovely scent.

1. Tender, young growth is handpicked from young shoots with two or three leaves. The leaves and shoots are allowed to wilt in the shade for a few hours to help with drying.
2. In order to stop oxidation the leaves are heated on a dry frying pan for 2 to 3 minutes on medium heat, stirring constantly and gently until all the leaves have been heated. A second option is to add a small amount of water to steam the leaves in the frying pan which is covered with a lid.
3. The leaves are dried in an oven at 200 degrees for at least thirty minutes until all the leaves are completely dry. Once all the water is removed from the leaves the tea is ready to use or stored in an air tight container.



**Green tea prepared for Japanese tea ceremony**

### Black Tea recipe

1. The handpicked tender new growth is allowed to dry on racks for 10 to 20 hours to reduce the internal moisture between 60 and 70 percent.
2. The leaves are bruised to begin the process of fermentation. Several shoots are rolled or crushed between your hands until the bruised leaves turn a bright copper like a new penny.
- 3 The leaves are allowed to ferment by placing thin layers on a tray in a shady protected area-- free from wind and pests. After 2 or 3 days they are ready for drying.
4. The leaves are placed in the oven set at 250 degrees F. This step removes all the moisture in the leaves, stops fermentation and seals in the flavor. Now the tea may be used or stored in an airtight container.

### Oolong Tea recipe

1. The fresh handpicked leaves are spread out in a thin layer on a table covered with a mat or towel. The shoots are allowed to wilt in the sun for thirty minutes to one hour depending on the temperature.
2. The leaves are then taken indoors where they are left to wither for four or five hours at room temperature. Every hour the leaves are gently agitated by hand. This will cause the leaf edges to turn red and reduces the moisture in the leaf to



about 20 percent. This controlled process causes the enzymes and the biochemical processes in the leaf to produce the aroma and colors found in oolong teas.

3. Next the leaves are dried in an oven at 250 degrees F. for 15 to 20 minutes which stops the enzymatic processes.

4. The leaves may now be used or stored in an air tight container.

*Camellia sinensis* can be grown in America anywhere other camellias thrive. They make an excellent landscape plant. A cluster or hedge makes a neat and attractive display that can be kept at 3 or 4 feet by pinching the new growth during the growing season using the new foliage to make tea. Tea is harvested many times a year as frequently as every ten days during the growing season. Large plants are also acceptable for landscaping and harvesting leaves for tea. A hedge may be needed to supply a family. Tea made from freshly cured leaves is superior to tea which has been stored for even a few months.

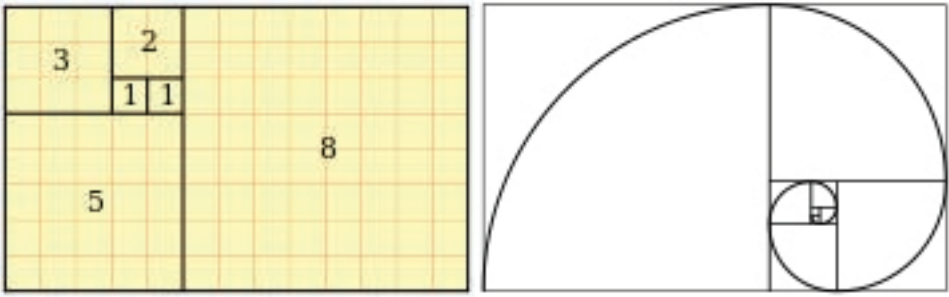
## Nature's Patterns

Article and Photos by Beth Stone

Today we're going to talk about mathematics, no please stay with me, don't turn the page! A surprising majority of Botanical Artists are quite familiar with the Fibonacci patterns found in nature. The 2015 New York Botanical Garden Second Triennial Exhibition titled "Weird, Wild & Wonderful" included this Camellia painting by New England artist and instructor Kelly Leahy Radding. Kelly named her artwork "Fibonacci's Camellia".

Fibonacci's Camellia,  
Courtesy of and © Kelly  
Leahy Radding, all rights  
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The Fibonacci sequence, named for 12th century mathematician Leonardo Fibonacci, is a series where each number is the sum of the previous two. Like this: 0, 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, 144, ... A Fibonacci spiral can be constructed by drawing circular arcs connecting the opposite corners of squares having sides of length corresponding to each Fibonacci number.

This particular spiral shape shows up in the uncurling of a fern, the arrangement of seeds on a strawberry, scales in pinecones and the florets and seeds of a sunflower head. Now that you're looking you'll see it everywhere, chrysanthemum blooms, broccoli heads, and taken to the extreme in Romanesque cauliflower.

Botanical artists are watchful for patterns which can make or break the accurate depiction of a plant. Some subjects are best drawn beginning with lines which follow nature's spiral arrangements then drawing each petal, seed or branch with attention to the pattern. In the Camellia world we have beautiful examples of the Fibonacci spiral most clearly observable in the blooms of varieties having the formal double form.



This *C. japonica* "Pink Perfection" bloom has 5 counterclockwise spirals and 8

clockwise spirals. Sure enough these are consecutive Fibonacci numbers, another common pattern. Sometimes the spiral pattern is even more evident in profile.



The number of petals on a flower is often a Fibonacci number. After the next show, let's pull some apart to count! The spacing and placement of leaves on a stem also often follow a Fibonacci sequence. We notice a pattern when pruning Camellias as we move up or down the stem a bit to select for an outward facing growth bud. The botanical artist must also observe and correctly capture this pattern.

The method of looking for a Fibonacci series in leaf placement is to find two leaves that grow in the same direction on a stem, then trace your way from leaf to leaf counting revolutions around the stem and the number of leaves encountered. When leaves alternate along a stem, one rotation of the spiral touches two leaves, so the pattern or ratio is  $1/2$ . Specific plants are known to have ratios of  $1/3$ ,  $2/5$ ,  $3/8$  and  $5/13$ . All alternate pairs of Fibonacci numbers.

This photograph is looking straight down at a shoot from the tip. The leaves are numbered according to their sequence beginning at the tip. It takes 3 revolutions of the stem to come to a leaf which aligns to the first leaf. Along the way 7 leaves are encountered. The ratio is a bit off pattern at  $3/7$  for this scion. There does seem to be a discontinuity in the pattern both at the very tip and where one year's growth meets another. Shoots with at least 8 leaves in a single year's growth cycle can be hard to find making verification of a  $3/8$  pattern for Camellias difficult. Roses are known to have a  $3/8$  ratio as do pear and poplar.



There is another clue in the photo above that points to a  $3/8$  pattern, the "Golden Angle". The ratio of alternate pairs of Fibonacci numbers converges on 0.382. This ratio times  $360^\circ$  equals  $137.5^\circ$ . This is called the "Golden Angle". The photo

shows  $135^\circ$  angles ( $3/8$  times  $360^\circ$ ) drawn between successive leaves 1 & 2 and leaves 3 & 4. The leaves fall pretty close to this angle. Consider that  $135^\circ$  times 8 leaves would equal 3 turns around the stem:  $135 \times 8 = 3 \times 360$ . Here are more examples of Camellias having a formal double form which illustrate Fibonacci's spiral:



Left to right: Button's n Bows - Beth Stone; Nuccio's Gem - George & Karen Harrison; Mrs. Tingley - Nuccio's Nursery; Pearl Maxwell - George & Karen Harrison

References: Garland, Trudi (1987), "Fascinating Fibonacci's", Parsippany, NJ: Dale Seymour Publications ISBN 0-86651-343-4. [https://en.wikipedia.org/wiki/Fibonacci\\_number](https://en.wikipedia.org/wiki/Fibonacci_number). <https://www.mathsisfun.com/numbers/nature-golden-ratio-fibonacci.html>

## Getting Buds To Open

By Bill Donnan

All of you show buffs know how it is. You have a bud on your favorite camellia bush, and it is just bursting with color but on the Saturday morning of the show it isn't open. So you leave it on the bush. Then on Sunday or Monday, it opens and

it becomes a bloom which would have won a trophy. I know of many exhibitors who will refrigerate a bloom for a week or more before a show and then enter the bloom which wins show points. But I, for one, never knew that a bud could be forced to open ahead of time. Now I know how it is done. Furthermore, I am going to pass the “secret” on to you.

Sergio Bracci told me about a bloom he was watching all week prior to the Huntington show. He was hoping it would open by Saturday morning so he could take it to the show. Alas! On Saturday the bud was only half open. Sergio said he cut the bloom and brought it in to the house and placed it in the shower stall with the hot water running. Within an hour the bloom was fully open. He took the bloom to the show and it won a Court of Honor. I really didn't believe him, but it makes a good story.

About two weeks later, three Japanese fellows showed up at Nuccio's Nurseries. They were Satoshi Kimura, President of the Atagawa Tropical and Alligator Gardens; Sadao Tambe, Vice President of the Japanese Mountaineering Association; and Hiroshi Terada of the Terada Nursery near Tokyo. The purpose of their trip was to collect 500 American camellia blooms for the annual camellia display at the Atagawa Tropical and Alligator Gardens.

They proposed the following time table for their project. They would pick the blooms on Saturday, January 16th, pack them on Sunday, fly to Tokyo on Monday, unpack them on Tuesday, set up the display on Thursday and open the display for the public on Friday, Saturday and Sunday. All we could say was “Lots of Luck.” But then we found out they didn't want camellia blooms—they wanted half opened buds. Furthermore, they proceeded to demonstrate how they would open the buds. They cut several half open buds on six inch stems and set the stems in a jar of warm water. Lo and behold, it didn't take long before the buds began to open.

In a half day many of the buds were opened. Thus when they collected camellia specimens on Saturday, they cut half opened buds on six inch stems. On Sunday these were packed in dry shredded paper with just a ball of moist cotton on the end of the stems. They packed 500 specimens into three large shipping boxes and took them to the plane with them as baggage. On arrival in Tokyo, the buds were unpacked and refrigerated until time to set up the display. On January 23, 24, and 25, 1982 the California camellia flowers were displayed. Mr. Kimura reported that over 10,000 people visited the display. The display was featured on national television in Japan.

## We Are Family...

### I got all my sisters with me<sup>1</sup>

By Linda and Joe Tunner



Most camellia enthusiasts are so engrossed in the culture and exhibition of camellias that they think of pests and reach for the spray can. We wanted to introduce you to some 'lovable' pests that we have met in our garden; these animals are sometimes bought and sold as pets.



Please say 'hello' to the Indian Walking Stick Insect, *Carausius morosus*,<sup>2</sup> native to southern India and officially identified for the first time in San Diego County in 1991. She is feeding on the typical 'tasty' camellia of all time, Nuccio's Gem.

She and all her sisters are so 'cute' that we have just watched as the colony decimates this plant. No

other camellia varieties have been colonized as of this publication. Even though 'Nuccio's Gem' looks ratty, it is far from dead and still has all of its flower buds undamaged.

A few walking stick species are native to California, including the Western Short-horned Walking Stick, *Parabacillus hesperus*, the Gray Walking Stick, *Pseudosermyla straminea*, and species in the genus *Timema*.<sup>3</sup> We have seen an 8" specimen, which is probably not an Indian Walking Stick, as these insects are only 2-4 inches. They are also characterized by a classic red spot on the first armpit area, the femora, which is used as a threat display should the insect come under attack.

Parthenogenesis is a big word that means a modified form of sexual reproduction, in which a gamete (embryo) develops into a new individual without the fertilization of an egg by a sperm . . . this condition may occur as a natural phenomenon or be induced by chemical or mechanical stimulation.<sup>4</sup>

Basically, these girls are all sisters/mothers and no one knows how far back the lineage goes. They are all related in this way – please see the accompanying picture of their eggs.



walking stick insect eggs<sup>5</sup>

The insects are active primarily at night and if you want to observe their normal behavior, you will have to venture out after dark with a flashlight. Occasionally, you may be lucky enough to see individuals during the daytime, but most people will pass them, unnoticed due to their cryptic coloration and resemblance to sticks or twigs. They are motionless during the daytime unless disturbed. These insects are not the serious pests the emerald grasshopper, the coffee beetle, and Japanese beetle species are, because they are unable to fly from plant to plant.

We select one of our favorite little pests, *Carausius morosus*, as our Parting Shot. Camellias are not just the amazing flowers and plants that fill our lives and gardens with beauty, they provide home, food, and shelter for an overwhelming number of other living species. Fitting these gals into your life means living with the damage you might see on one of your favorite plants.



Linda and Joe Tunner  
January, 2016



PARTING SHOT



1. From album “We Are Family,” recorded by Sister Sledge, Atlantic Records, 1978
2. [http://www.utsandiego.com/uniontrib/20041226/news\\_1m26sticks.html](http://www.utsandiego.com/uniontrib/20041226/news_1m26sticks.html)
3. Pest Note Publication 74157. University of California State Wide Integrated Pest Management Program, Agriculture and Natural Resources, May 2011
4. <http://medical-dictionary.thefreedictionary.com/Parthenogenic> , Miller-Keane Encyclopedia and Dictionary of Medicine, Nursing, and Allied Health, 7th edition, 2003
5. Photo from [www.keepinginsects.com](http://www.keepinginsects.com)



'Adorable' Photo by Brad King